

# 1997 Index

## Proceedings of the IEEE

### Vols. 83-85

This index covers all technical items - papers, correspondence, reviews, etc. - that appeared in this periodical during 1997, and items from previous years that were commented upon or corrected in 1997.

The Author Index contains the primary entry for each item, listed under the first author's name, and cross-references from all coauthors. The Subject Index contains several entries for each item under appropriate subject headings, and subject cross-references.

It is always necessary to refer to the primary entry in the Author Index for the exact title, coauthors, and comments/corrections.

#### AUTHOR INDEX

##### A

- Abed-Meraim, K.**, Wanzhi Qiu, and Yingbo Hua. Blind system identification; *PROC Aug 97* 1310-1322
- Abidi, A.A.** Low-power radio-frequency ICs for portable communications; *PROC Apr 95* 544-569
- Abu-Mostafa, Y.S.** Review of "Introduction to the Theory of Neural Computation" (Hertz, J., et al.; 1991); *PROC May 96* 799
- Aggarwal, J.K.**, see Nandhakumar, N., *PROC Jan 97* 147-163
- Ahmed, H.M.**, R. Callon, A.G. Malis, and J. Moy. IP switching for scalable IP services; *PROC Dec 97* 1984-1997
- Aizawa, K.**, and T.S. Huang. Model-based image coding advanced video coding techniques for very low bit-rate applications; *PROC Feb 95* 259-271
- Akasaki, I.**, and C. Wetzel. Future challenges and directions for nitride materials and light emitters; *PROC Nov 97* 1750-1751
- Akay, M.** Review of "Virtual Reality Technology" (Burdea, G., and Coiffet, P.; 1994); *PROC Sep 95* 1294
- Alard, M.**, see Le Floch, B., *PROC Jun 95* 982-996
- Aldrubi, A.**, see Unser, M., *PROC Apr 96* 626-638
- Alexander, W.E.**, D.S. Reeves, and C.S. Gloster, Jr. Parallel image processing with the block data parallel architecture; *PROC Jul 96* 947-968
- Alford, M.G.**, see Liggins, M.E., II, *PROC Jan 97* 97-109
- Alouini, M.-S.**, S.A. Borgsmiller, and P.G. Steffes. Channel characterization and modeling for Ka-band very small aperture terminals; *PROC Jun 97* 981-997
- Ambrose, B.E.**, and R.M. Goodman. Neural networks applied to traffic management in telephone networks; *PROC Oct 96* 1421-1429
- Andreou, A.G.** Review of "Analog VLSI Implementation of Neural Systems" (Mead, C., and Ismail, M., Eds.; 1989); *PROC Oct 95* 1430-1431
- Antony, R.T.** Database support to data fusion automation; *PROC Jan 97* 39-53
- Arabshahi, P.** Review of "Fundamentals of Artificial Neural Networks" (Hassoun, M.H.; 1995); *PROC Jun 96* 906-907
- Arbesser-Rastburg, B.R.**, and A. Paraboni. European research on Ka-band slant path propagation; *PROC Jun 97* 843-852
- Armstrong, E.H.** Some recent developments in the audio receiver; *PROC Apr 97* 685-697
- Armstrong-Helouvy, B.**, see Thomas, D.E., *PROC Mar 95* 407-421
- Arnon, S.**, and N.S. Kopeika. Laser satellite communication network-vibration effect and possible solutions; *PROC Oct 97* 1646-1661
- Asai, S.**, and Y. Wada. Technology challenges for integration near and below 0.1  $\mu\text{m}$ ; *PROC Apr 97* 505-520
- Asaida, T.**, see Hashimoto, Y., *PROC Jul 95* 1032-1043
- Asakura, T.**, see Iwai, T., *PROC May 96* 765-781
- Atlas, L.E.**, G.D. Bernard, and S.B. Narayanan. Applications of time-frequency analysis to signals from manufacturing and machine monitoring sensors; *PROC Sep 96* 1319-1329
- August, D.L.**, see Hwu, W.W., *PROC Dec 95* 1625-1640
- Awwal, A.A.S.**, see Karim, M.A., *PROC Jun 96* 814-827
- Azmoodeh, M.**, and R. Davison. Performance management of public ATM networks-a scaleable and flexible approach; *PROC Oct 97* 1639-1645

##### B

- Badami, V.**, see Bonissone, P.P., *PROC Mar 95* 450-465

- Baglietto, P.**, M. Maresca, M. Migliardi, and N. Zingirian. Image processing on high-performance RISC systems; *PROC Jul 96* 917-930
- Bakircioglu, H.**, see Cramer, C., *PROC Oct 96* 1529-1543
- Bandyopadhyay, S.**, see Roychowdhury, V.P., *PROC Apr 97* 574-588
- Banerjee, D.**, see Borella, M.S., *PROC Aug 97* 1274-1307
- Bard, J.F.** Review of "Heuristic Scheduling Systems with Applications to Production Systems and Project Management" (Morton, T.E., and Pentico, D.W.; 1993); *PROC Feb 96* 324-325
- Barhen, J.**, see Gelenbe, E., *PROC Oct 96* 1355-1357
- Barker, T.T.** Review of "Developing Online Help for Windows" (Boggan, S., et al.; 1993); *PROC Jun 95* 997-998
- Barr, R.C.**, see Ideker, R.E., *PROC Mar 96* 331-333
- Barry, D.T.**, see Wood, J.C., *PROC Sep 96* 1281-1294
- Barry, J.R.**, see Kahn, J.M., *PROC Feb 97* 265-298
- Bar-Shalom, Y.**, see Yeddnapudi, M., *PROC Jan 97* 80-96
- Baselt, D.R.**, G.U. Lee, K.M. Hansen, L.A. Chrisey, and R.L. Colton. A high-sensitivity micromachined biosensor; *PROC Apr 97* 672-680
- Bass, R.W.** Review of "Kalman Filtering: Theory and Practice" (Grewal, M.S., and Andrews, A.P.; 1993); *PROC Feb 96* 321-324
- Bastiaansen, H.**, see van der Wal, K., *PROC Dec 97* 1947-1957
- Battini, F.**, see Colaitis, M.-J., *PROC Jul 96* 1019-1037
- Bauer, R.**, see Davarian, F., *PROC Jun 97* 807-809
- Bauer, R.** Ka-band propagation measurements: an opportunity with the Advanced Communications Technology Satellite (ACTS); *PROC Jun 97* 853-862
- Baumann, S.B.**, see Mingui Sun, *PROC Sep 96* 1302-1311
- Beaver, J.D.**, and V.N. Bringi. The application of S-band polarimetric radar measurements to Ka-band attenuation prediction; *PROC Jun 97* 893-909
- Bernard, G.D.**, see Atlas, L.E., *PROC Sep 96* 1319-1329
- Berrou, C.**, see Le Floch, B., *PROC Jun 95* 982-996
- Bez, R.**, see Pavan, P., *PROC Aug 97* 1248-1271
- Bhat, P.B.**, see Cho-Li Wang, *PROC Jul 96* 931-946
- Biing-Hwang Juang.** see Pitton, J.W., *PROC Sep 96* 1199-1215
- Bijaoui, A.**, E. Slezak, F. Rue, and E. Lega. Wavelets and the study of the distant Universe; *PROC Apr 96* 670-679
- Birdsall, C.K.** Comments on "The pure electron discharge and its applications in radio telegraphy and telephony"; *PROC Sep 97* 1493-1495
- Blahut, D.E.**, T.E. Nichols, W.M. Schell, G.A. Story, and E.S. Szurkowski. Interactive television; *PROC Jul 95* 1071-1085
- Blidberg, D.R.**, see Meyrowitz, A.L., *PROC Aug 96* 1147-1164
- Bluhm, M.**, see McMahan, S.C., *PROC Dec 95* 1664-1672
- Blum, R.S.**, S.A. Kassam, and H.V. Poor. Distributed detection with multiple sensors I. Advanced topics; *PROC Jan 97* 64-79
- Bo Li Xiao.** see Haykin, S., *PROC Jan 95* 95-122
- Bolle, R.**, see Jain, A.K., *PROC Sep 97* 1365-1388
- Bolsens, I.**, H.J. De Man, B. Lin, K. Van Rompaey, S. Vercauteren, and D. Verkest. Hardware/software co-design of digital telecommunication systems; *PROC Mar 97* 391-418
- Bonissone, P.P.**, V. Badami, K.H. Chiang, P.S. Khedkar, K.W. Marcelle, and M.J. Schutzen. Industrial applications of fuzzy logic at General Electric; *PROC Mar 95* 450-465
- Borella, M.S.**, J.P. Jue, D. Banerjee, B. Ramamurthy, and B. Mukherjee. Optical components for WDM lightwave networks; *PROC Aug 97* 1274-1307
- Borgsmiller, S.A.**, see Alouini, M.-S., *PROC Jun 97* 981-997
- Bourlard, H.A.**, see Morgan, N., *PROC May 95* 742-772
- Bowles, J.B.**, and C.E. Pelaez. Application of fuzzy logic to reliability engineering; *PROC Mar 95* 435-449
- Bowyer, K.**, see Stark, L., *PROC Nov 96* 1640-1656
- Brailean, J.C.**, see Ozcelik, T., *PROC Feb 95* 304-316
- Brailean, J.C.**, R.P. Kleihorst, S. Efstratiadis, A.K. Katsaggelos, and R.L. Lagendijk. Noise reduction filters for dynamic image sequences: a review; *PROC Sep 95* 1272-1292
- Bringi, V.N.**, see Beaver, J.D., *PROC Jun 97* 893-909
- Brittain, J.A.** Scanning the Past: Harold A. Wheeler: A pioneer in radio and television; *PROC Jan 97* 200-201
- Brittain, J.A.** Scanning the past: Allen B. DuMont: A pioneer in electronic instruments, radio, and television; *PROC Dec 97* 2081-2082
- Brittain, J.E.** Scanning the past: Edith Clarke and power system stability; *PROC Jan 96* 90
- Brittain, J.E.** Scanning the past: Frederick E. Terman; *PROC Jan 95* 125-126
- Brittain, J.E.** The first issue of the Proceedings [intro. to reprint of issue]; *PROC Feb 97* 299-300
- Brittain, J.E.** Scanning the past: George H. Brown; *PROC Feb 95* 338

- Brittain, J.E.** Scanning the Past: Rudolf Kompfner and the traveling-wave tube; *PROC Feb 97* 340-341
- Brittain, J.E.** Scanning the Past: Lee de Forest and the amplifying audion; *PROC Mar 97* 476-477
- Brittain, J.E.** Scanning the past: William S. Lee and parallel hydro power; *PROC Mar 95* 490
- Brittain, J.E.** Scanning the past: John G. Brainerd and Project PX (ENIAC); *PROC Mar 96* 502
- Brittain, J.E.** The evolution of electrical and electronics engineering and the Proceedings of the IRE: 1938-1962; *PROC May 97* 762-797
- Brittain, J.E.** Scanning the Past: Shintaro Uda and the wave projector; *PROC May 97* 800-801
- Brittain, J.E.** Scanning the past: Fireless fireworks: Lighting at the Panama-Pacific Exposition in 1915; *PROC May 96* 802
- Brittain, J.E.** Scanning the past: William D. Coolidge and ductile tungsten; *PROC May 95* 828
- Brittain, J.E.** Scanning the past: Clarence W. Hansell and Philip S. Carter; *PROC Apr 96* 686
- Brittain, J.E.** Scanning the past: James K. Clapp; *PROC Apr 95* 698
- Brittain, J.E.** Scanning the Past: George W. Pierce: Radio pioneer and educator; *PROC Apr 97* 700-701
- Brittain, J.E.** Scanning the past: John R. Carson and conservation of radio spectrum; *PROC Jun 96* 909-910
- Brittain, J.E.** Scanning the past: Raymond A. Heising; *PROC Jun 95* 1003
- Brittain, J.E.** Scanning the Past: Edwin H. Colpitts: A pioneer in communications engineering; *PROC Jun 97* 1020-1021
- Brittain, J.E.** Scanning the past: William Le Roy Emmet and turboelectric engineering; *PROC Jul 96* 1053-1054
- Brittain, J.E.** Scanning the past: Donald B. Sinclair; *PROC Jul 95* 1107
- Brittain, J.E.** Scanning the Past: Frank J. Sprague and the electrification of urban transportation; *PROC Jul 97* 1183-1184
- Brittain, J.E.** Scanning the past: Semi J. Begun and magnetic recording; *PROC Aug 96* 1189-1190
- Brittain, J.E.** Scanning the past: Ernst F.W. Alexanderson and transoceanic radio; *PROC Aug 95* 1202
- Brittain, J.E.** Scanning the Past: Harold S. Black and the negative feedback amplifier; *PROC Aug 97* 1335-1336
- Brittain, J.E.** Scanning the past: Irving Langmuir and the thermionic vacuum tube; *PROC Sep 95* 1298
- Brittain, J.E.** Scanning the past: Sergei A. Schelkunoff and antenna theory; *PROC Sep 96* 1344
- Brittain, J.E.** Scanning the Past: Ralph Bown and the golden age of propagation research; *PROC Sep 97* 1511-1513
- Brittain, J.E.** Scanning the past: Greenleaf W. Pickard and the eclipse network; *PROC Oct 95* 1434
- Brittain, J.E.** Scanning the Past: John R. Stone and the professionalization of communications engineering; *PROC Oct 96* 1573-1574
- Brittain, J.E.** Scanning the Past: Vladimir Karapetoff: A pioneer electrical engineering educator; *PROC Oct 97* 1662-1663
- Brittain, J.E.** Scanning the past: Benjamin G. Lamme and giant generators; *PROC Nov 95* 1594-1595
- Brittain, J.E.** Prolog to "Antennae"; *PROC Nov 96* 1615-1616
- Brittain, J.E.** Scanning the past: Harris J. Ryan and high voltage engineering; *PROC Nov 96* 1709-1710
- Brittain, J.E.** Scanning the past: Edward W. Herold: A leader in the development of color television; *PROC Nov 97* 1876-1877
- Brittain, J.E.** Scanning the past: Harald T. Friis; *PROC Dec 95* 1514
- Brittain, J.E.** The evolution of electrical and electronics engineering and the Proceedings of the IRE: 1913-1937; *PROC Dec 96* 1747-1772
- Brittain, J.E.** Scanning the past: Reginald A. Fessenden and the origins of radio; *PROC Dec 96* 1852-1853
- Brodersen, R.W.**, see Chandrakasan, A.P., *PROC Apr 95* 498-523
- Buchanan, D.A.**, see Yuan Taur, *PROC Apr 97* 486-504
- Burks, A.W.** Electronic computing circuits of the ENIAC; *PROC Jul 97* 1172-1182
- Burlina, P.**, see Chellappa, R., *PROC Jan 97* 120-138
- Burton, F.**, see Lyons, M.H., *PROC Oct 97* 1544-1555
- Byeong Gi Lee**, and Seok Chang Kim. Recent advances in theory and applications of scrambling techniques for lightwave transmission; *PROC Oct 95* 1399-1428
- Carothers, F.** Prolog to "Asynchronous design methodologies: An overview"; *PROC Jan 95* 67-68
- Carothers, F.** Prolog to "Noise reduction filters for dynamic image sequences: A review"; *PROC Sep 95* 1270-1271
- Carothers, F.** Prolog to "Recognizing object function through reasoning about partial shape descriptions and dynamic physical properties"; *PROC Nov 96* 1638-1639
- Caswell, S.A.**, see Jenkins, J.M., *PROC Mar 96* 428-445
- Cathoor, F.**, see Singh, D., *PROC Apr 95* 570-594
- Cauley, G.**, see Hsiao-Dong Chang, *PROC Nov 95* 1497-1529
- Caulfield, H.J.**, see Yao Li, *PROC May 96* 720-732
- Cerrina, F.** Application of X-rays to nanolithography; *PROC Apr 97* 644-651
- Challapali, K.**, X. Lebegue, J.S. Lim, W.H. Paik, and P.A. Snopko. The Grand Alliance system for US HDTV; *PROC Feb 95* 158-174
- Chand, S.**, and S.L. Chiu. Scanning the issue: Special issue on fuzzy logic with engineering applications [intro.]; *PROC Mar 95* 343-344
- Chandrakasan, A.P.**, and R.W. Brodersen. Minimizing power consumption in digital CMOS circuits; *PROC Apr 95* 498-523
- Changdon Kee**, see Enge, P., *PROC Aug 96* 1063-1088
- Chang Hsiao-Dong**, see Hsiao-Dong Chang, *PROC Nov 95* 1497-1529
- Chang Kim Seok**, see Byeong Gi Lee, *PROC Oct 95* 1399-1428
- Chao Yi-Chung**, see Enge, P., *PROC Aug 96* 1063-1088
- Chaparro, L.F.**, see El-Jaroudi, A., *PROC Sep 96* 1312-1318
- Chapin Cutler, C.** Forty years of molecular electronics; *PROC Jul 97* 1141-1143
- Chapman, C.A.**, see Haykin, S., *PROC Sep 96* 1295-1301
- Charbonnier, F.M.** External defibrillators and emergency external pacemakers; *PROC Mar 96* 487-499
- Chee-Yee Chong**, see Liggins, M.E., II, *PROC Jan 97* 97-109
- Chellappa, R.**, Qinfen Zheng, P. Burlina, C. Shekhar, and K.B. Eom. On the positioning of multisensor imagery for exploitation and target recognition; *PROC Jan 97* 120-138
- Chellappa, R.**, C.L. Wilson, and S. Sirohey. Human and machine recognition of faces: a survey; *PROC May 95* 705-741
- Chen, C.-T.**, see Lin, D.W., *PROC Feb 95* 175-193
- Chen, T.-H.** Review of "Engineering Applications of Correlation and Spectral Analysis" (Bendat, J.S., and Piersol, A.G.; 1993); *PROC Jan 95* 124
- Chen-Ching Liu**, see Vu, K.T., *PROC Nov 95* 1442-1455
- Cheng, K.-Y.** Molecular beam epitaxy technology of III-V compound semiconductors for optoelectronic applications; *PROC Nov 97* 1694-1714
- Chen Hai-Wen**, see Hai-Wen Chen, *PROC Jan 95* 39-66
- Chen Wei**, see Yuan Taur, *PROC Apr 97* 486-504
- Cheron, B.**, see Colaitis, M.-J., *PROC Jul 96* 1019-1037
- Chia, S.** Review of "The GSM System for Mobile Communications" (Mouly, M., and Pautet, M.-B.); *PROC Jun 95* 999-1000
- Chia-Chi Chu**, see Hsiao-Dong Chang, *PROC Nov 95* 1497-1529
- Chiang, K.H.**, see Bonissone, P.P., *PROC Mar 95* 450-465
- Chiariglione, L.** The development of an integrated audiovisual coding standard: MPEG; *PROC Feb 95* 151-157
- Chin-Woo Tan, M.** Varghese, P. Varaiya, and F.F. Wu. Bifurcation, chaos, and voltage collapse in power systems; *PROC Nov 95* 1484-1496
- Chiu, S.L.**, see Chand, S., *PROC Mar 95* 343-344
- Cho-Li Wang, P.B.** Bhat, and V.K. Prasanna. High-performance computing for vision; *PROC Jul 96* 931-946
- Chong Chee-Yee**, see Liggins, M.E., II, *PROC Jan 97* 97-109
- Choquette, K.D.**, and H.Q. Hou. Vertical-cavity surface emitting lasers: Moving from research to manufacturing; *PROC Nov 97* 1730-1739
- Chou, S.Y.** Patterned magnetic nanostructures and quantized magnetic disks; *PROC Apr 97* 652-671
- Chrisey, L.A.**, see Baselt, D.R., *PROC Apr 97* 672-680
- Chuang Gu**, see Salembier, P., *PROC Jun 95* 843-857
- Chu Chia-Chi**, see Hsiao-Dong Chang, *PROC Nov 95* 1497-1529
- Chuen-Tsai Sun**, see Jang, J.-S.R., *PROC Mar 95* 378-406
- Claffy, K.**, and T. Monk. What's next for Internet data analysis? Status and challenges facing the community; *PROC Oct 97* 1563-1571
- Clarke, L.P.**, see Wei Qian, *PROC Oct 96* 1458-1473
- Cochrane, P.** Scanning the issue: Special issue on communications in the twenty-first century [intro.]; *PROC Oct 97* 1519-1522
- Cochrane, P.**, see Henning, I., *PROC Oct 97* 1572-1581
- Cohen, A.**, and J. Kovacevic. Wavelets: the mathematical background; *PROC Apr 96* 514-522
- Cohen, L.** // Preface to the special issue on time-frequency analysis; *PROC Sep 96* 1197-1198
- Colaitis, M.-J.**, J.-L. Jumpertz, B. Guerin, B. Cheron, F. Battini, B. De Lescure, E. Gautier, and J.-P. Geffroy. The implementation of P<sup>3</sup>I, a parallel architecture for video real-time processing: a case study; *PROC Jul 96* 1019-1037
- Coleman, J.J.** Metalorganic chemical vapor deposition for optoelectronic devices; *PROC Nov 97* 1715-1729
- Collin, R.E.** An introduction to the classic paper by M.I. Pupin [on antenna radiation resistance measurement]; *PROC Feb 97* 301-305
- Colton, R.L.**, see Baselt, D.R., *PROC Apr 97* 672-680

## C

- Callon, R.**, see Ahmed, H.M., *PROC Dec 97* 1984-1997
- Campbell, J.P., Jr.** Speaker recognition: a tutorial; *PROC Sep 97* 1437-1462
- Campbell, P.M.**, see Snow, E.S., *PROC Apr 97* 601-611
- Carmer, D.C.**, and L.M. Peterson. Laser radar in robotics; *PROC Feb 96* 299-320
- Caruthers, F.** Prolog to "Asynchronous design methodologies: An overview"; *PROC Jan 95* 67-68

- Corkum, D.L.**, see McManamon, P.F., *PROC Feb 96* 268-298
- Cornero, M.**, see Paulin, P.G., *PROC Mar 97* 419-435
- Costa, A.**, A. De Gloria, P. Faraboschi, A. Pagni, and G. Rizzotto. Hardware solutions for fuzzy control; *PROC Mar 95* 422-434
- Costantini, M.**, A. Farina, and F. Zirilli. The fusion of different resolution SAR images; *PROC Jan 97* 139-146
- Cotanis, N.** The radio receiver saga: An introduction to the classic paper by Edwin H. Armstrong; *PROC Apr 97* 681-684
- Couch, R.H.**, see Winker, D.M., *PROC Feb 96* 164-180
- Cramer, C.**, E. Gelenbe, and H. Bakircioglu. Low bit-rate video compression with neural networks and temporal subsampling; *PROC Oct 96* 1529-1543
- Crane, R.K.**, Xuhe Wang, D.B. Westenhaver, and W.J. Vogel. ACTS propagation experiment: experiment design, calibration, and data preparation and archival; *PROC Jun 97* 863-878
- Crane, R.K.**, and A.W. Dissanayake. ACTS propagation experiment: attenuation distribution observations and prediction model comparisons; *PROC Jun 97* 879-892
- Crane, R.K.**, see Mayer, C.E., *PROC Jun 97* 936-945
- Crane, R.K.**, and P.C. Robinson. ACTS propagation experiment: rain-rate distribution observations and prediction model comparisons; *PROC Jun 97* 946-958
- Crowcroft, J.**, see White, P.P., *PROC Dec 97* 1934-1946
- Csiszar, I.** Review of "Universal Compression and Retrieval" (Krichevsky, R.; 1994); *PROC Jun 95* 1000-1002
- Culshaw, B.**, C. Michie, P. Gardiner, and A. McGown. Smart structures and applications in civil engineering; *PROC Jan 96* 78-86

## D

- Dahl, R.E.**, see Mingui Sun, *PROC Sep 96* 1302-1311
- Dahleh, M.**, A. Peirce, H.A. Rabitz, and V. Ramakrishna. Control of molecular motion; *PROC Jan 96* 7-15
- Dahmann, J.S.**, and D.C. Wood. Scanning the issue: Special issue on distributed interactive simulation [intro.]; *PROC Aug 95* 1111-1113
- Daniel, M.M.**, and A.S. Willsky. A multiresolution methodology for signal-level fusion and data assimilation with applications to remote sensing; *PROC Jan 97* 164-180
- Dar-Shyang Lee**, see Srihari, S.N., *PROC Jul 96* 1038-1049
- Dasarathy, B.V.** Sensor fusion potential exploitation-innovative architectures and illustrative applications; *PROC Jan 97* 24-38
- Da Silva, V.L.**, see Yadlowsky, M.J., *PROC Nov 97* 1765-1779
- Daubechies, I.**, see Kovacevic, J., *PROC Apr 96* 507-509
- Daubechies, I.** Where do wavelets come from? A personal point of view; *PROC Apr 96* 510-513
- Davari, B.**, R.H. Dennard, and G.G. Shahidi. CMOS scaling for high performance and low power-the next ten years; *PROC Apr 95* 595-606
- Davarian, F.**, D.V. Rogers, and R. Bauer. Scanning the issue: Special issue on Ka-band propagation effects on earth-satellite links [intro.]; *PROC Jun 97* 807-809
- Davarian, F.**, see Rogers, D.V., *PROC Jun 97* 810-820
- Davie, B.**, see Rekhter, Y., *PROC Dec 97* 1973-1983
- Davis, L.L., Jr.**, see Puskorius, G.V., *PROC Oct 96* 1407-1420
- Davis, P.K.** Distributed interactive simulation in the evolution of DoD warfare modeling and simulation; *PROC Aug 95* 1138-1155
- Davison, R.**, see Azmoodeh, M., *PROC Oct 97* 1639-1645
- Decina, M.**, and V. Trecordi. Convergence of telecommunications and computing to networking models for integrated services and applications; *PROC Dec 97* 1887-1914
- Defevere, D.C.**, see Vanderwater, D.A., *PROC Nov 97* 1752-1764
- de Forest, L.** Recent developments in the work of the Federal Telegraph Company; *PROC Feb 97* 327-336
- De Gaudenzi, R.**, F. Giannetti, and M. Luise. Advances in satellite CDMA transmission for mobile and personal communications; *PROC Jan 96* 18-39
- De Gloria, A.**, see Costa, A., *PROC Mar 95* 422-434
- Delaney, R.L.**, see Verly, J.G., *PROC Feb 96* 126-163
- De Lescure, B.**, see Colaitis, M.-J., *PROC Jul 96* 1019-1037
- Deliso, E.M.**, see Yadlowsky, M.J., *PROC Nov 97* 1765-1779
- Delogne, P.** Radio in 1913: An introduction to the classic paper by L. de Forest [on telegraphy]; *PROC Feb 97* 323-326
- De Man, H.J.**, see Bolsens, I., *PROC Mar 97* 391-418
- Demassieux, N.**, see Pirsch, P., *PROC Feb 95* 220-246
- De Micheli, G.** Scanning the issue: Special issue on hardware/software co-design [intro.]; *PROC Mar 97* 347-348
- De Michell, G.**, and R.K. Gupta. Hardware/software co-design; *PROC Mar 97* 349-365
- DenBaars, S.P.** Gallium-nitride-based materials for blue to ultraviolet optoelectronics devices; *PROC Nov 97* 1740-1749
- Dennard, R.H.**, see Davari, B., *PROC Apr 95* 595-606
- Depp, S.W.**, see Harris, E.P., *PROC Apr 95* 636-658

- Deutsch, T.F.** Lasers and optics in health care; *PROC Nov 97* 1797-1816
- Director, S.W.**, P.K. Khosla, R.A. Rohrer, and R.A. Rutenbar. Reengineering the curriculum: design and analysis of a new undergraduate Electrical and Computer Engineering degree at Carnegie Mellon University; *PROC Sep 95* 1246-1269
- Dissanayake, A.W.**, see Crane, R.K., *PROC Jun 97* 879-892
- Dissanayake, A.W.** Application of open-loop uplink power control in Ka-band satellite links; *PROC Jun 97* 959-969
- Dissanayake, A.W.**, see Goldhirsh, J., *PROC Jun 97* 970-980
- Dony, R.D.**, and S. Haykin. Neural network approaches to image compression; *PROC Feb 95* 288-303
- Dorf, R.C.** Review of "The World in 2020" (McRae, H.; 1994); *PROC Jan 96* 88-89
- Dorf, R.C.** Review of "World Class" (Kanter, R.M.; 1995); *PROC Jul 96* 1050-1051
- Dorf, R.C.**, and M. Raitanen. The Balanced Scorecard: Translating Strategy into Action (Kaplan, R.S., and Norton, D.P.; 1996) [book review]; *PROC Sep 97* 1509-1510
- Dorschner, T.A.**, see McManamon, P.F., *PROC Feb 96* 268-298
- Dragonette, L.R.**, D.M. Drumheller, C.F. Gaumond, D.H. Hughes, B.T. O'Connor, Nai-Chyuan Yen, and T.J. Yoder. The application of two-dimensional signal transformations to the analysis and synthesis of structural excitations observed in acoustical scattering; *PROC Sep 96* 1249-1263
- Draper, B.A.**, A.R. Hanson, and E.M. Riseman. Knowledge-directed vision: control, learning, and integration; *PROC Nov 96* 1625-1637
- Dreher, R.D.**, see Warren, J.A., *PROC Mar 96* 468-479
- Drumheller, D.M.**, see Dragonette, L.R., *PROC Sep 96* 1249-1263
- Dudek, G.L.** Environment representation using multiple abstraction levels; *PROC Nov 96* 1684-1704
- Dufaux, F.**, and F. Moscheni. Motion estimation techniques for digital TV: a review and a new contribution; *PROC Jun 95* 858-876

## E

- Ebrahimi, T.**, E. Reusens, and Wei Li. New trends in very low bitrate video coding; *PROC Jun 95* 877-891
- Eckert, J.P., Jr.** A survey of digital computer memory systems; *PROC Jan 97* 184-197
- Edwards, B.E.**, see Melngailis, I., *PROC Feb 96* 227-267
- Edwards, S.**, L. Lavagno, E.A. Lee, and A. Sangiovanni-Vincentelli. Design of embedded systems: formal models, validation, and synthesis; *PROC Mar 97* 366-390
- Efstratiadis, S.**, see Brailean, J.C., *PROC Sep 95* 1272-1292
- Egan, B.**, see Lyons, M.H., *PROC Oct 97* 1544-1555
- Egger, O.**, Wei Li, and M. Kunt. High compression image coding using an adaptive morphological subband decomposition; *PROC Feb 95* 272-287
- Einstein, J.R.**, see Ying Xu, *PROC Oct 96* 1544-1552
- Ekmeccic, I.**, I. Tartalja, and V. Milutinovic. A survey of heterogeneous computing: concepts and systems; *PROC Aug 96* 1127-1144
- Eleftheriades, G.** Review of "Dyadic Green Functions in Electromagnetic Theory" (Tai, C.-T.; 1994); *PROC Jun 95* 998-999
- El-Jaroudi, A.**, M.S. Redfern, L.F. Chaparro, and J.M. Furman. The application of time-frequency methods to the analysis of postural sway; *PROC Sep 96* 1312-1318
- Ellenbogen, J.C.**, see Goldhaber-Gordon, D., *PROC Apr 97* 521-540
- Elliott, D.L.** Review of "Stability Theory" (Parks, P.C., and Hahn, V.; 1993); *PROC May 96* 799-800
- Enge, P.**, T. Walter, S. Pullen, Changdon Kee, Yi-Chung Chao, and Yeou-Jyh Tsai. Wide area augmentation of the Global Positioning System; *PROC Aug 96* 1063-1088
- Enz, C.C.**, and G.C. Temes. Circuit techniques for reducing the effects of op-amp imperfections: autozeroing, correlated double sampling, and chopper stabilization; *PROC Nov 96* 1584-1614
- Eom, K.B.**, see Chellappa, R., *PROC Jan 97* 120-138
- Ephremides, A.** Review of "The Collected Papers of Claude E. Shannon" (Sloane, N.J.A., and Wyner, A.D., Eds.; 1993); *PROC Oct 96* 1570-1571
- Erdreich, L.S.**, see Foster, K.R., *PROC May 97* 733-746
- Esaki, H.**, see Katsube, Y., *PROC Dec 97* 1998-2006
- Esch, J.** Prolog to "Control of molecular motion"; *PROC Jan 96* 6
- Esch, J.** Prolog to "Performance trends in high-end processors"; *PROC Jan 95* 18-19
- Esch, J.** Prolog to "Managing design data: The five dimensions of CAD frameworks, configuration management and product data management"; *PROC Jan 96* 40-41
- Esch, J.** Prolog to "Automatic on-line signature verification"; *PROC Feb 97* 213-214
- Esch, J.** Prolog to "Human and machine recognition of faces: A survey"; *PROC May 95* 704
- Esch, J.** Prolog to "Hypermedia data modeling, coding, and semiotics"; *PROC Jul 97* 1109-1110

- Esch, J.** Prolog to "Principles and methods of testing finite state machines - A survey"; *PROC Aug 96* 1089
- Esch, J.** Prolog to "Autonomous vehicles"; *PROC Aug 96* 1145-1146
- Esch, J.** Prolog to "Service disciplines for guaranteed performance service in packet-switching networks"; *PROC Oct 95* 1373
- Esch, J.** Prolog to "Environment representation using multiple abstraction levels"; *PROC Nov 96* 1682-1683
- Esch, J.** Prolog to "Quantum information processing: Cryptography, computation, and teleportation"; *PROC Dec 96* 1717-1718
- Eto, Y.**, see Umemoto, M., *PROC Jul 95* 1044-1054

## F

- Falk, H.** Prolog to "Detection of signals in chaos"; *PROC Jan 95* 94
- Falk, H.** Prolog to "Wireless infrared communications"; *PROC Feb 97* 263-264
- Falk, H.** Prolog to "Neural networks for statistical recognition of continuous speech"; *PROC May 95* 741
- Falk, H.** Prolog to "Discrete simulation of colored noise and stochastic processes and  $1/f^{\alpha}$  power law noise generation"; *PROC May 95* 800-801
- Falk, H.** Prolog to "Distributed multimedia systems"; *PROC Jul 97* 1061-1062
- Falk, H.** Prolog to "A survey of heterogeneous computing: Concepts and Systems"; *PROC Aug 96* 1124-1126
- Falk, H.** Prolog to "Reengineering the curriculum: Design and analysis of a new undergraduate electrical and computer engineering degree at Carnegie Mellon University"; *PROC Sep 95* 1244-1245
- Falk, H.** Prolog to "Protocol pruning"; *PROC Oct 95* 1356
- Falk, H.** Prolog to "Recent advances in theory and applications of scrambling techniques for lightwave transmission"; *PROC Oct 95* 1397-1398
- Falk, H.** Prolog to "Knowledge-directed vision: Control, learning, and integration"; *PROC Nov 96* 1623-1624
- Fan Tso Yee**, see Melngailis, I., *PROC Feb 96* 227-267
- Faraboschi, P.**, see Costa, A., *PROC Mar 95* 422-434
- Farge, M.**, N. Kevlahan, V. Perrier, and E. Goirand. Wavelets and turbulence; *PROC Apr 96* 639-669
- Farina, A.**, see Costantini, M., *PROC Jan 97* 139-146
- Farinacci, D.**, see Rekhter, Y., *PROC Dec 97* 1973-1983
- Faybusovich, L.** Review of "Optimization and Dynamical Systems" (Helmke, U., and Moore, J.; 1994); *PROC Jun 96* 907-908
- Feil, J.**, see Helmken, H., *PROC Jun 97* 917-925
- Feil, J.**, L.J. Ippolito, Jr., H. Helmken, C.E. Mayer, S. Horan, and R.E. Henning. Fade slope analysis for Alaska, Florida, and New Mexico ACTS propagation data at 20 and 27.5 GHz; *PROC Jun 97* 926-935
- Feldkamp, L.A.** Review of "Neural Networks: Current Applications" (Lisboa, P.G.J., Ed.; 1992); *PROC Jan 96* 87-88
- Feldkamp, L.A.**, see Puskorius, G.V., *PROC Oct 96* 1407-1420
- Feng Yutao**, see Gelenbe, E., *PROC Oct 96* 1488-1496
- Fischl, R.F.**, see Kwatny, H.G., *PROC Nov 95* 1456-1483
- Fitzsimmons, E.A.**, and J.D. Fletcher. Beyond DoD: non-defense training and education applications of DIS; *PROC Aug 95* 1179-1187
- Flamant, P.H.**, see Vaughan, J.M., *PROC Feb 96* 205-226
- Fletcher, J.D.**, see Fitzsimmons, E.A., *PROC Aug 95* 1179-1187
- Flynn, M.J.** Introduction to "Influence of programming techniques on the design of computers"; *PROC Mar 97* 467-469
- Fogel, D.B.** Review of "Review of Computational Intelligence Imitating Life" (Zurada, J.M., et al., Eds.; 1994); *PROC Nov 95* 1588-1591
- Foster, K.R.**, L.S. Erdreich, and J.E. Moulder. Weak electromagnetic fields and cancer in the context of risk assessment; *PROC May 97* 733-746
- Franca, J.**, A. Petraglia, and S.K. Mitra. Multirate analog-digital systems for signal processing and conversion; *PROC Feb 97* 242-262
- Frank, D.J.**, see Yuan Taur, *PROC Apr 97* 486-504
- Freed, C.**, see Melngailis, I., *PROC Feb 96* 227-267
- Freuhauf, K.** Review of "Software Quality Management - A Pro-active Approach" (Brinkworth, J.W.O.; 1992); *PROC Mar 95* 488-489
- Friedman, L.J.**, see McManamon, P.F., *PROC Feb 96* 268-298
- Fukinuki, T.**, see Umemoto, M., *PROC Jul 95* 1044-1054
- Furman, J.M.**, see El-Jaroudi, A., *PROC Sep 96* 1312-1318

## G

- Gagnaire, M.** An overview of broad-band access technologies; *PROC Dec 97* 1958-1972
- Gallagher, D.M.**, see Hwu, W.W., *PROC Dec 95* 1625-1640
- Gardiner, P.**, see Culshaw, B., *PROC Jan 96* 78-86
- Garibay, R.A., Jr.**, see McMahan, S.C., *PROC Dec 95* 1664-1672
- Garrett, R.**, see Reddy, R., *PROC Aug 95* 1188-1195
- Gaumont, C.F.**, see Dragonette, L.R., *PROC Sep 96* 1249-1263

- Gaunaud, G.C.**, and H.C. Strifors. Signal analysis by means of time-frequency (Wigner-type) distributions-applications to sonar and radar echoes; *PROC Sep 96* 1231-1248
- Gautier, E.**, see Colaitis, M.-J., *PROC Jul 96* 1019-1037
- Gaynor, G.H.** Review of "Strategic Technology Management" (Betz, F.; 1993); *PROC Mar 96* 500-501
- Geddes, L.A.**, see Tacker, W.A., *PROC Mar 96* 355-365
- Geffroy, J.-P.**, see Colaitis, M.-J., *PROC Jul 96* 1019-1037
- Gehrke, W.**, see Pirsch, P., *PROC Feb 95* 220-246
- Geisler, E.** Meeting of the Minds: Creating the Market-Based Enterprise (Barabba, V.; 1995) [book review]; *PROC Aug 97* 1334
- Gelenbe, E.**, and J. Barhen. Scanning the issue: Special issue on engineering applications of artificial neural networks [intro.]; *PROC Oct 96* 1355-1357
- Gelenbe, E.**, Yutao Feng, and K.R.R. Krishnan. Neural network methods for volumetric magnetic resonance imaging of the human brain; *PROC Oct 96* 1488-1496
- Gelenbe, E.**, see Cramer, C., *PROC Oct 96* 1529-1543
- Geurts, W.**, see Goossens, G., *PROC Mar 97* 436-454
- Giannetti, F.**, see De Gaudenzi, R., *PROC Jan 96* 18-39
- Gibbins, C.**, see Henning, I., *PROC Oct 97* 1572-1581
- Gi Lee Byeong.** see Byeong Gi Lee, *PROC Oct 95* 1399-1428
- Giles, R.**, and Tingye Li. Optical amplifiers transform long-distance lightwave telecommunications; *PROC Jun 96* 870-883
- Gloster, C.S., Jr.**, see Alexander, W.E., *PROC Jul 96* 947-968
- Godara, L.C.** Applications of antenna arrays to mobile communications. I. Performance improvement, feasibility, and system considerations; *PROC Jul 97* 1031-1060
- Godara, L.C.** Application of antenna arrays to mobile communications. II. Beam-forming and direction-of-arrival considerations; *PROC Aug 97* 1195-1245
- Goirand, E.**, see Farge, M., *PROC Apr 96* 639-669
- Goldgof, D.B.**, see Stark, L., *PROC Nov 96* 1640-1656
- Goldhaber-Gordon, D.**, M.S. Montemerlo, J.C. Love, G.J. Opiteck, and J.C. Ellenbogen. Overview of nanoelectronic devices; *PROC Apr 97* 521-540
- Goldhirsh, J.**, B.H. Musiani, and W.J. Vogel. Cumulative fade distributions and frequency scaling techniques at 20 GHz from the Advanced Communications Technology Satellite and at 12 GHz from the digital satellite system; *PROC Jun 97* 910-916
- Goldhirsh, J.**, B.H. Musiani, A.W. Dissanayake, and Kuan-Ting Lin. Three-site space-diversity experiment at 20 GHz using ACTS in the Eastern United States; *PROC Jun 97* 970-980
- Goldschlag, D.M.**, see Landwehr, C.E., *PROC Dec 97* 2034-2051
- Gonzalez, R.** Hypermedia data modeling, coding, and semiotics; *PROC Jul 97* 1111-1140
- Goode, B.** Scanning the issue: Special issue on global information infrastructure [intro.]; *PROC Dec 97* 1883-1886
- Gooden, D.**, see Wong, S., *PROC Feb 95* 194-219
- Goodman, R.M.**, see Ambrose, B.E., *PROC Oct 96* 1421-1429
- Goossens, G.**, see Paulin, P.G., *PROC Mar 97* 419-435
- Goossens, G.**, J. Van Praet, D. Lanneer, W. Geurts, A. Kifli, C. Liem, and P.G. Paulin. Embedded software in real-time signal processing systems: design technologies; *PROC Mar 97* 436-454
- Gordon, B.M.**, see Meng, T.H., *PROC Apr 95* 659-680
- Goser, K.F.**, C. Pacha, A. Kanstein, and M.L. Rossmann. Aspects of systems and circuits for nanoelectronics; *PROC Apr 97* 558-573
- Greenley, D.**, see Tremblay, M., *PROC Dec 95* 1653-1663
- Gregory, D.A.**, see Yu, F.T.S., *PROC May 96* 733-752
- Griwodz, C.**, see Wolf, L.C., *PROC Dec 97* 1915-1933
- Grover, W.D.** Self-organizing broad-band transport networks; *PROC Oct 97* 1582-1611
- Gu Chuang.** see Salembier, P., *PROC Jun 95* 843-857
- Guerin, B.**, see Colaitis, M.-J., *PROC Jul 96* 1019-1037
- Guillemain, P.**, and R. Kronland-Martinet. Characterization of acoustic signals through continuous linear time-frequency representations; *PROC Apr 96* 561-585
- Gupta, R.K.**, see De Michell, G., *PROC Mar 97* 349-365
- Gyllenhaal, J.C.**, see Hwu, W.W., *PROC Dec 95* 1625-1640

## H

- Haab, G.E.**, see Hwu, W.W., *PROC Dec 95* 1625-1640
- Habara, K.**, see Ohzu, H., *PROC May 96* 782-798
- Habib, I.W.** Applications of neurocomputing in traffic management of ATM networks; *PROC Oct 96* 1430-1441
- Hager, G.** Review of "Active Vision" (Blake, A., and Yuille, A.; 1992); *PROC Mar 95* 484
- Haines, D.E.**, see McRury, I.D., *PROC Mar 96* 404-416
- Hai-Wen Chen** Modeling and identification of parallel nonlinear systems: structural classification and parameter estimation methods; *PROC Jan 95* 39-66

- Halici, U.**, and G. Ongun. Fingerprint classification through self-organizing feature maps modified to treat uncertainties; *PROC Oct 96* 1497-1512
- Hall, D.L.**, and J. Llinas. An introduction to multisensor data fusion; *PROC Jan 97* 6-23
- Hammerstrom, D.W.**, and D.P. Lulich. Image processing using one-dimensional processor arrays; *PROC Jul 96* 1005-1018
- Hank, R.E.**, see Hwu, W.W., *PROC Dec 95* 1625-1640
- Hansen, K.M.**, see Baselt, D.R., *PROC Apr 97* 672-680
- Hanson, A.R.**, see Draper, B.A., *PROC Nov 96* 1625-1637
- Hardesty, R.M.**, see Huffaker, R.M., *PROC Feb 96* 181-204
- Harper, A.** Review of "Concurrent Engineering Design" (Miller, L.G.; 1994); *PROC Mar 95* 485-486
- Harris, E.P.**, S.W. Depp, W.E. Pence, S. Kirkpatrick, M. Sri-Jayantha, and R.R. Troutman. Technology directions for portable computers; *PROC Apr 95* 636-658
- Hashimoto, A.**, see Shafi, M., *PROC Oct 97* 1622-1638
- Hashimoto, Y.**, M. Yamamoto, and T. Asaida. Cameras and display systems; *PROC Jul 95* 1032-1043
- Hauck, S.** Asynchronous design methodologies: an overview; *PROC Jan 95* 69-93
- Hayes, D.F.** Review of "LAN Communications Handbook" (Simonds, F.; 1994); *PROC Sep 95* 1296-1297
- Haykin, S.**, and Xiao Bo Li. Detection of signals in chaos; *PROC Jan 95* 95-122
- Haykin, S.**, see Dony, R.D., *PROC Feb 95* 288-303
- Haykin, S.**, R.J. Racine, Yan Xu, and C.A. Chapman. Monitoring neuronal oscillations and signal transmission between cortical regions using time-frequency analysis of electroencephalographic activity; *PROC Sep 96* 1295-1301
- Heinrich, M.**, D. Ofelt, M.A. Horowitz, and J. Hennessy. Hardware/software co-design of the Stanford FLASH multiprocessor; *PROC Mar 97* 455-466
- Heising, R.A.** Production of single sideband for trans-Atlantic radio telephony; *PROC May 97* 752-761
- Helmken, H.**, R.E. Henning, J. Feil, L.J. Ippolito, and C.E. Mayer. A three-site comparison of fade-duration measurements; *PROC Jun 97* 917-925
- Helmken, H.**, see Feil, J., *PROC Jun 97* 926-935
- Hennessy, J.**, see Heinrich, M., *PROC Mar 97* 455-466
- Henning, I.**, S. Sim, C. Gibbings, M. Russell, and P. Cochrane. A testbed for the twenty-first century; *PROC Oct 97* 1572-1581
- Henning, R.E.**, see Helmken, H., *PROC Jun 97* 917-925
- Henning, R.E.**, see Feil, J., *PROC Jun 97* 926-935
- Henriquez, C.S.**, and A.A. Papazoglou. Using computer models to understand the roles of tissue structure and membrane dynamics in arrhythmogenesis; *PROC Mar 96* 334-354
- Herley, C.**, see Ramchandran, K., *PROC Apr 96* 541-560
- Hess-Nielsen, N.**, and M.V. Wickerhauser. Wavelets and time-frequency analysis; *PROC Apr 96* 523-540
- Hill, D.J.** Scanning the issue: special issue on nonlinear phenomena in power systems: theory and practical implications [intro.]; *PROC Nov 95* 1439-1441
- Hills, S.M.** High tension insulators for radio-communication; *PROC Feb 97* 314-322
- Hiskens, I.A.** Analysis tools for power systems-containing with nonlinearities; *PROC Nov 95* 1573-1587
- Hobbs, D.S.**, see McManamon, P.F., *PROC Feb 96* 268-298
- Hofer, R.C.**, and M.L. Loper. DIS today [Distributed interactive simulation]; *PROC Aug 95* 1124-1137
- Hofler, G.E.**, see Vanderwater, D.A., *PROC Nov 97* 1752-1764
- Holonyak, N., Jr.** The semiconductor laser: A thirty-five year prospective; *PROC Nov 97* 1678-1693
- Holz, M.**, see McManamon, P.F., *PROC Feb 96* 268-298
- Hong Lin**, see Jain, A.K., *PROC Sep 97* 1365-1388
- Hon-Sum Wong**, see Yuan Taur, *PROC Apr 97* 486-504
- Hoover, A.**, see Stark, L., *PROC Nov 96* 1640-1656
- Hopper, G.M.**, and J.W. Mauchly. Influence of programming techniques on the design of computers; *PROC Mar 97* 470-474
- Horan, S.**, see Feil, J., *PROC Jun 97* 926-935
- Horowitz, M.A.**, see Heinrich, M., *PROC Mar 97* 455-466
- Hou, H.Q.**, see Choquette, K.D., *PROC Nov 97* 1730-1739
- Hsiao-Dong Chang**, Chia-Chi Chu, and G. Cauley. Direct stability analysis of electric power systems using energy functions: theory, applications, and perspective; *PROC Nov 95* 1497-1529
- Hsien Wu Ming**, see Ting-Chung Poon, *PROC May 96* 753-764
- Hsing, T.R.**, see Lin, D.W., *PROC Feb 95* 175-193
- Huang, H.**, see Yatagai, T., *PROC Jun 96* 828-852
- Huang, H.K.**, see Wong, S., *PROC Feb 95* 194-219
- Huang, T.S.**, see Aizawa, K., *PROC Feb 95* 259-271
- Hua Yingbo**, see Abed-Meraim, K., *PROC Aug 97* 1310-1322
- Huffaker, R.M.**, and R.M. Hardesty. Remote sensing of atmospheric wind velocities using solid-state and CO<sub>2</sub> coherent laser systems; *PROC Feb 96* 181-204
- Hughes, D.H.**, see Dragonette, L.R., *PROC Sep 96* 1249-1263
- Hui Zhang** Service disciplines for guaranteed performance service in packet-switching networks; *PROC Oct 95* 1374-1396
- Hung, A.C.**, see Meng, T.H., *PROC Apr 95* 659-680
- Hwang, J.-N.** Review of "Neural Networks: A Comprehensive Foundation" (Haykin, S.; 1994); *PROC Sep 95* 1294-1296
- Hwu, W.W.**, R.E. Hank, D.M. Gallagher, S.A. Mahlke, D.M. Lavery, G.E. Haab, J.C. Gyllenhaal, and D.I. August. Compiler technology for future microprocessors; *PROC Dec 95* 1625-1640

## I

- Ichioka, Y.**, T. Iwaki, and K. Matsuoka. Optical information processing and beyond; *PROC May 96* 694-719
- Ideker, R.E.**, and R.C. Barr. Scanning the issue: Special issue on electrical therapy of cardiac arrhythmias [intro.]; *PROC Mar 96* 331-333
- Indiveri, G.**, see Sarpeshkar, R., *PROC Jul 96* 969-987
- Ippolito, L.J.**, see Helmken, H., *PROC Jun 97* 917-925
- Ippolito, L.J., Jr.**, see Rogers, D.V., *PROC Jun 97* 810-820
- Ippolito, L.J., Jr.**, see Feil, J., *PROC Jun 97* 926-935
- Ismail, K.E.**, see Yuan Taur, *PROC Apr 97* 486-504
- Isono, H.**, see Motoki, T., *PROC Jul 95* 1009-1021
- Itoh, K.**, K. Sasaki, and Y. Nakagome. Trends in low-power RAM circuit technologies; *PROC Apr 95* 524-543
- Iwai, T.**, and T. Asakura. Speckle reduction in coherent information processing; *PROC May 96* 765-781
- Iwai, Z.** Review of "Direct Adaptive Control Algorithms: Theory and Applications" (Kaufman, H., et al.; 1994); *PROC May 96* 800-801
- Iwaki, T.**, see Ichioka, Y., *PROC May 96* 694-719

## J

- Jabbari, B.** Introduction to the classic paper by Marconi; *PROC Oct 97* 1523-1525
- Jaeger, B.E.**, see Mayer, C.E., *PROC Jun 97* 936-945
- Jain, A.K.**, Lin Hong, S. Pankanti, and R. Bolle. An identity-authentication system using fingerprints; *PROC Sep 97* 1365-1388
- Janes, D.B.**, see Roychowdhury, V.P., *PROC Apr 97* 574-588
- Jang, J.-S.R.**, and Chuen-Tsai Sun. Neuro-fuzzy modeling and control; *PROC Mar 95* 378-406
- Jaworski, R.V.**, see Warren, J.A., *PROC Mar 96* 468-479
- Jelalian, A.V.** Scanning the issue: Special issue on laser radar [intro.]; *PROC Feb 96* 99-102
- Jenkins, J.M.**, and S.A. Caswell. Detection algorithms in implantable cardioverter defibrillators; *PROC Mar 96* 428-445
- Jensen, M.A.**, and Y. Rahmat-Samii. EM interaction of handset antennas and a human in personal communications; *PROC Jan 95* 7-17
- Jimma, K.M.**, see Vu, K.T., *PROC Nov 95* 1442-1455
- Jones, J.L.**, and O.H. Tovar. The mechanism of defibrillation and cardioversion; *PROC Mar 96* 392-403
- Juang Biing-Hwang**, see Pitton, J.W., *PROC Sep 96* 1199-1215
- Joe, J.P.**, see Borella, M.S., *PROC Aug 97* 1274-1307
- Jumpertz, J.-L.**, see Colaitis, M.-J., *PROC Jul 96* 1019-1037
- Jun Zhang**, Yong Yan, and M. Lades. Pace recognition: eigenface, elastic matching, and neural nets; *PROC Sep 97* 1423-1435
- Jutamulia, S.**, and J. Tsujiuchi. Scanning the issue: Special issue on optical information processing [intro.]; *PROC May 96* 691-693
- Jutamulia, S.**, and J. Tsujiuchi. Scanning the issue: Special issue on optical information processing, part 2: Applications - Nonimage signal processing [intro.]; *PROC Jun 96* 811-813

## K

- Kadar, I.**, see Liggins, M.E., II, *PROC Jan 97* 97-109
- Kahn, J.M.**, and J.R. Barry. Wireless infrared communications; *PROC Feb 97* 265-298
- Kalata, P.**, see Kam, M., *PROC Jan 97* 110-119
- Kalogerias, D.**, see Panagiotidis, N.G., *PROC Oct 96* 1474-1487
- Kam, M.**, Xiaoxun Zhu, and P. Kalata. Sensor fusion for mobile robot navigation; *PROC Jan 97* 110-119
- Kangas, J.**, see Kohonen, T., *PROC Oct 96* 1358-1384
- Kanstein, A.**, see Goser, K.F., *PROC Apr 97* 558-573
- Kant, K.**, and L. Ong. Signaling in emerging telecommunications and data networks; *PROC Oct 97* 1612-1621
- Karasawa, Y.**, and Y. Maekawa. Ka-band Earth-space propagation research in Japan; *PROC Jun 97* 821-842

- Karim, M.A.**, and A.A.S. Awwal. Electrooptic displays for optical information processing; *PROC Jun 96* 814-827
- Kasdin, N.J.** Discrete simulation of colored noise and stochastic processes and  $1/f^\alpha$  power law noise generation; *PROC May 95* 802-827
- Kassam, S.A.**, see Blum, R.S., *PROC Jan 97* 64-79
- Katsaggelos, A.K.**, see Ozcelik, T., *PROC Feb 95* 304-316
- Katsaggelos, A.K.**, see Brailean, J.C., *PROC Sep 95* 1272-1292
- Katsube, Y.**, K.-I. Nagami, S. Matsuzawa, and H. Esaki. Internetworking based on cell switch router - Architecture and protocol overview; *PROC Dec 97* 1998-2006
- Katz, D.**, see Rekhter, Y., *PROC Dec 97* 1973-1983
- Kawai, S.**, see Yatagai, T., *PROC Jun 96* 828-852
- Kee Changdon**, see Enge, P., *PROC Aug 96* 1063-1088
- Keicher, W.E.**, see Melngailis, I., *PROC Feb 96* 227-267
- Kersey, A.D.** Prolog to the special section on smart structures; *PROC Jan 96* 57-59
- Kevlahan, N.**, see Farge, M., *PROC Apr 96* 639-669
- Khanna, R.**, see Shen, W., *PROC Sep 97* 1343-1347
- Khanna, R.**, see Shen, W., *PROC Sep 97* 1347
- Khanna, R.**, see Shen, W., *PROC Sep 97* 1364
- Khanna, R.**, see Shen, W., *PROC Sep 97* 1389
- Khanna, R.**, see Shen, W., *PROC Sep 97* 1422
- Khanna, R.**, see Shen, W., *PROC Sep 97* 1436
- Khanna, R.**, see Shen, W., *PROC Sep 97* 1463
- Khanna, R.**, see Weicheng Shen, *PROC Sep 97* 1464-1478
- Khanna, R.**, see Shen, W., *PROC Sep 97* 1479
- Khedkar, P.S.**, see Bonissone, P.P., *PROC Mar 95* 450-465
- Khosla, P.K.**, see Director, S.W., *PROC Sep 95* 1246-1269
- Kifli, A.**, see Goossens, G., *PROC Mar 97* 436-454
- Kim, Y.**, and P.H. Schimpf. Electrical behavior of defibrillation and pacing electrodes; *PROC Mar 96* 446-456
- Kim Seok Chang**, see Byeong Gi Lee, *PROC Oct 95* 1399-1428
- Kirkpatrick, S.**, see Harris, E.P., *PROC Apr 95* 636-658
- Kish, F.A.**, see Vanderwater, D.A., *PROC Nov 97* 1752-1764
- Klasterin, T.D.** Review of "Project Management: Engineering, Technology, and Implementation" (Shtub, A., et al.; 1994); *PROC Dec 95* 1513
- Kleihorst, R.P.**, see Brailean, J.C., *PROC Sep 95* 1272-1292
- Klein, M.J.**, see Stelzried, C.T., *PROC Aug 96* 1187
- Knisley, S.B.**, and W.H. Smith. Experimental techniques for investigating cardiac electrical activity and response to electrical stimuli; *PROC Mar 96* 417-427
- Koch, C.**, see Sarpeshkar, R., *PROC Jul 96* 969-987
- Kohonen, T.**, E. Oja, O. Simula, A. Visa, and J. Kangas. Engineering applications of the self-organizing map; *PROC Oct 96* 1358-1384
- Kollias, S.D.**, see Panagiotidis, N.G., *PROC Oct 96* 1474-1487
- Kompfner, R.**, see Pierce, J.R., *PROC Jun 97* 1011-1019
- Kopeika, N.S.**, see Arnon, S., *PROC Oct 97* 1646-1661
- Kovac, M.**, and N. Ranganathan. JAGUAR: a fully pipelined VLSI architecture for JPEG image compression standard; *PROC Feb 95* 247-258
- Kovacevic, J.**, and I. Daubechies. Scanning the issue: Special issue on wavelets [intro.]; *PROC Apr 96* 507-509
- Kovacevic, J.**, see Cohen, A., *PROC Apr 96* 514-522
- Kowalczyk, J.**, see Mlynek, D.J., *PROC Jul 95* 1055-1070
- Kramer, J.**, see Sarpeshkar, R., *PROC Jul 96* 969-987
- Krikelis, A.**, and R.M. Lea. A modular massively parallel computing approach to image-related processing; *PROC Jul 96* 988-1004
- Krishnan, K.R.R.**, see Gelenbe, E., *PROC Oct 96* 1488-1496
- Kronland-Martinet, R.**, see Guillemain, P., *PROC Apr 96* 561-585
- Kruschke, J.K.** Review of "Connectionism and Psychology" (Quinlan, P.; 1991); *PROC Oct 95* 1431-1432
- Kuansang Wang**, see Pitton, J.W., *PROC Sep 96* 1199-1215
- Kuan-Ting Lin**, see Goldhirsh, J., *PROC Jun 97* 970-980
- Kuchta, D.M.** Review of "Computational Methods for Electromagnetics and Microwaves" (Booton, R.C.; 1992); *PROC Jan 95* 123-124
- Kunt, M.**, see Egger, O., *PROC Feb 95* 272-287
- Kunt, M.** Scanning the issue: Special issue on digital television, part I: enabling technologies [intro.]; *PROC Jun 95* 831-833
- Kunt, M.** Scanning the issue: Special issue on digital television, part 2: hardware and applications [intro.]; *PROC Jul 95* 1007-1008
- Kwark, Y.H.** Review of "Hot-Carrier Reliability of MOS VLSI Circuits" (Leblebici, Y., and Kang, S.-M.; 1993); *PROC Mar 95* 486-487
- Kwatny, H.G.**, R.F. Fischl, and C.O. Nwankpa. Local bifurcation in power systems: theory, computation, and application; *PROC Nov 95* 1456-1483
- Kwong, W.A.**, K.M. Passino, E.G. Laukonen, and S. Yurkovich. Expert supervision of fuzzy learning systems for fault tolerant aircraft control; *PROC Mar 95* 466-483
- Laevens, K.**, see Michiel, H., *PROC Dec 97* 2007-2033
- Legendijk, R.L.**, see Brailean, J.C., *PROC Sep 95* 1272-1292
- LaMaire, R.O.** Review of "Narrowband Land-Mobile Radio Networks" (Linnartz, J.-P.; 1992); *PROC Apr 95* 695-696
- Landwehr, C.E.**, and D.M. Goldschlag. Security issues in networks with Internet access; *PROC Dec 97* 2034-2051
- Langmuir, I.** The pure electron discharge and its applications in radio telegraphy and telephony; *PROC Sep 97* 1496-1508
- Lanneer, D.**, see Goossens, G., *PROC Mar 97* 436-454
- Laukonen, E.G.**, see Kwong, W.A., *PROC Mar 95* 466-483
- Lavagno, L.**, see Edwards, S., *PROC Mar 97* 366-390
- Lavery, D.M.**, see Hwu, W.W., *PROC Dec 95* 1625-1640
- Lea, R.M.**, see Krikelis, A., *PROC Jul 96* 988-1004
- Lebegue, X.**, see Challapali, K., *PROC Feb 95* 158-174
- Lee, D.**, and M. Yannakakis. Principles and methods of testing finite state machines-a survey; *PROC Aug 96* 1090-1123
- Lee, D.**, A.N. Netravali, and K.K. Sabnani. Protocol pruning; *PROC Oct 95* 1357-1372
- Lee, E.A.**, see Edwards, S., *PROC Mar 97* 366-390
- Lee, E.A.**, and T.M. Parks. Dataflow process networks; *PROC May 95* 773-801
- Lee, G.U.**, see Baselt, D.R., *PROC Apr 97* 672-680
- Lee, M.T.**, see Sanders, R.S., *PROC Mar 96* 480-486
- Lee Byeong Gi**, see Byeong Gi Lee, *PROC Oct 95* 1399-1428
- Lee Dar-Shyang**, see Srihari, S.N., *PROC Jul 96* 1038-1049
- Le Floch, B.**, M. Alard, and C. Berrou. Coded orthogonal frequency division multiplex [TV broadcasting]; *PROC Jun 95* 982-996
- Lega, E.**, see Bijaoui, A., *PROC Apr 96* 670-679
- Lenhart, S.** Optimal Control Theory for Infinite Dimensional Systems (Li, X., and Yong, J.; 1995) [book review]; *PROC Feb 97* 338-339
- Lent, C.S.**, and P.D. Tougaw. A device architecture for computing with quantum dots; *PROC Apr 97* 541-557
- Lepoeter, K.**, see van den Hamer, P., *PROC Jan 96* 42-56
- Lerner, J.**, see Taiwei Lu, *PROC Jun 96* 895-905
- Lesieutre, B.C.**, see Pai, M.A., *PROC Nov 95* 1562-1572
- Levine, M.D.** Scanning the issue [including intro. to special section on signals and systems]; *PROC Nov 96* 1579-1580
- Li, C.-S.** Review of "Asynchronous Transfer Mode Solution for Broadband ISBN, 2nd edn." (De Prycker, M.; 1993); *PROC Mar 95* 487-488
- Li, V.O.K.**, and Wanjiun Liao. Distributed multimedia systems; *PROC Jul 97* 1063-1108
- Li, V.O.K.**, and Xiaoxin Qiu. Personal communication systems (PCS); *PROC Sep 95* 1210-1243
- Li, W.**, see Zhang, Y.-Q., *PROC Feb 95* 135-138
- Liao Wanjiun**, see Li, V.O.K., *PROC Jul 97* 1063-1108
- Liberman, S.**, see McManamon, P.F., *PROC Feb 96* 268-298
- Liem, C.**, see Paulin, P.G., *PROC Mar 97* 419-435
- Liem, C.**, see Goossens, G., *PROC Mar 97* 436-454
- Liggins, M.E., II**, Chee-Yee Chong, I. Kadar, M.G. Alford, V. Vannicola, and S. Thomopoulos. Distributed fusion architectures and algorithms for target tracking; *PROC Jan 97* 97-109
- Likourezos, G.** Prolog to "Weak electromagnetic fields and cancer in the context of risk assessment"; *PROC May 97* 731-732
- Likourezos, G.** Prolog to "Applications of antenna arrays to mobile communications, Part I: Performance improvement, feasibility, and system considerations"; *PROC Jul 97* 1029-1030
- Likourezos, G.** Prolog to "Application of antenna arrays to mobile communications, Part II: Beam-forming and direction-of-arrival considerations"; *PROC Aug 97* 1193-1194
- Lim, J.S.**, see Challapali, K., *PROC Feb 95* 158-174
- Lin, B.**, see Bolsens, I., *PROC Mar 97* 391-418
- Lin, D.W.**, C.-T. Chen, and T.R. Hsing. Video on phone lines: technology and applications; *PROC Feb 95* 175-193
- Lin-Cheng Wang**, see Rizvi, S.A., *PROC Oct 96* 1513-1528
- Lin Hong**, see Jain, A.K., *PROC Sep 97* 1365-1388
- Lin Kuan-Ting**, see Goldhirsh, J., *PROC Jun 97* 970-980
- Lippman, A.**, see Netravali, A., *PROC Jun 95* 834-842
- Li Tingye**, see Giles, R., *PROC Jun 96* 870-883
- Liu Chen-Ching**, see Vu, K.T., *PROC Nov 95* 1442-1455
- Li Wei**, see Egger, O., *PROC Feb 95* 272-287
- Li Wei**, see Ebrahimi, T., *PROC Jun 95* 877-891
- Li Weiping**, see Weiping Li, *PROC Feb 95* 317-335
- Li Xiao Bo**, see Haykin, S., *PROC Jan 95* 95-122
- Li Yao**, see Yao Li, *PROC May 96* 720-732
- Llinas, J.**, see Hall, D.L., *PROC Jan 97* 6-23
- Lo, Y.-H.** Scanning the issue: Special issue on optoelectronics technology [intro.]; *PROC Nov 97* 1671-1672
- Loper, M.L.**, see Hofer, R.C., *PROC Aug 95* 1124-1137
- Lo Shih-Hsien**, see Yuan Taur, *PROC Apr 97* 486-504
- Loughlin, P.J.** Scanning the issue: Special issue on time-frequency analysis [intro.]; *PROC Sep 96* 1195-1196
- Love, J.C.**, see Goldhaber-Gordon, D., *PROC Apr 97* 521-540

## L

**Lades, M.**, see Jun Zhang, *PROC Sep 97* 1423-1435

- Lucky, R.W.** New communications services-what does society want?; *PROC Oct 97* 1536-1543
- Luise, M.**, see De Gaudenzi, R., *PROC Jan 96* 18-39
- Lulich, D.P.**, see Hammerstrom, D.W., *PROC Jul 96* 1005-1018
- Lunceford, W.H., Jr.**, see Shiflett, J.E., *PROC Aug 95* 1168-1178
- Lu Taiwei**, see Taiwei Lu, *PROC Jun 96* 895-905
- Lyding, J.W.** UHV STM nanofabrication: progress, technology spin-offs, and challenges; *PROC Apr 97* 589-600
- Lynch, T.**, see Lyons, M.H., *PROC Oct 97* 1544-1555
- Lyons, M.H.**, F. Burton, B. Egan, T. Lynch, and S. Skelton. Dynamic modeling of present and future service demand; *PROC Oct 97* 1544-1555
- M**
- Maciejewski, A.A.** Review of "Robotics and Remote Systems for Hazardous Environments" (Jamshidi, M., and Eicker, P., Eds.; 1993); *PROC Feb 95* 336-337
- Macq, B.M.**, and J.-J. Quisquater. Cryptology for digital TV broadcasting; *PROC Jun 95* 944-957
- Maekawa, Y.**, see Karasawa, Y., *PROC Jun 97* 821-842
- Magnnet Thalman, N.**, and D. Thalmann. Digital actors for interactive television; *PROC Jul 95* 1022-1031
- Mahlke, S.A.**, see Hwu, W.W., *PROC Dec 95* 1625-1640
- Malis, A.G.**, see Ahmed, H.M., *PROC Dec 97* 1984-1997
- Mallat, S.** Wavelets for a vision; *PROC Apr 96* 604-614
- Mandjes, M.**, see van der Wal, K., *PROC Dec 97* 1947-1957
- Mansour, M.** Review of "Robust Control: Systems with Uncertain Physical Parameters" (Ackermann, J., et al.; 1993); *PROC Oct 96* 1572
- Mansuripur, M.**, and G. Sincerbox. Principles and techniques of optical data storage; *PROC Nov 97* 1780-1796
- Marcelle, K.W.**, see Bonissone, P.P., *PROC Mar 95* 450-465
- Marconi, S.G.** Radio telegraphy; *PROC Oct 97* 1526-1535
- Marcus, S.**, see Melngailis, I., *PROC Feb 96* 227-267
- Maresca, M.** Scanning the issue: Special issue on parallel architectures for image processing [intro.]; *PROC Jul 96* 915-916
- Maresca, M.**, see Baglietto, P., *PROC Jul 96* 917-930
- Marrian, C.R.K.** Scanning the issue: Special issue on nanometer-scale science and technology [intro.]; *PROC Apr 97* 483-485
- Matsui, S.** Nanostructure fabrication using electron beam and its application to nanometer devices; *PROC Apr 97* 629-643
- Matsumoto, K.** STM/AFM nano-oxidation process to room-temperature-operated single-electron transistor and other devices; *PROC Apr 97* 612-628
- Matsuoka, K.**, see Ichioka, Y., *PROC May 96* 694-719
- Matsuzawa, S.**, see Katsube, Y., *PROC Dec 97* 1998-2006
- Mauchly, J.W.**, see Hopper, G.M., *PROC Mar 97* 470-474
- Mayer, C.E.**, see Helmken, H., *PROC Jun 97* 917-925
- Mayer, C.E.**, see Feil, J., *PROC Jun 97* 926-935
- Mayer, C.E.**, B.E. Jaeger, R.K. Crane, and Xuhe Wang. Ka-band scintillations: measurements and model predictions; *PROC Jun 97* 936-945
- Mazor, S.** The history of the microcomputer-invention and evolution; *PROC Dec 95* 1601-1608
- McCormick, M.P.**, see Winker, D.M., *PROC Feb 96* 164-180
- McGown, A.**, see Culshaw, B., *PROC Jan 96* 78-86
- McMahan, S.C.**, M. Bluhm, and R.A. Garibay, Jr. 6x86: the Cyrix solution to executing x86 binaries on a high performance microprocessor; *PROC Dec 95* 1664-1672
- McManamon, P.F.**, T.A. Dorschner, D.L. Corkum, L.J. Friedman, D.S. Hobbs, M. Holz, S. Liberman, H.Q. Nguyen, D.P. Resler, R.C. Sharp, and E.A. Watson. Optical phased array technology; *PROC Feb 96* 268-298
- McRury, I.D.**, and D.E. Haines. Ablation for the treatment of arrhythmias; *PROC Mar 96* 404-416
- Meerkov, S.M.** Review of "Manufacturing Systems Engineering" (Gershwin, S.B.; 1994); *PROC Jul 96* 1051-1052
- Meindl, J.D.** Low power microelectronics: retrospect and prospect; *PROC Apr 95* 619-635
- Melngailis, I.**, W.E. Keicher, C. Freed, S. Marcus, B.E. Edwards, A. Sanchez, Tso Yee Fan, and D.L. Spears. Laser radar component technology; *PROC Feb 96* 227-267
- Mendel, J.M.** Fuzzy logic systems for engineering: a tutorial; *PROC Mar 95* 345-377
- Mendel, J.M.** Correction to "Fuzzy logic systems for engineering: A tutorial" (Mar 95 345-377); *PROC Sep 95* 1293
- Meng, T.H.**, B.M. Gordon, E.K. Tsern, and A.C. Hung. Portable video-on-demand in wireless communication; *PROC Apr 95* 659-680
- Mertens, R.P.**, see Szlufcik, J., *PROC May 97* 711-730
- Messerschmitt, D.G.** Introduction to the classic paper by R.A. Heising [on single-sideband transatlantic radio telephony]; *PROC May 97* 747-751
- Messerschmitt, D.G.** The convergence of telecommunications and computing: what are the implications today?; *PROC Aug 96* 1167-1186
- Meyer, F.**, see Salembier, P., *PROC Jun 95* 843-857
- Meyrowitz, A.L.**, D.R. Blidberg, and R.C. Michelson. Autonomous vehicles; *PROC Aug 96* 1147-1164
- Michelson, R.C.**, see Meyrowitz, A.L., *PROC Aug 96* 1147-1164
- Michie, C.**, see Culshaw, B., *PROC Jan 96* 78-86
- Michiel, H.**, and K. Laevens. Teletraffic engineering in a broad-band era; *PROC Dec 97* 2007-2033
- Migliardi, M.**, see Baglietto, P., *PROC Jul 96* 917-930
- Mikolajczak, B.** Review of "Parallel Logic Programming" (Takeuchi, A.; 1992); *PROC Mar 95* 488
- Miller, D.C.**, and J.A. Thorpe. SIMNET: the advent of simulator networking; *PROC Aug 95* 1114-1123
- Milstein, L.B.** Review of "Communication Systems Engineering" (Proakis, and Salehi; 1994); *PROC Mar 95* 486
- Milutinovic, V.**, see Ekmecic, I., *PROC Aug 96* 1127-1144
- Mindell, D.A.** Review of "High Performance: The Culture and Technology of Drag Racing: 1950-1990" (Post, R.C.; 1994); *PROC Aug 95* 1200-1201
- Ming Hsien Wu**, see Ting-Chung Poon, *PROC May 96* 753-764
- Mingui Sun**, Shie Qian, Xiaopu Yan, S.B. Baumann, Xiang-Gen Xia, R.E. Dahl, N.D. Ryan, and R.J. ScLabassi. Localizing functional activity in the brain through time-frequency analysis and synthesis of the EEG; *PROC Sep 96* 1302-1311
- Mitra, S.K.**, see Franca, J., *PROC Feb 97* 242-262
- Mlynek, D.J.**, and J. Kowalczuk. VLSI for digital television; *PROC Jul 95* 1055-1070
- Mohammad, S.N.**, A.A. Salvador, and H. Morkoc. Emerging gallium nitride based devices; *PROC Oct 95* 1306-1355
- Monk, T.**, see Claffy, K., *PROC Oct 97* 1563-1571
- Montemerlo, M.S.**, see Goldhaber-Gordon, D., *PROC Apr 97* 521-540
- Morgan, N.**, and H.A. Bourlard. Neural networks for statistical recognition of continuous speech; *PROC May 95* 742-772
- Morkoc, H.**, see Mohammad, S.N., *PROC Oct 95* 1306-1355
- Moscheni, F.**, see Dufaux, F., *PROC Jun 95* 858-876
- Motoki, T.**, H. Isono, and I. Yuyama. Present status of three-dimensional television research; *PROC Jul 95* 1009-1021
- Moulder, J.E.**, see Foster, K.R., *PROC May 97* 733-746
- Moy, J.**, see Ahmed, H.M., *PROC Dec 97* 1984-1997
- Mozden, T.J.**, see Singh, D., *PROC Apr 95* 570-594
- Mukherjee, B.**, see Borella, M.S., *PROC Aug 97* 1274-1307
- Mural, R.J.**, see Ying Xu, *PROC Oct 96* 1544-1552
- Murase, T.**, see Shafi, M., *PROC Oct 97* 1622-1638
- Musiani, B.H.**, see Goldhirsh, J., *PROC Jun 97* 910-916
- Musiani, B.H.**, see Goldhirsh, J., *PROC Jun 97* 970-980
- N**
- Nacabal, F.**, see Paulin, P.G., *PROC Mar 97* 419-435
- Nagami, K.-I.**, see Katsube, Y., *PROC Dec 97* 1998-2006
- Nai-Chyuan Yen**, see Dragonette, L.R., *PROC Sep 96* 1249-1263
- Nakagome, Y.**, see Itoh, K., *PROC Apr 95* 524-543
- Nalwa, V.S.** Automatic on-line signature verification; *PROC Feb 97* 215-239
- Nandhakumar, N.**, and J.K. Aggarwal. Physics-based integration of multiple sensing modalities for scene interpretation; *PROC Jan 97* 147-163
- Narayanan, S.B.**, see Atlas, L.E., *PROC Sep 96* 1319-1329
- Narendra, K.S.** Neural networks for control theory and practice; *PROC Oct 96* 1385-1406
- Nasrabadi, N.M.**, see Rizvi, S.A., *PROC Oct 96* 1513-1528
- Nelson, J.K.** An introduction to the classic paper by S.M. Hills [on high-voltage insulators for radio]; *PROC Feb 97* 311-313
- Netravali, A.**, and A. Lippman. Digital television: a perspective; *PROC Jun 95* 834-842
- Netravali, A.N.**, see Lee, D., *PROC Oct 95* 1357-1372
- Nguyen, H.Q.**, see McManamon, P.F., *PROC Feb 96* 268-298
- Nichols, T.E.**, see Blahut, D.E., *PROC Jul 95* 1071-1085
- Ning, T.H.** On Shockley's 1952 Proceedings of the IRE paper; *PROC Dec 97* 2052-2054
- Ninomiya, Y.** High definition television systems; *PROC Jul 95* 1086-1093
- Nlis, J.F.**, see Szlufcik, J., *PROC May 97* 711-730
- Noll, P.** Digital audio coding for visual communications; *PROC Jun 95* 925-943
- Normoyle, K.**, see Tremblay, M., *PROC Dec 95* 1653-1663
- Nwankpa, C.O.**, see Kwatny, H.G., *PROC Nov 95* 1456-1483
- O**
- O'Connor, B.T.**, see Dragonette, L.R., *PROC Sep 96* 1249-1263

- O'Donnell, R.** Prolog to "EM interaction of handset antennas and a human in personal communications"; *PROC Jan 95* 5-6
- O'Donnell, R.** Prolog to "Advances in satellite CDMA transmission for mobile and personal communications"; *PROC Jan 96* 16-17
- O'Donnell, R.** Prolog to "The convergence of telecommunications and computing: What are the implications today?"; *PROC Aug 96* 1165-1166
- O'Donnell, R.** Prolog to "Flash memory cells - An overview"; *PROC Aug 97* 1246-1247
- O'Donnell, R.** Prolog to "Optical components for WDM lightwave networks"; *PROC Aug 97* 1272-1273
- O'Donnell, R.** Prolog to "Blind system identification"; *PROC Aug 97* 1308-1309
- O'Donnell, R.** Prolog to "Personal communication systems (PCS)"; *PROC Sep 95* 1208-1209
- O'Donnell, R.** Prolog to "Circuit techniques for reducing the effects of op-amp imperfections: Autozeroing, correlated double sampling, and chopper stabilization"; *PROC Nov 96* 1582-1583
- O'Donnell, R.** Prologs to "A hybrid system for two-dimensional image recognition"; *PROC Nov 96* 1657-1658
- O'Donnell, R.** Prolog to "Radar"; *PROC Dec 96* 1773-1774
- O'Donnell, R.** Prolog to "Comments on diffraction principles and limitations of RCS reduction techniques"; *PROC Dec 96* 1828-1829
- O'Donnell, R.A.** Prolog to "Dataflow process networks"; *PROC May 95* 771-772
- Ofelt, D.**, see Heinrich, M., *PROC Mar 97* 455-466
- Ogose, S.**, see Shafi, M., *PROC Oct 97* 1622-1638
- Ohzu, H.**, and K. Habara. Behind the scenes of virtual reality: vision and motion; *PROC May 96* 782-798
- Oja, E.**, see Kohonen, T., *PROC Oct 96* 1358-1384
- Okubo, S.** Reference model methodology-A tool for the collaborative creation of video coding standards; *PROC Feb 95* 139-150
- Olafsson, S.** Games on networks; *PROC Oct 97* 1556-1562
- Olivo, P.**, see Pavan, P., *PROC Aug 97* 1248-1271
- O'Neill, R.R.** Review of "Mastering the Dynamics of Innovation: How Companies Can Seize Opportunities in the Face of Technological Change" (Utterback, J.M.; 1994); *PROC Jun 95* 999
- Ong, L.**, see Kant, K., *PROC Oct 97* 1612-1621
- Ungun, G.**, see Halici, U., *PROC Oct 96* 1497-1512
- Opitck, G.J.**, see Goldhaber-Gordon, D., *PROC Apr 97* 521-540
- Osche, G.R.**, and D.S. Young. Imaging laser radar in the near and far infrared; *PROC Feb 96* 103-125
- Otoshi, T.Y.** Corrections to "The fractional frequency stability of a 34-m-diameter beam waveguide antenna" (May 94 788-795); *P PROC Aug 96* 1187
- Ozcelik, T.**, J.C. Brailan, and A.K. Katsaggelos. Image and video compression algorithms based on recovery techniques using mean field annealing; *PROC Feb 95* 304-316

## P

- Pacha, C.**, see Goser, K.F., *PROC Apr 97* 558-573
- Pagni, A.**, see Costa, A., *PROC Mar 95* 422-434
- Pai, M.A.**, P.W. Sauer, and B.C. Lesieutre. Static and dynamic nonlinear loads and structural stability in power systems; *PROC Nov 95* 1562-1572
- Paik, W.H.**, see Challapali, K., *PROC Feb 95* 158-174
- Panagiotidis, N.G.**, D. Kalogeras, S.D. Kollias, and A. Stafylopatis. Neural network-assisted effective lossy compression of medical images; *PROC Oct 96* 1474-1487
- Pankanti, S.**, see Jain, A.K., *PROC Sep 97* 1365-1388
- Papazoglou, A.A.**, see Henriquez, C.S., *PROC Mar 96* 334-354
- Paraboni, A.**, see Arbesser-Rastburg, B.R., *PROC Jun 97* 843-852
- Parks, T.M.**, see Lee, E.A., *PROC May 95* 773-801
- Passino, K.M.**, see Kwong, W.A., *PROC Mar 95* 466-483
- Patt, Y.** Scanning the issue: Special issue on microprocessors [intro.]; *PROC Dec 95* 1439-1440
- Pattipati, K.**, see Yeddanapudi, M., *PROC Jan 97* 80-96
- Paulin, P.G.**, C. Liem, M. Cornero, F. Nacabal, and G. Goossens. Embedded software in real-time signal processing systems: application and architecture trends; *PROC Mar 97* 419-435
- Paulin, P.G.**, see Goossens, G., *PROC Mar 97* 436-454
- Pavan, P.**, R. Bez, P. Olivo, and E. Zanon. Flash memory cells-an overview; *PROC Aug 97* 1248-1271
- Pearson, D.E.** Developments in model-based video coding; *PROC Jun 95* 892-906
- Pedram, M.**, see Singh, D., *PROC Apr 95* 570-594
- Peirce, A.**, see Dahleh, M., *PROC Jan 96* 7-15
- Pelaez, C.E.**, see Bowles, J.B., *PROC Mar 95* 435-449
- Pelosi, G.** Scanning the past: The birth of the term "microwaves"; *PROC Feb 96* 326
- Pence, W.E.**, see Harris, E.P., *PROC Apr 95* 636-658
- Perkins, F.K.**, see Snow, E.S., *PROC Apr 97* 601-611

- Perrier, V.**, see Farge, M., *PROC Apr 96* 639-669
- Petajan, E.** The HDTV Grand Alliance system; *PROC Jul 95* 1094-1105
- Peterson, L.M.**, see Carmer, D.C., *PROC Feb 96* 299-320
- Petraglia, A.**, see Franca, J., *PROC Feb 97* 242-262
- Pickard, G.W.** Antennae; *PROC Nov 96* 1617-1622
- Pielemeier, W.J.**, G.H. Wakefield, and M.H. Simoni. Time-frequency analysis of musical signals; *PROC Sep 96* 1216-1230
- Pierce, J.R.**, and R. Kompfner. Transoceanic communication by means of satellites ~classic paper; *PROC Jun 97* 1011-1019
- Pinto, J.K.** Review of "Managing Innovation and Entrepreneurship in Technology Based Firms" (Martin, M.J.C.; 1994); *PROC Nov 96* 1706-1707
- Pinto, J.K.** Review of "Technology and Strategy: Conceptual Models and Diagnostics" (Goodman, R.A., and Lawless, M.W.; 1994); *PROC Nov 96* 1707-1708
- Pinto, J.K.** Project Management in Manufacturing and High Technology Management, 2nd edn. (Badiru, A.B.; 1996); *PROC Nov 97* 1875
- Pirsch, P.**, N. Demassieux, and W. Gehrke. VLSI architectures for video compression-a survey; *PROC Feb 95* 220-246
- Pitton, J.W.**, Kuansan Wang, and Bing-Hwang Juang. Time-frequency analysis and auditory modeling for automatic recognition of speech; *PROC Sep 96* 1199-1215
- Poon Ting-Chung**, see Ting-Chung Poon, *PROC May 96* 753-764
- Poor, H.V.**, see Blum, R.S., *PROC Jan 97* 64-79
- Powers, R.A.** Batteries for low power electronics; *PROC Apr 95* 687-693
- Pozar, D.M.** Beam transmission of ultra short waves: An introduction to the classic paper by H. Yagi; *PROC Nov 97* 1857-1863
- Prasanna, V.K.**, see Cho-Li Wang, *PROC Jul 96* 931-946
- Protopopescu, V.A.**, see Rao, N.S.V., *PROC Oct 96* 1562-1569
- Pullen, J.M.**, and D.C. Wood. Networking technology and DIS; *PROC Aug 95* 1156-1167
- Pullen, S.**, see Enge, P., *PROC Aug 96* 1063-1088
- Pupin, M.I.** A discussion on experimental tests of the radiation law for radio oscillators; *PROC Feb 97* 306-310
- Puskorius, G.V.**, L.A. Feldkamp, and L.I. Davis, Jr. Dynamic neural network methods applied to on-vehicle idle speed control; *PROC Oct 96* 1407-1420
- Putzke, J.J.**, see Warren, J.A., *PROC Mar 96* 468-479

## Q

- Qian Shie**, see Mingui Sun, *PROC Sep 96* 1302-1311
- Qian Wei**, see Wei Qian, *PROC Oct 96* 1458-1473
- Qinfen Zheng**, see Chellappa, R., *PROC Jan 97* 120-138
- Qiu Wanzhi**, see Abed-Meraim, K., *PROC Aug 97* 1310-1322
- Qiu Xiaoxin**, see Li, V.O.K., *PROC Sep 95* 1210-1243
- Quisquater, J.-J.**, see Macq, B.M., *PROC Jun 95* 944-957

## R

- Rabaey, J.M.**, see Singh, D., *PROC Apr 95* 570-594
- Rabitz, H.A.**, see Dahleh, M., *PROC Jan 96* 7-15
- Racine, R.J.**, see Haykin, S., *PROC Sep 96* 1295-1301
- Rahmat-Samii, Y.**, see Jensen, M.A., *PROC Jan 95* 7-17
- Raitanen, M.**, see Dorf, R.C., *PROC Sep 97* 1509-1510
- Rajgopal, S.**, see Singh, D., *PROC Apr 95* 570-594
- Ramakrishna, V.**, see Dahleh, M., *PROC Jan 96* 7-15
- Ramamurthy, B.**, see Borella, M.S., *PROC Aug 97* 1274-1307
- Ramanaprasad, V.**, see Srihari, S.N., *PROC Jul 96* 1038-1049
- Ramchandran, K.**, M. Vetterli, and C. Herley. Wavelets, subband coding, and best bases; *PROC Apr 96* 541-560
- Ranganathan, N.**, see Kovac, M., *PROC Feb 95* 247-258
- Rao, N.S.V.**, and V.A. Protopopescu. On PAC learning of functions with smoothness properties using feedforward sigmoidal networks; *PROC Oct 96* 1562-1569
- Reddy, R.**, and R. Garrett. Future technology challenges in distributed interactive simulation; *PROC Aug 95* 1188-1195
- Redfern, M.S.**, see El-Jaroudi, A., *PROC Sep 96* 1312-1318
- Reeves, D.S.**, see Alexander, W.E., *PROC Jul 96* 947-968
- Rekhter, Y.**, B. Davie, E. Rosen, G. Swallow, D. Farinacci, and D. Katz. Tag switching architecture overview; *PROC Dec 97* 1973-1983
- Resler, D.P.**, see McManamon, P.F., *PROC Feb 96* 268-298
- Reusens, E.**, see Ebrahimi, T., *PROC Jun 95* 877-891
- Riseman, E.M.**, see Draper, B.A., *PROC Nov 96* 1625-1637
- Rizvi, S.A.**, Lin-Cheng Wang, and N.M. Nasrabadi. Neural network architectures for vector prediction; *PROC Oct 96* 1513-1528
- Rizzoni, G.**, see Samimy, B., *PROC Sep 96* 1330-1343
- Rizzotto, G.**, see Costa, A., *PROC Mar 95* 422-434
- Robertazzi, T.** Review of "Fundamentals of Telecommunication Networks" (Saadawi, T.N., et al.; 1994); *PROC Aug 95* 1197-1198



- Robinson, P.C.**, see Crane, R.K., *PROC Jun 97* 946-958
- Roddy, A.R.**, and J.D. Stosz. Fingerprint features-statistical analysis and system performance estimates; *PROC Sep 97* 1390-1421
- Rogers, D.V.**, see Davarian, F., *PROC Jun 97* 807-809
- Rogers, D.V.**, L.J. Ippolito, Jr., and F. Davarian. System requirements for Ka-band Earth-satellite propagation data; *PROC Jun 97* 810-820
- Rohrer, R.A.**, see Director, S.W., *PROC Sep 95* 1246-1269
- Roli, F.**, S.B. Serpico, and G. Vernazza. A hybrid system for two-dimensional image recognition; *PROC Nov 96* 1659-1681
- Rosen, E.**, see Rekhter, Y., *PROC Dec 97* 1973-1983
- Rossmann, M.L.**, see Goser, K.F., *PROC Apr 97* 558-573
- Roth, B.J.**, and J.P. Wikswo, Jr. The effect of externally applied electrical fields on myocardial tissue; *PROC Mar 96* 379-391
- Roychowdhury, V.P.**, D.B. Janes, and S. Bandyopadhyay. Nanoelectronic architecture for Boolean logic; *PROC Apr 97* 574-588
- Rue, F.**, see Bijaoui, A., *PROC Apr 96* 670-679
- Russell, M.**, see Henning, I., *PROC Oct 97* 1572-1581
- Russie, R.J.**, see Warren, J.A., *PROC Mar 96* 468-479
- Rutenbar, R.A.**, see Director, S.W., *PROC Sep 95* 1246-1269
- Ryan, N.D.**, see Mingui Sun, *PROC Sep 96* 1302-1311
- S**
- Sabnani, K.K.**, see Lee, D., *PROC Oct 95* 1357-1372
- Sai-Halasz, G.A.** Performance trends in high-end processors; *PROC Jan 95* 20-36
- Sai-Halasz, G.A.**, see Yuan Taur, *PROC Apr 97* 486-504
- Salembier, P.**, L. Torres, F. Meyer, and Chuang Gu. Region-based video coding using mathematical morphology; *PROC Jun 95* 843-857
- Salon, S.** Review of "How to Design a Single Phase Motor on a Personal Computer, 4th edn." (Veinott, C.); *PROC Mar 95* 485
- Salvador, A.A.**, see Mohammad, S.N., *PROC Oct 95* 1306-1355
- Samimy, B.**, and G. Rizzoni. Mechanical signature analysis using time-frequency signal processing: application to internal combustion engine knock detection; *PROC Sep 96* 1330-1343
- Sanchez, A.**, see Melngailis, I., *PROC Feb 96* 227-267
- Sandberg, I.W.** Qualitative Theory of Dynamical Systems: The Role of Stability Preserving Mappings (Michel, A.N., and Wang, K.; 1995); *PROC Jan 97* 198-199
- Sanders, R.S.**, and M.T. Lee. Implantable pacemakers; *PROC Mar 96* 480-486
- Sangiovanni-Vincentelli, A.**, see Edwards, S., *PROC Mar 97* 366-390
- Sarpeshkar, R.**, J. Kramer, G. Indiveri, and C. Koch. Analog VLSI architectures for motion processing: from fundamental limits to system applications; *PROC Jul 96* 969-987
- Sasaki, K.**, see Itoh, K., *PROC Apr 95* 524-543
- Sauer, P.W.**, see Pai, M.A., *PROC Nov 95* 1562-1572
- Schafer, R.**, and T. Sikora. Digital video coding standards and their role in video communications; *PROC Jun 95* 907-924
- Schattler, H.**, see Venkatasubramanian, V., *PROC Nov 95* 1530-1561
- Schell, W.M.**, see Blahut, D.E., *PROC Jul 95* 1071-1085
- Schimpf, P.H.**, see Kim, Y., *PROC Mar 96* 446-456
- Schmajuk, N.A.** The psychology of robots; *PROC Oct 96* 1553-1561
- Schneck, P.B.** Introduction to the classic paper "A survey of digital computer memory systems"; *PROC Jan 97* 181-183
- Schneck, P.B.** A modern review of "Electronic computing circuits of the ENIAC" [classic paper by Arthur W. Burks]; *PROC Jul 97* 1169-1171
- Schneck, P.B.** A modern review of "Electronic computing circuits of the ENIAC"; *PROC Jul 97* 1169-1171
- Schneider, E.G.** Radar; *PROC Dec 96* 1775-1827
- Schoch, K.F., Jr.** Review of "The Wiley Project Engineer's Desk Reference" (Heisler, S.I.; 1994); *PROC Mar 95* 485
- Schreiber, W.F.** Advanced television systems for terrestrial broadcasting: Some problems and some proposed solutions; *PROC Jun 95* 958-981
- Schroder, P.** Wavelets in computer graphics; *PROC Apr 96* 615-625
- Schroder, P.** Corrections to "Wavelets in computer graphics" (Apr 96 615-625); *PROC Aug 96* 1188
- Schutten, M.J.**, see Bonissone, P.P., *PROC Mar 95* 450-465
- Sclabassi, R.J.**, see Mingui Sun, *PROC Sep 96* 1302-1311
- Sehgal, N.**, see Singh, D., *PROC Apr 95* 570-594
- Self, K.** Prolog to "Modeling and identification of parallel nonlinear systems: Structural classification and parameter estimation methods"; *PROC Jan 95* 37-38
- Self, K.** Prolog to "Multirate analog-digital systems for signal processing and conversion"; *PROC Feb 97* 240-241
- Self, K.** Prolog to "Low-cost industrial technologies of crystalline silicon solar cells"; *PROC May 97* 709-710
- Self, K.** Prolog to "Wide area augmentation of the Global Positioning System"; *PROC Aug 96* 1061-1062
- Self, K.** Prolog to "Emerging gallium nitride base devices"; *PROC Oct 95* 1305
- Seok Chang Kim**, see Byeong Gi Lee, *PROC Oct 95* 1399-1428
- Serpico, S.B.**, see Roli, F., *PROC Nov 96* 1659-1681
- Shafi, M.**, A. Hashimoto, M. Umehira, S. Ogose, and T. Murase. Wireless communications in the twenty-first century: a perspective; *PROC Oct 97* 1622-1638
- Shah, M.B.**, see Ying Xu, *PROC Oct 96* 1544-1552
- Shahidi, G.G.**, see Davari, B., *PROC Apr 95* 595-606
- Shams, S.** Neural network optimization for multi-target multi-sensor passive tracking; *PROC Oct 96* 1442-1457
- Sharf, I.** Review of "Parallel Computation Systems for Robotics Algorithms and Architectures" (Fijany, A., and Bejczy, A., Eds.; 1992); *PROC Aug 95* 1196-1197
- Sharp, R.C.**, see McManamon, P.F., *PROC Feb 96* 268-298
- Shekhar, C.**, see Chellappa, R., *PROC Jan 97* 120-138
- Shen, W.**, and R. Khanna. Scanning the issue: Special issue on automated biometrics [intro.]; *PROC Sep 97* 1343-1347
- Shen, W.**, and R. Khanna. Prolog to "Iris recognition: An emerging biometric technology"; *PROC Sep 97* 1347
- Shen, W.**, and R. Khanna. Prolog to "An identity-authentication system using fingerprints"; *PROC Sep 97* 1364
- Shen, W.**, and R. Khanna. Prolog to "Fingerprint features: Statistical analysis and system performance estimates"; *PROC Sep 97* 1389
- Shen, W.**, and R. Khanna. Prolog to "Face recognition: Eigenface, elastic matching, and neural nets"; *PROC Sep 97* 1422
- Shen, W.**, and R. Khanna. Prolog to "Speaker recognition: A tutorial"; *PROC Sep 97* 1436
- Shen, W.**, and R. Khanna. Prolog to "Evaluation of automated biometrics-based identification and verification systems"; *PROC Sep 97* 1463
- Shen, W.**, R. Khanna, and J.D. Woodward. Prolog to "Biometrics: Privacy's foe or privacy's friend?"; *PROC Sep 97* 1479
- Sheng Yunlong**, see Yao Li, *PROC May 96* 720-732
- Shenoi, B.A.** Review of "Handbook for Digital Signal Processing" (Mitra, S.K., and Kaiser, J.F., Eds.; 1993); *PROC Aug 95* 1199-1200
- Shen Weicheng**, see Weicheng Shen, *PROC Sep 97* 1464-1478
- Shie Qian**, see Mingui Sun, *PROC Sep 96* 1302-1311
- Shiflett, J.E.**, W.H. Lunceford, Jr., and R.P. Willis. Application of distributed interactive simulation technology within the Department of Defense; *PROC Aug 95* 1168-1178
- Shih-Hsien Lo**, see Yuan Taur, *PROC Apr 97* 486-504
- Shinoda, K.**, see Ting-Chung Poon, *PROC May 96* 753-764
- Shin Yong-Chul**, see Srihari, S.N., *PROC Jul 96* 1038-1049
- Shockley, W.** Transistor electronics: Imperfections, unipolar and analog transistors; *PROC Dec 97* 2055-2080
- Sikora, T.**, see Schafer, R., *PROC Jun 95* 907-924
- Sim, S.**, see Henning, I., *PROC Oct 97* 1572-1581
- Simaan, M.A.** Introduction to "The iconoscope - A modern version of the electric eye"; *PROC Aug 97* 1323-1326
- Simoni, M.H.**, see Pielemeier, W.J., *PROC Sep 96* 1216-1230
- Simula, O.**, see Kohonen, T., *PROC Oct 96* 1358-1384
- Sincerbox, G.**, see Mansuripur, M., *PROC Nov 97* 1780-1796
- Singh, D.**, J.M. Rabaey, M. Pedram, F. Cathoor, S. Rajgopal, N. Sehgal, and T.J. Mozdzen. Power conscious CAD tools and methodologies: a perspective; *PROC Apr 95* 570-594
- Sirohey, S.**, see Chellappa, R., *PROC May 95* 705-741
- Sivonthaman, S.**, see Szlufcik, J., *PROC May 97* 711-730
- Skelton, S.**, see Lyons, M.H., *PROC Oct 97* 1544-1555
- Slezak, E.**, see Bijaoui, A., *PROC Apr 96* 670-679
- Smith, J.E.**, and G.S. Sohi. The microarchitecture of superscalar processors; *PROC Dec 95* 1609-1624
- Smith, W.H.**, see Knisley, S.B., *PROC Mar 96* 417-427
- Snopko, P.A.**, see Challapali, K., *PROC Feb 95* 158-174
- Snow, E.S.**, P.M. Campbell, and F.K. Perkins. Nanofabrication with proximal probes; *PROC Apr 97* 601-611
- Sohi, G.S.**, see Smith, J.E., *PROC Dec 95* 1609-1624
- Spears, D.L.**, see Melngailis, I., *PROC Feb 96* 227-267
- Spiller, T.P.** Quantum information processing: cryptography, computation, and teleportation; *PROC Dec 96* 1719-1746
- Spillman, W.B., Jr.** Sensing and processing for smart structures; *PROC Jan 96* 68-77
- Srihari, S.N.**, Yong-Chul Shin, V. Ramanaprasad, and Dar-Shyang Lee. A system to read names and addresses on tax forms; *PROC Jul 96* 1038-1049
- Sri-Jayantha, M.**, see Harris, E.P., *PROC Apr 95* 636-658
- Stafylopatis, A.**, see Panagiotidis, N.G., *PROC Oct 96* 1474-1487
- Stark, L.**, K. Bowyer, A. Hoover, and D.B. Goldgof. Recognizing object function through reasoning about partial shape descriptions and dynamic physical properties; *PROC Nov 96* 1640-1656
- Steffes, P.G.**, see Alouini, M.-S., *PROC Jun 97* 981-997
- Steinmetz, R.**, see Wolf, L.C., *PROC Dec 97* 1915-1933
- Steinval, K.O.**, see Vaughan, J.M., *PROC Feb 96* 205-226

- Stelzried, C.T.**, and M.J. Klein. Corrections to "Precision DSN radiometer systems: Impact on microwave calibrations" (May 94 776-787); *PROC Aug 96 1187*
- Stokes, K.** Cardiac pacing electrodes; *PROC Mar 96 457-467*
- Stork, J.M.C.** Technology leverage for ultra-low power information systems; *PROC Apr 95 607-618*
- Story, G.A.**, see Blahut, D.E., *PROC Jul 95 1071-1085*
- Stosz, J.D.**, see Roddy, A.R., *PROC Sep 97 1390-1421*
- Stoustrup, J.** Loop Transfer Recovery: Analysis and Design (Saber, A., et al.; 1993) [book review]; *PROC Feb 97 337-338*
- Strifors, H.C.**, see Gaunaud, G.C., *PROC Sep 96 1231-1248*
- Sun Chuen-Tsai**, see Jang, J.-S.R., *PROC Mar 95 378-406*
- Sun Mingui**, see Mingui Sun, *PROC Sep 96 1302-1311*
- Surette, M.**, see Weicheng Shen, *PROC Sep 97 1464-1478*
- Suzuki, Y.**, see Ting-Chung Poon, *PROC May 96 753-764*
- Swallow, G.**, see Rekhter, Y., *PROC Dec 97 1973-1983*
- Sweldens, W.** Wavelets: What next?; *PROC Apr 96 680-685*
- Swiniarski, R.W.** Review of "Neural Networks for Optimization and Signal Processing" (Cichocki, A., and Unbehauen, R.; 1993); *PROC Jul 95 1106*
- Szlufcik, J.**, S. Sivoththaman, J.F. Nlis, R.P. Mertens, and R. Van Overstraeten. Low-cost industrial technologies of crystalline silicon solar cells; *PROC May 97 711-730*
- Szu, H.H.**, see Yao Li, *PROC May 96 720-732*
- Szurkowski, E.S.**, see Blahut, D.E., *PROC Jul 95 1071-1085*

## T

- Tacker, W.A.**, and L.A. Geddes. The laws of electrical stimulation of cardiac tissue; *PROC Mar 96 355-365*
- Taiwei Lu**, and J. Lerner. Spectroscopy and hybrid neural network analysis; *PROC Jun 96 895-905*
- Tan, I.-H.**, see Vanderwater, D.A., *PROC Nov 97 1752-1764*
- Tan Chin-Woo**, see Chin-Woo Tan, *PROC Nov 95 1484-1496*
- Tartalja, I.**, see Ekmeçic, I., *PROC Aug 96 1127-1144*
- Taur Yuan**, see Yuan Taur, *PROC Apr 97 486-504*
- Taylor, C.W.**, see Vu, K.T., *PROC Nov 95 1442-1455*
- Temes, G.C.**, see Enz, C.C., *PROC Nov 96 1584-1614*
- Terman, L.M.**, and R.-H. Yan. Scanning the issue: Special issue on low power electronics [intro.]; *PROC Apr 95 495-497*
- Thalmann, D.**, see Magnenat Thalmann, N., *PROC Jul 95 1022-1031*
- Thomas, D.E.**, and B. Armstrong-Helouvy. Fuzzy logic control—a taxonomy of demonstrated benefits; *PROC Mar 95 407-421*
- Thomopoulos, S.**, see Liggins, M.E., II, *PROC Jan 97 97-109*
- Thorpe, J.A.**, see Miller, D.C., *PROC Aug 95 1114-1123*
- Ting-Chung Poon**, Ming Hsien Wu, K. Shinoda, and Y. Suzuki. Optical scanning holography; *PROC May 96 753-764*
- Tingye Li**, see Giles, R., *PROC Jun 96 870-883*
- Torres, L.**, see Salembier, P., *PROC Jun 95 843-857*
- Tougaw, P.D.**, see Lent, C.S., *PROC Apr 97 541-557*
- Toumodge, S.** Review of "Model Reference Adaptive Control: From Theory to Practice" (Butler, H.; 1992); *PROC Apr 95 694-695*
- Toumodge, S.** Review of "Stochastic Systems for Engineers: Modelling, Estimation and Control" (Borrie, J.A.; 1992); *PROC Apr 95 695*
- Toumodge, S.** Review of "The Principles of Self-Support in Control Systems" (Novakovic, Z.R.; 1992); *PROC Apr 95 696-697*
- Toumodge, S.** Review of "Predictive Control: A Unified Approach" (Soeterboek, R.; 1992); *PROC Aug 95 1198-1199*
- Tovar, O.H.**, see Jones, J.L., *PROC Mar 96 392-403*
- Travis, A.R.L.** The display of three-dimensional video images; *PROC Nov 97 1817-1832*
- Trecordi, V.**, see Decina, M., *PROC Dec 97 1887-1914*
- Tredennick, N.** Technology and business: forces driving microprocessor evolution; *PROC Dec 95 1641-1652*
- Tremblay, M.**, D. Greenley, and K. Normoyle. The design of the microarchitecture of UltraSPARC-I; *PROC Dec 95 1653-1663*
- Trick, T.N.** In memoriam [Mac Elwyn Van Valkenburg (1921-1997)]; *PROC Nov 97 1675-1677*
- Troutman, R.R.**, see Harris, E.P., *PROC Apr 95 636-658*
- Tsai, C.S.** Integrated acoustooptic and magneto-optic devices for optical information processing; *PROC Jun 96 853-869*
- Tsai Yeou-Jyh**, see Enge, P., *PROC Aug 96 1063-1088*
- Tsern, E.K.**, see Meng, T.H., *PROC Apr 95 659-680*
- Tso Yee Fan**, see Melngailis, I., *PROC Feb 96 227-267*
- Tsujiuchi, J.**, see Jutamulia, S., *PROC May 96 691-693*
- Tsujiuchi, J.**, see Jutamulia, S., *PROC Jun 96 811-813*
- Tung, L.** Detrimental effects of electrical fields on cardiac muscle; *PROC Mar 96 366-378*

## U

- Uberbacher, E.C.**, see Ying Xu, *PROC Oct 96 1544-1552*
- Udd, E.** Fiber optic smart structures; *PROC Jan 96 60-67*
- Udd, E.** Fiber optic smart structures; *PROC Jun 96 884-894*
- Ufimtsev, P.Y.** Corrections to "Comments on diffraction principles and limitations of RCS reduction techniques" [Dec 96 1830-1851]; *PROC Mar 97 475*
- Ufimtsev, P.Y.** Comments on diffraction principles and limitations of RCS reduction techniques; *PROC Dec 96 1830-1851*
- Umehira, M.**, see Shafi, M., *PROC Oct 97 1622-1638*
- Umemoto, M.**, Y. Eto, and T. Fukinuki. Digital video recording; *PROC Jul 95 1044-1054*
- Unser, M.**, and A. Aldroubi. A review of wavelets in biomedical applications; *PROC Apr 96 626-638*

## V

- van den Hamer, P.**, and K. Lepoeter. Managing design data: the five dimensions of CAD frameworks, configuration management, and product data management; *PROC Jan 96 42-56*
- van der Wal, K.**, M. Mandjes, and H. Bastiaansen. Delay performance analysis of the new Internet services with guaranteed QoS; *PROC Dec 97 1947-1957*
- Vanderwater, D.A.**, I.-H. Tan, G.E. Hofler, D.C. Defever, and F.A. Kish. High-brightness AlGaInP light emitting diodes; *PROC Nov 97 1752-1764*
- Vannicola, V.**, see Liggins, M.E., II, *PROC Jan 97 97-109*
- Van Overstraeten, R.**, see Szlufcik, J., *PROC May 97 711-730*
- Van Praet, J.**, see Goossens, G., *PROC Mar 97 436-454*
- Van Rompaey, K.**, see Bolsens, I., *PROC Mar 97 391-418*
- Varaiya, P.**, see Chin-Woo Tan, *PROC Nov 95 1484-1496*
- Varghese, M.**, see Chin-Woo Tan, *PROC Nov 95 1484-1496*
- Varshney, P.K.** Scanning the issue: Special issue on data fusion [intro.]; *PROC Jan 97 3-5*
- Varshney, P.K.**, see Viswanathan, R., *PROC Jan 97 54-63*
- Vaughan, J.M.**, K.O. Steinvall, C. Werner, and P.H. Flamant. Coherent laser radar in Europe; *PROC Feb 96 205-226*
- Venkatasubramanian, V.**, H. Schattler, and J. Zaborsky. Dynamics of large constrained nonlinear systems—a taxonomy theory [power system stability]; *PROC Nov 95 1530-1561*
- Vercauteren, S.**, see Bolsens, I., *PROC Mar 97 391-418*
- Verkest, D.**, see Bolsens, I., *PROC Mar 97 391-418*
- Verly, J.G.**, and R.L. Delanoy. Model-based automatic target recognition (ATR) system for forward-looking ground-based and airborne imaging laser radars (LADAR); *PROC Feb 96 126-163*
- Vernazza, G.**, see Roli, F., *PROC Nov 96 1659-1681*
- Vetterli, M.**, see Ramchandran, K., *PROC Apr 96 541-560*
- Visa, A.**, see Kohonen, T., *PROC Oct 96 1358-1384*
- Viswanathan, R.**, and P.K. Varshney. Distributed detection with multiple sensors I. Fundamentals; *PROC Jan 97 54-63*
- Viswanathan, R.G.**, see Yuan Taur, *PROC Apr 97 486-504*
- Vogel, W.J.**, see Crane, R.K., *PROC Jun 97 863-878*
- Vogel, W.J.**, see Goldhirsh, J., *PROC Jun 97 910-916*
- Vu, K.T.**, Chen-Ching Liu, C.W. Taylor, and K.M. Jimma. Voltage instability: mechanisms and control strategies [power systems]; *PROC Nov 95 1442-1455*

## W

- Wada, Y.**, see Asai, S., *PROC Apr 97 505-520*
- Wakefield, G.H.**, see Pielemeier, W.J., *PROC Sep 96 1216-1230*
- Walter, T.**, see Enge, P., *PROC Aug 96 1063-1088*
- Wang Cho-Li**, see Cho-Li Wang, *PROC Jul 96 931-946*
- Wang Kuansan**, see Pitton, J.W., *PROC Sep 96 1199-1215*
- Wang Lin-Cheng**, see Rizvi, S.A., *PROC Oct 96 1513-1528*
- Wang Xuhe**, see Crane, R.K., *PROC Jun 97 863-878*
- Wang Xuhe**, see Mayer, C.E., *PROC Jun 97 936-945*
- Wanjiun Liao**, see Li, V.O.K., *PROC Jul 97 1063-1108*
- Wann, H.-J.C.**, see Yuan Taur, *PROC Apr 97 486-504*
- Wanzhi Qiu**, see Abed-Meraim, K., *PROC Aug 97 1310-1322*
- Warren, J.A.**, R.D. Dreher, R.V. Jaworski, J.J. Putzke, and R.J. Russie. Implantable cardioverter defibrillators; *PROC Mar 96 468-479*
- Warwick, C.W.** Trends and limits in the "Talk times" of personal communicators; *PROC Apr 95 681-686*
- Watson, E.A.**, see McManamon, P.F., *PROC Feb 96 268-298*
- Wei Chen**, see Yuan Taur, *PROC Apr 97 486-504*
- Weicheng Shen**, M. Surette, and R. Khanna. Evaluation of automated biometrics-based identification and verification systems; *PROC Sep 97 1464-1478*
- Wei Li**, see Egger, O., *PROC Feb 95 272-287*

- Wei Li**, *see* Ebrahimi, T., *PROC Jun 95* 877-891
- Weiping Li**, and Ya-Qin Zhang. Vector-based signal processing and quantization for image and video compression; *PROC Feb 95* 317-335
- Wei Qian**, and L.P. Clarke. Wavelet-based neural network with fuzzy-logic adaptivity for nuclear image restoration; *PROC Oct 96* 1458-1473
- Werner, C.**, *see* Vaughan, J.M., *PROC Feb 96* 205-226
- Westenhaver, D.B.**, *see* Crane, R.K., *PROC Jun 97* 863-878
- Wetzel, C.**, *see* Akasaki, I., *PROC Nov 97* 1750-1751
- White, P.P.**, and J. Crowcroft. The integrated services in the Internet: State of the art; *PROC Dec 97* 1934-1946
- Wickerhauser, M.V.**, *see* Hess-Nielsen, N., *PROC Apr 96* 523-540
- Wiksw, J.P., Jr.**, *see* Roth, B.J., *PROC Mar 96* 379-391
- Wildes, R.P.** Iris recognition: an emerging biometric technology; *PROC Sep 97* 1348-1363
- Williams, R.J.** Review of "Neural Networks for Signal Processing" (Kosko, B., Ed.; 1992); *PROC Oct 95* 1432-1433
- Williams, W.J.** Reduced interference distributions: biological applications and interpretations; *PROC Sep 96* 1264-1280
- Willis, R.P.**, *see* Shiflett, J.E., *PROC Aug 95* 1168-1178
- Willsky, A.S.**, *see* Daniel, M.M., *PROC Jan 97* 164-180
- Wilson, C.L.**, *see* Chellappa, R., *PROC May 95* 705-741
- Wind, S.J.**, *see* Yuan Taur, *PROC Apr 97* 486-504
- Winker, D.M.**, R.H. Couch, and M.P. McCormick. An overview of LITE: NASA's Lidar In-space Technology Experiment; *PROC Feb 96* 164-180
- Winn, D.** Review of "The Icon Book: Visual Symbols for Computer Systems and Documentation" (Horton, W.; 1994); *PROC Oct 95* 1429-1430
- Wittke, J.P.** Molecular amplification and generation of microwaves; *PROC Jul 97* 1144-1168
- Wolf, L.C.**, C. Griwodz, and R. Steinmetz. Multimedia communication; *PROC Dec 97* 1915-1933
- Wong, S.**, L. Zaremba, D. Gooden, and H.K. Huang. Radiologic image compression-a review; *PROC Feb 95* 194-219
- Wong Hon-Sum**, *see* Yuan Taur, *PROC Apr 97* 486-504
- Wood, D.C.**, *see* Dahmann, J.S., *PROC Aug 95* 1111-1113
- Wood, D.C.**, *see* Pullen, J.M., *PROC Aug 95* 1156-1167
- Wood, J.C.**, and D.T. Barry. Time-frequency analysis of skeletal muscle and cardiac vibrations; *PROC Sep 96* 1281-1294
- Woodward, J.D.**, *see* Shen, W., *PROC Sep 97* 1479
- Woodward, J.D.** Biometrics: privacy's foe or privacy's friend?; *PROC Sep 97* 1480-1492
- Wornell, G.W.** Emerging applications of multirate signal processing and wavelets in digital communications; *PROC Apr 96* 586-603
- Wornell, G.W.** Corrections to "Emerging applications of multirate signal processing and wavelets in digital communications" (Apr 96 586-603); *PROC Aug 96* 1187-1188
- Wu, F.F.**, *see* Chin-Woo Tan, *PROC Nov 95* 1484-1496
- Wu, M.C.** Micromachining for optical and optoelectronic systems; *PROC Nov 97* 1833-1856
- Wu, W.W.** Satellite communications; *PROC Jun 97* 998-1010
- Wu Ming Hsien**, *see* Ting-Chung Poon, *PROC May 96* 753-764

## X

- Xiang-Gen Xia**, *see* Mingui Sun, *PROC Sep 96* 1302-1311
- Xiao Bo Li**, *see* Haykin, S., *PROC Jan 95* 95-122
- Xiaopu Yan**, *see* Mingui Sun, *PROC Sep 96* 1302-1311
- Xiaoxin Qiu**, *see* Li, V.O.K., *PROC Sep 95* 1210-1243
- Xiaoxun Zhu**, *see* Kam, M., *PROC Jan 97* 110-119
- Xia Xiang-Gen**, *see* Mingui Sun, *PROC Sep 96* 1302-1311
- Xuhe Wang**, *see* Crane, R.K., *PROC Jun 97* 863-878
- Xuhe Wang**, *see* Mayer, C.E., *PROC Jun 97* 936-945
- Xu Yan**, *see* Haykin, S., *PROC Sep 96* 1295-1301
- Xu Ying**, *see* Ying Xu, *PROC Oct 96* 1544-1552

## Y

- Yadlowsky, M.J.**, E.M. Deliso, and V.L. Da Silva. Optical fibers and amplifiers for WDM systems; *PROC Nov 97* 1765-1779
- Yagi, H.** Beam transmission of ultra short waves; *PROC Nov 97* 1864-1874
- Yamamoto, M.**, *see* Hashimoto, Y., *PROC Jul 95* 1032-1043
- Yan, R.-H.**, *see* Terman, L.M., *PROC Apr 95* 495-497
- Yannakakis, M.**, *see* Lee, D., *PROC Aug 96* 1090-1123
- Yan Xiaopu**, *see* Mingui Sun, *PROC Sep 96* 1302-1311
- Yan Xu**, *see* Haykin, S., *PROC Sep 96* 1295-1301
- Yan Yong**, *see* Jun Zhang, *PROC Sep 97* 1423-1435
- Yao Li**, H.H. Szu, Yunlong Sheng, and H.J. Caulfield. Wavelet processing and optics; *PROC May 96* 720-732
- Ya-Qin Zhang**, *see* Weiping Li, *PROC Feb 95* 317-335
- Yatagai, T.**, S. Kawai, and H. Huang. Optical computing and interconnects; *PROC Jun 96* 828-852

- Yaz, E.E.** Linear Matrix Inequalities in System and Control Theory (Boyd, S., et al.; 1994) [book review]; *PROC Apr 97* 698-699
- Yeddanapudi, M.**, Y. Bar-Shalom, and K. Pattipati. IMM estimation for multitarget-multisensor air traffic surveillance; *PROC Jan 97* 80-96
- Yee Fan Tso**, *see* Melngailis, I., *PROC Feb 96* 227-267
- Yen Nai-Chyuan**, *see* Dragonette, L.R., *PROC Sep 96* 1249-1263
- Yeou-Jyh Tsai**, *see* Enge, P., *PROC Aug 96* 1063-1088
- Yi-Chung Chao**, *see* Enge, P., *PROC Aug 96* 1063-1088
- Yingbo Hua**, *see* Abed-Meraim, K., *PROC Aug 97* 1310-1322
- Ying Xu**, R.J. Mural, J.R. Einstein, M.B. Shah, and E.C. Uberbacher. GRAIL: a multi-agent neural network system for gene identification; *PROC Oct 96* 1544-1552
- Yoder, T.J.**, *see* Dragonette, L.R., *PROC Sep 96* 1249-1263
- Yong-Chul Shin**, *see* Srihari, S.N., *PROC Jul 96* 1038-1049
- Yong Yan**, *see* Jun Zhang, *PROC Sep 97* 1423-1435
- Young, D.S.**, *see* Osche, G.R., *PROC Feb 96* 103-125
- Yu, F.T.S.**, and D.A. Gregory. Optical pattern recognition: architectures and techniques; *PROC May 96* 733-752
- Yuan Taur**, D.A. Buchanan, Wei Chen, D.J. Frank, K.E. Ismail, Shih-Hsien Lo, G.A. Sai-Halasz, R.G. Viswanathan, H.-J.C. Wann, S.J. Wind, and Hon-Sum Wong. CMOS scaling into the nanometer regime; *PROC Apr 97* 486-504
- Yunlong Sheng**, *see* Yao Li, *PROC May 96* 720-732
- Yurkovich, S.**, *see* Kwong, W.A., *PROC Mar 95* 466-483
- Yutao Feng**, *see* Gelenbe, E., *PROC Oct 96* 1488-1496
- Yuyama, I.**, *see* Motoki, T., *PROC Jul 95* 1009-1021

## Z

- Zaborsky, J.**, *see* Venkatasubramanian, V., *PROC Nov 95* 1530-1561
- Zalevsky, J.** Review of "SBus: Information, Applications, and Experience" (Lyle, J.D.; 1992); *PROC Apr 95* 694
- Zanoni, E.**, *see* Pavan, P., *PROC Aug 97* 1248-1271
- Zaremba, L.**, *see* Wong, S., *PROC Feb 95* 194-219
- Zhang, Y.-Q.**, and W. Li. Scanning the issue: Special issue on advances in image and video compression [intro.]; *PROC Feb 95* 135-138
- Zhang Hui**, *see* Hui Zhang, *PROC Oct 95* 1374-1396
- Zhang Jun**, *see* Jun Zhang, *PROC Sep 97* 1423-1435
- Zhang Ya-Qin**, *see* Weiping Li, *PROC Feb 95* 317-335
- Zheng Qinfen**, *see* Chellappa, R., *PROC Jan 97* 120-138
- Zhou, M.C.** Review of "Process Control Engineering" (Rao, M., and Qui, H.; 1993); *PROC Nov 95* 1592-1593
- Zhu Xiaoxun**, *see* Kam, M., *PROC Jan 97* 110-119
- Zingirian, N.**, *see* Baglietto, P., *PROC Jul 96* 917-930
- Zirilli, F.**, *see* Costantini, M., *PROC Jan 97* 139-146
- Zworykin, V.K.** The iconoscope - A modern version of the electric eye; *PROC Aug 97* 1327-1333

## SUBJECT INDEX

## A

- Ablation**  
arrhythmia treatment, elec./RF ablation, review. *McRury, I.D.*, + , *PROC Mar 96* 404-416
- Absorbing media; cf.** Electromagnetic scattering by absorbing media
- Access control**  
automatic speaker-recogn. systs. *Campbell, J.P., Jr.*, *PROC Sep 97* 1437-1462  
digital TV broadcasting, cryptology. *Macq, B.M.*, + , *PROC Jun 95* 944-957  
iris recogn. *Wildes, R.P.*, *PROC Sep 97* 1348-1363  
privacy aspects of biometrics. *Woodward, J.D.*, *PROC Sep 97* 1480-1492
- Access protocols**  
pers. commun. systs., review. *Li, V.O.K.*, + , *PROC Sep 95* 1210-1243
- AC generators**  
Benjamin G. Lamme, career/contribs. *Brittain, J.E.*, *PROC Nov 95* 1594-1595
- AC motors; cf.** Induction motors
- Acoustic convolvers**  
air-filled elastic shells, acoustical scatt., structural excitations anal. *Dragonette, L.R.*, + , *PROC Sep 96* 1249-1263
- Acoustic filters; cf.** Acoustooptic filters
- Acoustic scattering**  
air-filled elastic shells, acoustical scatt., structural excitations anal. *Dragonette, L.R.*, + , *PROC Sep 96* 1249-1263

- Acoustic scattering; cf.** Sonar scattering
- Acoustic signal analysis**  
 continuous lin. time-freq. representations. *Guillemain, P.*, +, *PROC Apr 96* 561-585  
 musical sigs., time-freq. anal. *Pielemeier, W.J.*, +, *PROC Sep 96* 1216-1230
- Acoustic signal analysis; cf.** Sonar signal analysis
- Acoustooptic filters**  
 Bragg cell Integrated acoustooptic/magneto optic modulator devices for opt. inform. proc. *Tsai, C.S.*, *PROC Jun 96* 853-869
- Acoustooptic modulation**  
 Bragg cell Integrated acoustooptic/magneto optic modulator devices for opt. inform. proc. *Tsai, C.S.*, *PROC Jun 96* 853-869
- Acoustooptic signal processing; cf.** Acoustooptic filters
- Acoustooptic switches**  
 Bragg cell Integrated acoustooptic/magneto optic modulator devices for opt. inform. proc. *Tsai, C.S.*, *PROC Jun 96* 853-869
- Active circuits; cf.** Oscillators
- Active vision**  
 book review; Active Vision (Blake, A., and Yuille, A.; 1992). *Hager, G.*, *PROC Mar 95* 484
- Adaptive control**  
 book review; Direct Adaptive Control Algorithms: Theory and Applications (Kaufman, H., et al.; 1994). *Iwai, Z.*, *PROC May 96* 800-801
- Adaptive filters**  
 morph. subband decomp., image coding. *Egger, O.*, +, *PROC Feb 95* 272-287
- Adaptive signal detection**  
 morph. subband decomp., image coding. *Egger, O.*, +, *PROC Feb 95* 272-287
- Adaptive signal processing**  
 antenna arrays appl. to mobile commun., beamforming and DOA aspects. *Godara, L.C.*, *PROC Aug 97* 1195-1245  
 morph. subband decomp., image coding. *Egger, O.*, +, *PROC Feb 95* 272-287
- Adaptive signal processing; cf.** Adaptive filters
- Adaptive systems**  
 autonomous robots, adaptive neural control. *Schmajuk, N.A.*, *PROC Oct 96* 1553-1561  
 neuro-fuzzy modeling/control, adaptive network. *Jang, J.-S.R.*, +, *PROC Mar 95* 378-406
- Aerosols**  
 LITE, NASA space lidar for cloud and aerosol. *Winker, D.M.*, +, *PROC Feb 96* 164-180
- Aerospace control; cf.** Aircraft control; Air traffic control
- Agriculture**  
 laser radar imaging sens. for robotic appls. *Carmar, D.C.*, +, *PROC Feb 96* 299-320
- Airborne radar**  
 XTRS LADAR, model-based automatic target recogn. syst. *Verly, J.G.*, +, *PROC Feb 96* 126-163
- Aircraft; cf.** Military aircraft
- Aircraft control**  
 fighter aircraft fault tolerant fuzzy control. *Kwong, W.A.*, +, *PROC Mar 95* 466-483  
 fuzzy logic control, indust. appls. *Bonissone, P.P.*, +, *PROC Mar 95* 450-465
- Aircraft instrumentation**  
 coherent laser radar in Europe, ground-based and airborne systs. *Vaughan, J.M.*, +, *PROC Feb 96* 205-226
- Aircraft navigation**  
 GPS wide area augmentation for aircraft navig. *Enge, P.*, +, *PROC Aug 96* 1063-1088
- Air traffic control**  
 distributed fusion archits. and algms. for target tracking. *Liggins, M.E.*, II, +, *PROC Jan 97* 97-109  
 multitarget-multisensor air traffic surveillance, interact. multiple model estim. *Yeddapanudi, M.*, +, *PROC Jan 97* 80-96
- Algebra; cf.** Set theory
- Aluminum compounds**  
 high-brightness AlGaInP light emitting diodes. *Vanderwater, D.A.*, +, *PROC Nov 97* 1752-1764
- Amplifiers; cf.** Feedback amplifiers; Optical amplifiers
- Amplitude modulation**  
 acoustic sigs. charact., continuous lin. time-freq. representation. *Guillemain, P.*, +, *PROC Apr 96* 561-585
- Amplitude shift keying**  
 IR wireless high-speed short-range digital commun. *Kahn, J.M.*, +, *PROC Feb 97* 265-298
- Analog-digital conversion**  
 multirate analog-digital systs. for sig. proc./conversion. *Franca, J.*, +, *PROC Feb 97* 242-262
- Analog integrated circuits**  
 book review; Analog VLSI Implementation of Neural Systems (Mead, C., and Ismail, M., Eds.; 1989). *Andreou, A.G.*, *PROC Oct 95* 1430-1431
- Analog integrated circuits; cf.** Mixed analog-digital integrated circuits
- Analog processing circuits**  
 VLSI analog archit., motion proc. *Sarpeshkar, R.*, +, *PROC Jul 96* 969-987
- Animals**  
 cortical region neuronal oscills., EEG activity time-freq. anal. *Haykin, S.*, +, *PROC Sep 96* 1295-1301  
 skeletal muscle/cardiac vibrs., time-freq. anal. *Wood, J.C.*, +, *PROC Sep 96* 1281-1294
- Animation**  
 interactive TV, digital actors. *Magnenat Thalmann, N.*, +, *PROC Jul 95* 1022-1031
- Antenna accessories**  
 HT insulators, dielec. props. and radio appl. *Hills, S.M.*, *PROC Feb 97* 314-322
- Antenna arrays**  
 mobile commun., antenna arrays appl., beamforming and DOA aspects. *Godara, L.C.*, *PROC Aug 97* 1195-1245  
 mobile commun., antenna arrays, channel requirement, appls. *Godara, L.C.*, *PROC Jul 97* 1031-1060
- Antenna arrays; cf.** Phased arrays; Yagi-Uda arrays
- Antenna measurements**  
 corrections to "The fractional frequency stability of a 34-m-diameter beam waveguide antenna" (May 94 788-795). *Otoshi, T.Y.*, *P PROC Aug 96* 1187  
 intro. to classic paper by M.I. Pupin on antenna radiation resistance meas. (classic paper reprint, pp. 306-310). *Collin, R.E.*, *PROC Feb 97* 301-305  
 James K. Clapp, career/contribs. *Brittain, J.E.*, *PROC Apr 95* 698
- Antenna radiation patterns**  
 radiation law determ. and theory. *Pupin, M.I.*, *PROC Feb 97* 306-310
- Antennas; cf.** Mobile antennas; Monopole antennas; Multibeam antennas; Reflector antennas; Transmitting antennas; UHF antennas; Waveguide antennas; Wire antennas
- Antenna theory**  
 Sergei A. Schelkunoff, career/contribs. *Brittain, J.E.*, *PROC Sep 96* 1344
- Aperture antennas; cf.** Waveguide antennas
- Application specific integrated circuits**  
 embedded software in real-time sig. proc., telecom appl. *Paulin, P.G.*, +, *PROC Mar 97* 419-435  
 fuzzy control, hardware soln. *Costa, A.*, +, *PROC Mar 95* 422-434  
 reactive real-time embedded syst. design, formal models. *Edwards, S.*, +, *PROC Mar 97* 366-390  
 VLSI for digital HDTV. *Mlynek, D.J.*, +, *PROC Jul 95* 1055-1070
- Approximation methods**  
 PAC learning fn. approx., feedforward sigmoidal nets. *Rao, N.S.V.*, +, *PROC Oct 96* 1562-1569
- Approximation methods; cf.** Interpolation; Least squares methods
- Arrays; cf.** Antenna arrays; Logic arrays; Optical arrays
- Array signal processing**  
 antenna arrays appl. to mobile commun., beamforming aspects. *Godara, L.C.*, *PROC Aug 97* 1195-1245
- Artificial intelligence**  
 book review; Review of Computational Intelligence Imitating Life (Zurada, J.M., et al., Eds.; 1994). *Fogel, D.B.*, *PROC Nov 95* 1588-1591  
 knowledge-directed vision, control, learning and integrat. *Draper, B.A.*, +, *PROC Nov 96* 1625-1637  
 multisensor data fusion, state of art/appls. *Hall, D.L.*, +, *PROC Jan 97* 6-23
- Artificial intelligence; cf.** Knowledge based systems
- Associative memories**  
 opt. pattern recogn. archits./techs. *Yu, F.T.S.*, +, *PROC May 96* 733-752
- Astronomy**  
 wavelets and study of distant Universe. *Bijaoui, A.*, +, *PROC Apr 96* 670-679
- Astronomy; cf.** Radio astronomy
- Asynchronous logic circuits**  
 design methodologies/computations, overview. *Hauck, S.*, *PROC Jan 95* 69-93
- Asynchronous transfer mode**  
 book review; Asynchronous Transfer Mode Solution for Broadband ISBN, 2nd edn. (De Prycker, M.; 1993). *Li, C.-S.*, *PROC Mar 95* 487-488  
 convergence of telecomms. and computing to networking models for integrated services and appls. *Decina, M.*, +, *PROC Dec 97* 1887-1914  
 distributed interactive simul., networking technol. *Pullen, J.M.*, +, *PROC Aug 95* 1156-1167

- internetworking based on cell switch router - archit. and protocol review. *Katsube, Y.*, +, *PROC Dec 97* 1998-2006
- IP switching for scalable IP services. *Ahmed, H.M.*, +, *PROC Dec 97* 1984-1997
- network traffic mgt. by neural net. *Habib, I.W.*, *PROC Oct 96* 1430-1441
- public networks, perform. mgt., scaleable/flexible approach. *Azmoodeh, M.*, +, *PROC Oct 97* 1639-1645
- scrambling techs. for dig. lightwave transm. *Byeong Gi Lee*, +, *PROC Oct 95* 1399-1428
- tag switching archit. overview. *Rekhter, Y.*, +, *PROC Dec 97* 1973-1983
- telecomms. and data networks signaling. *Kant, K.*, +, *PROC Oct 97* 1612-1621
- wireless commun. in twenty-first century. *Shafi, M.*, +, *PROC Oct 97* 1622-1638
- Atmospheric measurements**
- LITE, NASA space lidar for cloud and aerosol. *Winker, D.M.*, +, *PROC Feb 96* 164-180
- wind velocities, rem. sens., coherent laser radar systs. *Huffaker, R.M.*, +, *PROC Feb 96* 181-204
- Atomic force microscopy**
- nano-oxid. proc., single-electron transistors, photoconductive switches, HEMT. *Matsumoto, K.*, *PROC Apr 97* 612-628
- proximal probes, nanofabrication, STM and AFM. *Snow, E.S.*, +, *PROC Apr 97* 601-611
- Attenuation measurement**
- ACTS propag. expt. for Ka-band satellite commun. syst. design. *Crane, R.K.*, +, *PROC Jun 97* 863-878
- S-band polarimetric radar meas. appl., Ka-band atten. predict. *Beaver, J.D.*, +, *PROC Jun 97* 893-909
- Audio coding**
- digital audio coding for visual commun. *Noll, P.*, *PROC Jun 95* 925-943
- MPEG integrated audiovisual coding std., develop. *Chiariglione, L.*, *PROC Feb 95* 151-157
- Auditory system**
- automatic speech recogn., time-freq. anal. and auditory modeling. *Pitton, J.W.*, +, *PROC Sep 96* 1199-1215
- digital audio coding for visual commun. *Noll, P.*, *PROC Jun 95* 925-943
- wavelets in biomedical appls. review. *Unser, M.*, +, *PROC Apr 96* 626-638
- Automation; cf.** Design automation
- Autoregressive moving average processes**
- neural nets, control appls., practise. *Narendra, K.S.*, *PROC Oct 96* 1385-1406
- B**
- Backscattering; cf.** Radar detection
- Bandwidth compression**
- 3D TV research, present status. *Motoki, T.*, +, *PROC Jul 95* 1009-1021
- Batteries**
- low power electronics, batt. technol. *Powers, R.A.*, *PROC Apr 95* 687-693
- Bayes procedures**
- distributed detect. with multiple sens., fund. *Viswanathan, R.*, +, *PROC Jan 97* 54-63
- Beam waveguides**
- corrections to "Precision DSN radiometer systems: impact on microwave calibrations" (May 94 776-787). *Stelzried, C.T.*, +, *PROC Aug 96* 1187
- corrections to "The fractional frequency stability of a 34-m-diameter beam waveguide antenna" (May 94 788-795). *Otoshi, T.Y.*, *P PROC Aug 96* 1187
- Behavioral science; cf.** Psychology
- Bifurcation**
- multimachine power syst. structural stabil., nonlin. load effects. *Pai, M.A.*, +, *PROC Nov 95* 1562-1572
- nonlin. large power syst. stabil. anal., taxonomy theory-based. *Venkatasubramanian, V.*, +, *PROC Nov 95* 1530-1561
- power syst. voltage collapse modelling, bifurcation theory-based. *Chin-Woo Tan*, +, *PROC Nov 95* 1484-1496
- power syst. voltage stabil. anal., local bifurcation theory-based. *Kwatny, H.G.*, +, *PROC Nov 95* 1456-1483
- Binary sequences**
- digital lightwave transm., scrambling techs. *Byeong Gi Lee*, +, *PROC Oct 95* 1399-1428
- Bioacoustics; cf.** Biomedical acoustics
- Biocontrol; cf.** Biological control systems
- Bioelectric phenomena**
- arrhythmia treatment, elec./RF ablation, review. *McRury, I.D.*, +, *PROC Mar 96* 404-416
- cardiac elec. activity, response, elec. stimuli. *Knisley, S.B.*, +, *PROC Mar 96* 417-427
- cardiac muscle, detrimental effects of elec. fields. *Tung, L.*, *PROC Mar 96* 366-378
- cardiac tissue, elec. stimulation laws. *Tacker, W.A.*, +, *PROC Mar 96* 355-365
- defibrillation/cardioversion mechanism. *Jones, J.L.*, +, *PROC Mar 96* 392-403
- defibrillation/pacing electrodes, elec. behavior. *Kim, Y.*, +, *PROC Mar 96* 446-456
- electrical therapy of cardiac arrhythmias (special issue). *PROC Mar 96* 331-499
- myocardial tissue, externally applied elec. fields effect. *Roth, B.J.*, +, *PROC Mar 96* 379-391
- reduced interf. distribs., biological appls./interps. *Williams, W.J.*, *PROC Sep 96* 1264-1280
- skeletal muscle/cardiac vibrs., time-freq. anal. *Wood, J.C.*, +, *PROC Sep 96* 1281-1294
- wavelets in biomedical appls. review. *Unser, M.*, +, *PROC Apr 96* 626-638
- Biofeedback; cf.** Biological control systems
- Biographies**
- George H. Brown, brief biog./contribs. *Brittain, J.E.*, *PROC Feb 95* 338
- Biological control systems**
- postural sway, human bal. control, time-freq. spectral anal. *El-Jaroudi, A.*, +, *PROC Sep 96* 1312-1318
- Biological effects of electromagnetic radiation**
- arrhythmia treatment, elec./RF ablation, review. *McRury, I.D.*, +, *PROC Mar 96* 404-416
- cancer risk assess., weak EM fields. *Foster, K.R.*, +, *PROC May 97* 733-746
- cardiac muscle, detrimental effects of elec. fields. *Tung, L.*, *PROC Mar 96* 366-378
- cellular pers. commun., handset antenna/human EM interact. *Jensen, M.A.*, +, *PROC Jan 95* 7-17
- myocardial tissue, externally applied elec. fields effect. *Roth, B.J.*, +, *PROC Mar 96* 379-391
- Biological materials**
- GRAIL, multi-agent neural net gene ident. syst. *Ying Xu*, +, *PROC Oct 96* 1544-1552
- Biological system modeling**
- arrhythmogenesis, computer models, tissue struct./membrane dyn. roles. *Henriquez, C.S.*, +, *PROC Mar 96* 334-354
- myocardial tissue, externally applied elec. fields effect. *Roth, B.J.*, +, *PROC Mar 96* 379-391
- skeletal muscle/cardiac vibrs., time-freq. anal. *Wood, J.C.*, +, *PROC Sep 96* 1281-1294
- Biological systems; cf.** Biological control systems; Biological tissues; Nervous system; Visual system
- Biological thermal factors**
- arrhythmia treatment, elec./RF ablation, review. *McRury, I.D.*, +, *PROC Mar 96* 404-416
- Biological tissues**
- arrhythmogenesis, computer models, tissue struct./membrane dyn. roles. *Henriquez, C.S.*, +, *PROC Mar 96* 334-354
- cardiac tissue, elec. stimulation laws. *Tacker, W.A.*, +, *PROC Mar 96* 355-365
- defibrillation/pacing electrodes, elec. behavior. *Kim, Y.*, +, *PROC Mar 96* 446-456
- Biological tissues; cf.** Biological thermal factors; Muscles
- Biology; cf.** Genetics
- Biomechanics**
- skeletal muscle/cardiac vibrs., time-freq. anal. *Wood, J.C.*, +, *PROC Sep 96* 1281-1294
- Biomedical acoustics**
- reduced interf. distribs., biological appls./interps. *Williams, W.J.*, *PROC Sep 96* 1264-1280
- skeletal muscle/cardiac vibrs., time-freq. anal. *Wood, J.C.*, +, *PROC Sep 96* 1281-1294
- wavelets in biomedical appls. review. *Unser, M.*, +, *PROC Apr 96* 626-638
- Biomedical applications of electromagnetic radiation**
- arrhythmia treatment, elec./RF ablation, review. *McRury, I.D.*, +, *PROC Mar 96* 404-416
- Biomedical applications of optical radiation; cf.** Laser biomedical applications
- Biomedical computing**
- arrhythmogenesis, computer models, tissue struct./membrane dyn. roles. *Henriquez, C.S.*, +, *PROC Mar 96* 334-354
- GRAIL, multi-agent neural net gene ident. syst. *Ying Xu*, +, *PROC Oct 96* 1544-1552
- skeletal muscle/cardiac vibrs., time-freq. anal. *Wood, J.C.*, +, *PROC Sep 96* 1281-1294

**Biomedical electrodes**

- arrhythmia treatment, elec./RF ablation, review. *McRury, I.D.*, + , *PROC Mar 96* 404-416  
 cardiac elec. activity, response, elec. stimuli. *Knisley, S.B.*, + , *PROC Mar 96* 417-427  
 defibrillation/pacing electrodes, elec. behavior. *Kim, Y.*, + , *PROC Mar 96* 446-456

**Biomedical electrodes; cf.** Implantable electrodes**Biomedical equipment; cf.** Biomedical transducers**Biomedical magnetic resonance imaging**

- human brain NMR image anal. by neural net. *Gelenbe, E.*, + , *PROC Oct 96* 1488-1496  
 radiologic image compression, review. *Wong, S.*, + , *PROC Feb 95* 194-219  
 wavelets in biomedical appls. review. *Unser, M.*, + , *PROC Apr 96* 626-638

**Biomedical materials**

- cardiac pacing electrodes, pulse generator/lead perform. *Stokes, K.*, *PROC Mar 96* 457-467

**Biomedical measurements**

- automated biometrics (special issue). *PROC Sep 97* 1343-1492  
 automated biometrics, special issue intro. *Shen, W.*, + , *PROC Sep 97* 1343-1347

**Biomedical monitoring**

- cortical region neuronal oscills., EEG activity time-freq. anal. *Haykin, S.*, + , *PROC Sep 96* 1295-1301

**Biomedical nuclear imaging**

- nuc. med. image restoration by neural net. *Wei Qian*, + , *PROC Oct 96* 1458-1473  
 radiologic image compression, review. *Wong, S.*, + , *PROC Feb 95* 194-219

**Biomedical power supplies**

- cardiac pacing electrodes, pulse generator/lead perform. *Stokes, K.*, *PROC Mar 96* 457-467

**Biomedical signal analysis**

- brain functional activity localization, EEG time-freq. anal. *Mingui Sun*, + , *PROC Sep 96* 1302-1311  
 implantable cardioverter defibrillators, detect. algms. *Jenkins, J.M.*, + , *PROC Mar 96* 428-445

**Biomedical signal detection**

- implantable cardioverter defibrillators, detect. algms. *Jenkins, J.M.*, + , *PROC Mar 96* 428-445

**Biomedical signal processing**

- cortical region neuronal oscills., EEG activity time-freq. anal. *Haykin, S.*, + , *PROC Sep 96* 1295-1301  
 human brain NMR image anal. by neural net. *Gelenbe, E.*, + , *PROC Oct 96* 1488-1496  
 lossy compression by neural net. *Panagiotidis, N.G.*, + , *PROC Oct 96* 1474-1487  
 nuc. med. image restoration by neural net. *Wei Qian*, + , *PROC Oct 96* 1458-1473  
 reduced interf. distribs., biological appls./interps. *Williams, W.J.*, *PROC Sep 96* 1264-1280  
 skeletal muscle/cardiac vibrs., time-freq. anal. *Wood, J.C.*, + , *PROC Sep 96* 1281-1294  
 wavelets in biomedical appls. review. *Unser, M.*, + , *PROC Apr 96* 626-638

**Biomedical transducers**

- micromachined device. *Baselt, D.R.*, + , *PROC Apr 97* 672-680

**Biomedical ultrasonics; cf.** Biomedical acoustics**Biomedical X-ray imaging**

- radiologic image compression, review. *Wong, S.*, + , *PROC Feb 95* 194-219  
 wavelets in biomedical appls. review. *Unser, M.*, + , *PROC Apr 96* 626-638

**Bipolar digital integrated circuits**

- high-end proc., CMOS and bipolar, perform. trends. *Sai-Halasz, G.A.*, *PROC Jan 95* 20-36

**B-ISDN**

- global information infrastructure (special issue). *PROC Dec 97* 1883-2051  
 global information infrastructure, special issue intro. *Goode, B.*, *PROC Dec 97* 1883-1886  
 teletraffic engng. in broadband era. *Michiel, H.*, + , *PROC Dec 97* 2007-2033

**Block codes**

- motion estim. techs. for digital TV, review. *Dufaux, F.*, + , *PROC Jun 95* 858-876

**Book reviews**

- Active Vision (Blake, A., and Yuille, A.; 1992). *Hager, G.*, *PROC Mar 95* 484  
 Analog VLSI Implementation of Neural Systems (Mead, C., and Ismail, M., Eds.; 1989). *Andreou, A.G.*, *PROC Oct 95* 1430-1431

- Asynchronous Transfer Mode Solution for Broadband ISBN, 2nd edn. (De Prycker, M.; 1993). *Li, C.-S.*, *PROC Mar 95* 487-488  
 Communication Systems Engineering (Proakis, and Salehi; 1994). *Milstein, L.B.*, *PROC Mar 95* 486  
 Computational Methods for Electromagnetics and Microwaves (Boonin, R.C.; 1992). *Kuchta, D.M.*, *PROC Jan 95* 123-124  
 Concurrent Engineering Design (Miller, L.G.; 1994). *Harper, A.*, *PROC Mar 95* 485-486  
 Connectionism and Psychology (Quinlan, P.; 1991). *Kruschke, J.K.*, *PROC Oct 95* 1431-1432  
 Developing Online Help for Windows (Boggan, S., et al.; 1993). *Barker, T.T.*, *PROC Jun 95* 997-998  
 Direct Adaptive Control Algorithms: Theory and Applications (Kaufman, H., et al.; 1994). *Iwai, Z.*, *PROC May 96* 800-801  
 Dyadic Green Functions in Electromagnetic Theory (Tai, C.-T.; 1994). *Eleftheriades, G.*, *PROC Jun 95* 998-999  
 Engineering Applications of Correlation and Spectral Analysis (Bendat, J.S., and Piersol, A.G.; 1993). *Chen, T.-H.*, *PROC Jan 95* 124  
 Fundamentals of Artificial Neural Networks (Hassoun, M.H.; 1995). *Arabshahi, P.*, *PROC Jun 96* 906-907  
 Fundamentals of Telecommunication Networks (Saadawi, T.N., et al.; 1994). *Robertazzi, T.*, *PROC Aug 95* 1197-1198  
 Handbook for Digital Signal Processing (Mittra, S.K., and Kaiser, J.F., Eds.; 1993). *Shenoi, B.A.*, *PROC Aug 95* 1199-1200  
 Heuristic Scheduling Systems with Applications to Production Systems and Project Management (Morton, T.E., and Pentico, D.W.; 1993). *Bard, J.F.*, *PROC Feb 96* 324-325  
 High Performance; The Culture and Technology of Drag Racing: 1950-1990 (Post, R.C.; 1994). *Mindell, D.A.*, *PROC Aug 95* 1200-1201  
 Hot-Carrier Reliability of MOS VLSI Circuits (Leblebici, Y., and Kang, S.-M.; 1993). *Kwark, Y.H.*, *PROC Mar 95* 486-487  
 How to Design a Single Phase Motor on a Personal Computer, 4th edn. (Veinott, C.). *Salon, S.*, *PROC Mar 95* 485  
 Introduction to the Theory of Neural Computation (Hertz, J., et al.; 1991). *Abu-Mostafa, Y.S.*, *PROC May 96* 799  
 Kalman Filtering: Theory and Practice (Grewal, M.S., and Andrews, A.P.; 1993). *Bass, R.W.*, *PROC Feb 96* 321-324  
 LAN Communications Handbook (Simonds, F.; 1994). *Hayes, D.F.*, *PROC Sep 95* 1296-1297  
 Linear Matrix Inequalities in System and Control Theory (Boyd, S., et al.; 1994). *Yaz, E.E.*, *PROC Apr 97* 698-699  
 Loop Transfer Recovery: Analysis and Design (Saberti, A., et al.; 1993). *Stoustrup, J.*, *PROC Feb 97* 337-338  
 Managing Innovation and Entrepreneurship in Technology Based Firms (Martin, M.J.C.; 1994). *Pinto, J.K.*, *PROC Nov 96* 1706-1707  
 Manufacturing Systems Engineering (Gershwin, S.B.; 1994). *Meerkov, S.M.*, *PROC Jul 96* 1051-1052  
 Mastering the Dynamics of Innovation: How Companies Can Seize Opportunities in the Face of Technological Change (Utterback, J.M.; 1994). *O'Neill, R.R.*, *PROC Jun 95* 999  
 Meeting of the Minds: Creating the Market-Based Enterprise (Barabba, V.; 1995). *Geisler, E.*, *PROC Aug 97* 1334  
 Model Reference Adaptive Control: From Theory to Practice (Butler, H.; 1992). *Toumodge, S.*, *PROC Apr 95* 694-695  
 Narrowband Land-Mobile Radio Networks (Linnartz, J.-P.; 1992). *LaMaire, R.O.*, *PROC Apr 95* 695-696  
 Neural Networks: A Comprehensive Foundation (Haykin, S.; 1994). *Hwang, J.-N.*, *PROC Sep 95* 1294-1296  
 Neural Networks: Current Applications (Lisboa, P.G.J., Ed; 1992). *Feldkamp, L.A.*, *PROC Jan 96* 87-88  
 Neural Networks for Optimization and Signal Processing (Cichocki, A., and Unbehauen, R.; 1993). *Swiniarski, R.W.*, *PROC Jul 95* 1106  
 Neural Networks for Signal Processing (Kosko, B., Ed.; 1992). *Williams, R.J.*, *PROC Oct 95* 1432-1433  
 Optimal Control Theory for Infinite Dimensional Systems (Li, X., and Yong, J.; 1995). *Lenhart, S.*, *PROC Feb 97* 338-339  
 Optimization and Dynamical Systems (Helmke, U., and Moore, J.; 1994). *Faybusovich, L.*, *PROC Jun 96* 907-908  
 Parallel Computation Systems for Robotics Algorithms and Architectures (Fijany, A., and Bejczy, A., Eds.; 1992). *Sharf, I.*, *PROC Aug 95* 1196-1197  
 Parallel Logic Programming (Takeuchi, A.; 1992). *Mikolajczak, B.*, *PROC Mar 95* 488  
 Predictive Control: A Unified Approach (Soeterboek, R.; 1992). *Toumodge, S.*, *PROC Aug 95* 1198-1199  
 Process Control Engineering (Rao, M., and Qui, H.; 1993). *Zhou, M.C.*, *PROC Nov 95* 1592-1593  
 Project Management: Engineering, Technology, and Implementation (Shtub, A., et al.; 1994). *Klasterin, T.D.*, *PROC Dec 95* 1513  
 Project Management in Manufacturing and High Technology Management, 2nd edn. (Badiru, A.B.; 1996). *Pinto, J.K.*, *PROC Nov 97* 1875

- Qualitative Theory of Dynamical Systems: The Role of Stability Preserving Mappings (Michel, A.N., and Wang, K.; 1995). *Sandberg, I.W.*, *PROC Jan 97* 198-199
- Review of Computational Intelligence Imitating Life (Zurada, J.M., et al., Eds.; 1994). *Fogel, D.B.*, *PROC Nov 95* 1588-1591
- Robotics and Remote Systems for Hazardous Environments (Jamshidi, M., and Eicker, P., Eds.; 1993). *Maciejewski, A.A.*, *PROC Feb 95* 336-337
- Robust Control: Systems with Uncertain Physical Parameters (Ackermann, J., et al.; 1993). *Mansour, M.*, *PROC Oct 96* 1572
- SBus: Information, Applications, and Experience (Lyle, J.D.; 1992). *Zalevsky, J.*, *PROC Apr 95* 694
- Software Quality Management - A Pro-active Approach (Brinkworth, J.W.O.; 1992). *Freuhauf, K.*, *PROC Mar 95* 488-489
- Stability Theory (Parks, P.C., and Hahn, V.; 1993). *Elliott, D.L.*, *PROC May 96* 799-800
- Stochastic Systems for Engineers: Modelling, Estimation and Control (Borrie, J.A.; 1992). *Toumodge, S.*, *PROC Apr 95* 695
- Strategic Technology Management (Betz, F.; 1993). *Gaynor, G.H.*, *PROC Mar 96* 500-501
- Technology and Strategy: Conceptual Models and Diagnostics (Goodman, R.A., and Lawless, M.W.; 1994). *Pinto, J.K.*, *PROC Nov 96* 1707-1708
- The Balanced Scorecard: Translating Strategy into Action (Kaplan, R.S., and Norton, D.P.; 1996). *Dorf, R.C.*, + , *PROC Sep 97* 1509-1510
- The Collected Papers of Claude E. Shannon (Sloane, N.J.A., and Wyner, A.D., Eds.; 1993). *Ephremides, A.*, *PROC Oct 96* 1570-1571
- The GSM System for Mobile Communications (Mouly, M., and Pautet, M.-B.). *Chia, S.*, *PROC Jun 95* 999-1000
- The Icon Book: Visual Symbols for Computer Systems and Documentation (Horton, W.; 1994). *Winn, D.*, *PROC Oct 95* 1429-1430
- The Principles of Self-Support in Control Systems (Novakovic, Z.R.; 1992). *Toumodge, S.*, *PROC Apr 95* 696-697
- The Wiley Project Engineer's Desk Reference (Heisler, S.I.; 1994). *Schoch, K.F., Jr.*, *PROC Mar 95* 485
- The World in 2020 (McRae, H.; 1994). *Dorf, R.C.*, *PROC Jan 96* 88-89
- Universal Compression and Retrieval (Krichevsky, R.; 1994). *Csizar, I.*, *PROC Jun 95* 1000-1002
- Virtual Reality Technology (Burdea, G., and Coiffet, P.; 1994). *Akay, M.*, *PROC Sep 95* 1294
- World Class (Kanter, R.M.; 1995). *Dorf, R.C.*, *PROC Jul 96* 1050-1051
- Boolean functions**  
nanoelectronic archit., double-barrier reson. tunneling diode. *Roychowdhury, V.P.*, + , *PROC Apr 97* 574-588
- Boundary element methods**  
defibrillation/pacing electrodes, elec. behavior. *Kim, Y.*, + , *PROC Mar 96* 446-456
- Brain**  
brain functional activity localization, EEG time-freq. anal. *Mingui Sun*, + , *PROC Sep 96* 1302-1311  
cortical region neuronal oscills., EEG activity time-freq. anal. *Haykin, S.*, + , *PROC Sep 96* 1295-1301  
human brain NMR image anal. by neural net. *Gelenbe, E.*, + , *PROC Oct 96* 1488-1496  
wavelets in biomedical appls. review. *Unser, M.*, + , *PROC Apr 96* 626-638
- Broadband communication**  
ATM public networks, perform. mgt., scaleable and flexible approach. *Azmoodeh, M.*, + , *PROC Oct 97* 1639-1645  
communications in the twenty-first century (special issue). *PROC Oct 97* 1519-1661  
overview of broadband access technols. *Gagnaire, M.*, *PROC Dec 97* 1958-1972  
self-organizing broadband transport networks. *Grover, W.D.*, *PROC Oct 97* 1582-1611  
telecomms. and data networks signaling. *Kant, K.*, + , *PROC Oct 97* 1612-1621
- Broadband communication; cf.** Asynchronous transfer mode; B-ISDN; Cable TV
- Broadcasting; cf.** Radio broadcasting; TV broadcasting
- Burst switching**  
asynchronous design methodologies, overview. *Hauck, S.*, *PROC Jan 95* 69-93
- Business**  
book review; World Class (Kanter, R.M.; 1995). *Dorf, R.C.*, *PROC Jul 96* 1050-1051  
new commun. services, society needs. *Lucky, R.W.*, *PROC Oct 97* 1536-1543  
testbed for twenty-first century. *Henning, I.*, + , *PROC Oct 97* 1572-1581
- Business communication**  
interactive TV, residential consumer video service. *Blahut, D.E.*, + , *PROC Jul 95* 1071-1085
- Business data processing; cf.** Financial data processing
- Business planning**  
present and future service demand, dyn. modeling. *Lyons, M.H.*, + , *PROC Oct 97* 1544-1555
- C**
- Cable TV**  
interactive TV, residential consumer video service. *Blahut, D.E.*, + , *PROC Jul 95* 1071-1085
- CAD (computer-aided design); cf.** Design automation
- Calibration**  
ACTS propag. expt. for Ka-band satellite commun. syst. design. *Crane, R.K.*, + , *PROC Jun 97* 863-878  
corrections to "Precision DSN radiometer systems: impact on microwave calibrations" (May 94 776-787). *Stelzried, C.T.*, + , *PROC Aug 96* 1187
- Cancer**  
cancer risk assess., weak EM fields. *Foster, K.R.*, + , *PROC May 97* 733-746
- Carbon dioxide lasers**  
CO<sub>2</sub> range-Doppler imaging laser radar component technol. *Melngailis, I.*, + , *PROC Feb 96* 227-267  
XTRS LADAR, model-based automatic target recogn. syst. *Verly, J.G.*, + , *PROC Feb 96* 126-163
- Cardiac pacemakers**  
cardiac pacing electrodes, pulse generator/lead perform. *Stokes, K.*, *PROC Mar 96* 457-467  
electrical therapy of cardiac arrhythmias (special issue). *PROC Mar 96* 331-499  
external defibrillators/emergency external pacemakers. *Charbonnier, F.M.*, *PROC Mar 96* 487-499  
implantable pacemakers, size reduction/reliab. improvement. *Sanders, R.S.*, + , *PROC Mar 96* 480-486
- Cardiography**  
wavelets in biomedical appls. review. *Unser, M.*, + , *PROC Apr 96* 626-638
- Cardiovascular system**  
arrhythmia treatment, elec./RF ablation, review. *McRury, I.D.*, + , *PROC Mar 96* 404-416  
arrhythmogenesis, computer models, tissue struct./membrane dyn. roles. *Henriquez, C.S.*, + , *PROC Mar 96* 334-354  
defibrillation/cardioversion mechanism. *Jones, J.L.*, + , *PROC Mar 96* 392-403  
defibrillation/pacing electrodes, elec. behavior. *Kim, Y.*, + , *PROC Mar 96* 446-456  
elec. fields, detrimental effects on cardiac muscle. *Tung, L.*, *PROC Mar 96* 366-378  
elec. stimulation laws for cardiac tissue. *Tacker, W.A.*, + , *PROC Mar 96* 355-365  
electrical therapy of cardiac arrhythmias (special issue). *PROC Mar 96* 331-499  
myocardial tissue, externally applied elec. fields effect. *Roth, B.J.*, + , *PROC Mar 96* 379-391  
skeletal muscle/cardiac vibrs., time-freq. anal. *Wood, J.C.*, + , *PROC Sep 96* 1281-1294
- Cardiovascular system, prostheses/orthoses; cf.** Cardiac pacemakers; Defibrillators
- Careers; cf.** Biographies; Engineering profession
- CCITT**  
MPEG integrated audiovisual coding std., develop. *Chiariglione, L.*, *PROC Feb 95* 151-157  
telephone loop plant, technol./appls. *Lin, D.W.*, + , *PROC Feb 95* 175-193  
video coding stds., ref. model methodology. *Okubo, S.*, *PROC Feb 95* 139-150  
VLSI archits. for video compression, survey. *Pirsch, P.*, + , *PROC Feb 95* 220-246
- Cellular automata**  
QCA, quantum-dot cellular automata, pipelined archit. appl. *Lent, C.S.*, + , *PROC Apr 97* 541-557
- Cellular land mobile radio; cf.** Land mobile radio cellular systems
- Cellular logic arrays**  
low-power RAM cct. technol. trends. *Itoh, K.*, + , *PROC Apr 95* 524-543  
nanoelectronics, quantum-effect devices, fault tolerance, design. *Goser, K.F.*, + , *PROC Apr 97* 558-573
- Channel bank filters**  
corrections to "Emerging applications of multirate signal processing and wavelets in digital communications" (Apr 96 586-603). *Wornell, G.W.*, *PROC Aug 96* 1187-1188  
digital commun., multirate sig. proc. and wavelets appls. *Wornell, G.W.*, *PROC Apr 96* 586-603

- wavelets, subband coding, and best bases. *Ramchandran, K.*, + , *PROC Apr 96* 541-560
- Chaos**  
power syst. voltage collapse modelling, bifurcation theory-based. *Chin-Woo Tan*, + , *PROC Nov 95* 1484-1496  
radar detect. of sigs. in chaos, small target in sea clutter. *Haykin, S.*, + , *PROC Jan 95* 95-122
- Charge carrier processes; cf.** Hot carriers
- Charge coupled image sensors**  
cameras and display systs., rel., digital TV. *Hashimoto, Y.*, + , *PROC Jul 95* 1032-1043
- Chemical transducers**  
civ. engng. smart structs., distrib. fiber optic technols. *Culshaw, B.*, + , *PROC Jan 96* 78-86
- Chemistry**  
mol. motion control. *Dahleh, M.*, + , *PROC Jan 96* 7-15
- Choppers**  
CMOS op-amp imperfections reduction, autozeroing, correl. double sampling, chopper stabil. *Enz, C.C.*, + , *PROC Nov 96* 1584-1614
- Circuit analysis**  
John R. Carson, career/contribs. *Brittain, J.E.*, *PROC Jun 96* 909-910
- Circuit noise; cf.** Integrated circuit noise
- Circuit optimization**  
digital CMOS ccts., power consumption minimization. *Chandrakasan, A.P.*, + , *PROC Apr 95* 498-523
- Circuit reliability; cf.** Integrated circuit reliability
- Circuits; cf.** Counting circuits; Integrated circuit...; Logic circuits
- Circuit stability**  
CMOS op-amp imperfections reduction, autozeroing, correl. double sampling, chopper stabil. *Enz, C.C.*, + , *PROC Nov 96* 1584-1614
- Circuit synthesis**  
ENIAC electronic computing ccts., review. *Schneck, P.B.*, *PROC Jul 97* 1169-1171
- Circuit topology**  
digital CMOS ccts., power consumption minimization. *Chandrakasan, A.P.*, + , *PROC Apr 95* 498-523  
distributed detect. with multiple sens., fund. *Viswanathan, R.*, + , *PROC Jan 97* 54-63
- Closed loop systems**  
book review; Loop Transfer Recovery: Analysis and Design (Saberti, A., et al.; 1993. *Stoustrup, J.*, *PROC Feb 97* 337-338
- Clutter; cf.** Radar clutter
- CMOS analog integrated circuits**  
op-amp imperfections reduction, autozeroing, correl. double sampling, chopper stabil. *Enz, C.C.*, + , *PROC Nov 96* 1584-1614
- CMOS digital integrated circuits**  
high-end proc., CMOS and bipolar, perform. trends. *Sai-Halasz, G.A.*, *PROC Jan 95* 20-36  
portable video-on-demand syst. in wireless commun. *Meng, T.H.*, + , *PROC Apr 95* 659-680  
power consumption minimization, cct. optim. *Chandrakasan, A.P.*, + , *PROC Apr 95* 498-523  
scaling, low-power design, logic appls., next decade. *Davari, B.*, + , *PROC Apr 95* 595-606  
technol. challenges for integrat. near and below 0.1  $\mu\text{m}$  design rule. *Asai, S.*, + , *PROC Apr 97* 505-520
- CMOSFET circuits; cf.** CMOS integrated circuits
- CMOSFET logic devices**  
Si scaled submicron ultra-low power CMOS technol. *Stork, J.M.C.*, *PROC Apr 95* 607-618  
VLSI for digital HDTV. *Mlynek, D.J.*, + , *PROC Jul 95* 1055-1070
- CMOSFETs**  
UHV STM nanofabrication, nanolithography tool, selective oxid., metallization. *Lyding, J.W.*, *PROC Apr 97* 589-600
- CMOSFETs; cf.** CMOS integrated circuits
- CMOS integrated circuits**  
low-power electronics (special issue). *PROC Apr 95* 495-693  
low-power RF ICs for portable commun., all-CMOS radio. *Abidi, A.A.*, *PROC Apr 95* 544-569  
scaling into nanometer regime, fund. phys. effects, practicality. *Yuan Taur*, + , *PROC Apr 97* 486-504  
VLSI archits. for video compression, survey. *Pirsch, P.*, + , *PROC Feb 95* 220-246
- CMOS integrated circuits; cf.** CMOS digital integrated circuits
- CMOS memory integrated circuits**  
low-power RAM cct. technol. trends. *Itoh, K.*, + , *PROC Apr 95* 524-543  
Si scaled submicron ultra-low power CMOS technol. *Stork, J.M.C.*, *PROC Apr 95* 607-618
- Codecs**  
VLSI for digital HDTV. *Mlynek, D.J.*, + , *PROC Jul 95* 1055-1070
- Code division multiaccess**  
corrections to "Emerging applications of multirate signal processing and wavelets in digital communications" (Apr 96 586-603). *Wornell, G.W.*, *PROC Aug 96* 1187-1188  
digital commun., multirate sig. proc. and wavelets appls. *Wornell, G.W.*, *PROC Apr 96* 586-603  
satellite CDMA transm. for mobile and pers. commun. *De Gaudenzi, R.*, + , *PROC Jan 96* 18-39
- Code division multiplexing**  
satellite CDMA transm. for mobile and pers. commun. *De Gaudenzi, R.*, + , *PROC Jan 96* 18-39
- Coding/decoding; cf.** Cryptography; Multidimensional coding; Source coding
- Cognitive science**  
semiotic paradigm for hypermedia data and coding models. *Gonzalez, R.*, *PROC Jul 97* 1111-1140
- Collaborative work**  
distributed interactive simul. environ. *Hofer, R.C.*, + , *PROC Aug 95* 1124-1137  
distributed interactive simul., nondefense training/education appls. *Fitzsimmons, E.A.*, + , *PROC Aug 95* 1179-1187
- Combinational logic circuits**  
Boolean logic, nanoelectronic archit., double-barrier reson. tunneling diode. *Roychowdhury, V.P.*, + , *PROC Apr 97* 574-588
- Communication channels; cf.** Fading channels; Multicast channels; Multipath channels
- Communication equipment**  
Edwin H. Colpitts, career/contribs. *Brittain, J.E.*, *PROC Jun 97* 1020-1021
- Communication equipment; cf.** Optical communication equipment; Radio communication equipment; Telephone equipment
- Communication industry**  
new commun. services, society needs. *Lucky, R.W.*, *PROC Oct 97* 1536-1543  
present and future service demand, dyn. modeling. *Lyons, M.H.*, + , *PROC Oct 97* 1544-1555
- Communication standards**  
digital audio coding for visual commun. *Noll, P.*, *PROC Jun 95* 925-943  
digital video coding stds., video commun. role. *Schafer, R.*, + , *PROC Jun 95* 907-924  
distributed interactive simul., networking technol. *Pullen, J.M.*, + , *PROC Aug 95* 1156-1167  
HDTV digital systs., stds., proc. and coding. *Ninomiya, Y.*, *PROC Jul 95* 1086-1093  
JAGUAR, pipelined VLSI archit. for JPEG image compression. *Kovac, M.*, + , *PROC Feb 95* 247-258  
wireless commun. in twenty-first century. *Shafi, M.*, + , *PROC Oct 97* 1622-1638
- Communication switching**  
IP switching for scalable IP services. *Ahmed, H.M.*, + , *PROC Dec 97* 1984-1997  
tag switching archit. overview. *Rekhter, Y.*, + , *PROC Dec 97* 1973-1983
- Communication switching; cf.** Asynchronous transfer mode; Burst switching; Packet switching
- Communication system control**  
self-organizing broadband transport networks. *Grover, W.D.*, *PROC Oct 97* 1582-1611
- Communication system economics**  
satellite commun. develop. *Wu, W.W.*, *PROC Jun 97* 998-1010
- Communication system interfaces**  
pers. communicators, batt.-powered, trends. *Warwick, C.W.*, *PROC Apr 95* 681-686
- Communication system nonlinearities**  
long-dist. lightwave telecomms., opt. fiber amps. *Giles, R.*, + , *PROC Jun 96* 870-883
- Communication system operations and management**  
ATM public networks, perform. mgt., scaleable and flexible approach. *Azmoodeh, M.*, + , *PROC Oct 97* 1639-1645  
communications in the twenty-first century (special issue). *PROC Oct 97* 1519-1661  
communications in the twenty-first century, special issue intro. *Cochrane, P.*, *PROC Oct 97* 1519-1522  
data networks signaling. *Kant, K.*, + , *PROC Oct 97* 1612-1621  
heterog. servers network, service provision, user selection. *Olafsson, S.*, *PROC Oct 97* 1556-1562  
new commun. services, society needs. *Lucky, R.W.*, *PROC Oct 97* 1536-1543  
packet-switching networks, service disciplines for guaranteed perform. *Hui Zhang*, *PROC Oct 95* 1374-1396  
pers. commun. systs., review. *Li, V.O.K.*, + , *PROC Sep 95* 1210-1243  
present and future service demand, dyn. modeling. *Lyons, M.H.*, + , *PROC Oct 97* 1544-1555



- self-organizing broadband transport networks. *Grover, W.D., PROC Oct 97 1582-1611*
- tag switching archit. overview. *Rekhter, Y., +, PROC Dec 97 1973-1983*
- Communication system operations and management; cf.** Computer network management
- Communication system performance**  
advanced TV systs. for terrestrial broadcasting, problems and solns. *Schreiber, W.F., PROC Jun 95 958-981*  
ATM public networks, perform. mgt., scaleable and flexible approach. *Azmoodeh, M., +, PROC Oct 97 1639-1645*  
delay perform. anal. of new Internet services with guaranteed QoS. *van der Wal, K., +, PROC Dec 97 1947-1957*  
integrated services in Internet, state of art. *White, P.P., +, PROC Dec 97 1934-1946*  
laser satellite commun. network, vibr. effect and solns. *Arnon, S., +, PROC Oct 97 1646-1661*  
packet-switching networks, service disciplines for guaranteed perform. *Hui Zhang, PROC Oct 95 1374-1396*  
teletraffic engng. in broadband era. *Michiel, H., +, PROC Dec 97 2007-2033*
- Communication system performance; cf.** Computer network performance
- Communication system planning**  
present and future service demand, dyn. modeling. *Lyons, M.H., +, PROC Oct 97 1544-1555*  
testbed for twenty-first century. *Henning, I., +, PROC Oct 97 1572-1581*
- Communication system reliability**  
self-organizing broadband transport networks. *Grover, W.D., PROC Oct 97 1582-1611*
- Communication system routing**  
internetworking based on cell switch router - archit. and protocol review. *Katsube, Y., +, PROC Dec 97 1998-2006*
- Communication systems**  
book review; Communication Systems Engineering (Proakis, and Salehi; 1994). *Milstein, L.B., PROC Mar 95 486*  
computing and telecomms. technols., convergence. *Messerschmitt, D.G., PROC Aug 96 1167-1186*  
John R. Stone, career/contris. *Brittain, J.E., PROC Oct 96 1573-1574*
- Communication systems; cf.** Broadband communication; Business communication; CCITT; Computer networks; Data communication; Digital communication; Image communication; Intelligent networks; Military communication; Mobile communication; Multiaccess communication; Multimedia communication; Optical communication; Radio communication; Space vehicle communication; Speech communication; Teleconferencing; Telegraphy; Videophone systems
- Communication system security; cf.** Computer network security
- Communication system signaling**  
communications in the twenty-first century (special issue). *PROC Oct 97 1519-1661*  
communications in the twenty-first century, special issue intro. *Cochrane, P., PROC Oct 97 1519-1522*  
data networks signaling. *Kant, K., +, PROC Oct 97 1612-1621*
- Communication system software**  
ATM network traffic mgt. by neural net. *Habib, I.W., PROC Oct 96 1430-1441*  
ATM public networks, perform. mgt., scaleable and flexible approach. *Azmoodeh, M., +, PROC Oct 97 1639-1645*  
convergence of telecomms. and computing technols. *Messerschmitt, D.G., PROC Aug 96 1167-1186*  
CoWare hardware-software codesign tool for digital telecom systs. *Bolsens, I., +, PROC Mar 97 391-418*  
embedded software design tools, real-time sig. proc. systs. *Goossens, G., +, PROC Mar 97 436-454*  
embedded software in real-time sig. proc., telecom appl. *Paulin, P.G., +, PROC Mar 97 419-435*  
telephone network traffic neural net mgt. *Ambrose, B.E., +, PROC Oct 96 1421-1429*
- Communication system traffic**  
ATM network traffic mgt. by neural net. *Habib, I.W., PROC Oct 96 1430-1441*  
data networks signaling. *Kant, K., +, PROC Oct 97 1612-1621*  
distributed interactive simul., networking technol. *Pullen, J.M., +, PROC Aug 95 1156-1167*  
Internet data anal., status and community challenges. *Claffy, K., +, PROC Oct 97 1563-1571*  
network traffic neural net mgt. *Ambrose, B.E., +, PROC Oct 96 1421-1429*  
self-organizing broadband transport networks. *Grover, W.D., PROC Oct 97 1582-1611*  
tag switching archit. overview. *Rekhter, Y., +, PROC Dec 97 1973-1983*  
teletraffic engng. in broadband era. *Michiel, H., +, PROC Dec 97 2007-2033*  
testbed for twenty-first century. *Henning, I., +, PROC Oct 97 1572-1581*
- Communication terminals; cf.** Satellite communication earth terminals
- Compensation**  
CMOS op-amp imperfections reduction, autozeroing, correl. double sampling, chopper stabil. *Enz, C.C., +, PROC Nov 96 1584-1614*
- Complementary circuits; cf.** CMOS integrated circuits
- Complexity theory**  
distributed detect. with multiple sens., fund. *Viswanathan, R., +, PROC Jan 97 54-63*  
fuzzy control, hardware soln. *Costa, A., +, PROC Mar 95 422-434*  
human and machine recogn. of faces, survey. *Chellappa, R., +, PROC May 95 705-741*  
PAC learning fn. approx., feedforward sigmoidal nets. *Rao, N.S.V., +, PROC Oct 96 1562-1569*
- Computer-aided design; cf.** Design automation
- Computer aided engineering; cf.** Computer aided software engineering
- Computer aided software engineering**  
CoWare hardware-software codesign tool for digital telecom systs. *Bolsens, I., +, PROC Mar 97 391-418*
- Computer applications**  
automated biometrics (special issue). *PROC Sep 97 1343-1492*  
automated biometrics, special issue intro. *Shen, W., +, PROC Sep 97 1343-1347*
- Computer applications; cf.** Design automation; Military computing; Neural network applications
- Computer architecture**  
embedded software design tools, real-time sig. proc. systs. *Goossens, G., +, PROC Mar 97 436-454*  
prog. tech. influence. *Hopper, G.M., +, PROC Mar 97 470-474*  
reactive real-time embedded syst. design, formal models. *Edwards, S., +, PROC Mar 97 366-390*  
sens. fusion pot. exploitation, archits. and appls. *Dasarathy, B.V., PROC Jan 97 24-38*  
UltraSPARC- $\mu$ P, microarchitecture design. *Tremblay, M., +, PROC Dec 95 1653-1663*
- Computer architecture; cf.** Memory architecture; Parallel architectures
- Computer communication; cf.** Computer networks; Data communication
- Computer graphics**  
correction to "Wavelets in computer graphics" (Apr 96 615-625). *Schroder, P., PROC Aug 96 1188*  
wavelets in computer graphics. *Schroder, P., PROC Apr 96 615-625*
- Computer graphics; cf.** Visualization
- Computer instructions**  
computer design, prog. tech. influence. *Hopper, G.M., +, PROC Mar 97 470-474*  
embedded software in real-time sig. proc., telecom appl. *Paulin, P.G., +, PROC Mar 97 419-435*
- Computer languages; cf.** Visual languages
- Computer network management**  
testbed for twenty-first century. *Henning, I., +, PROC Oct 97 1572-1581*
- Computer network performance**  
Internet data anal., status and community challenges. *Claffy, K., +, PROC Oct 97 1563-1571*
- Computer networks**  
book review; Fundamentals of Telecommunication Networks (Saadawi, T.N., et al.; 1994). *Robertazzi, T., PROC Aug 95 1197-1198*  
convergence of telecomms. and computing to networking models for integrated services and appls. *Decina, M., +, PROC Dec 97 1887-1914*  
telecomms. and computing technols., convergence. *Messerschmitt, D.G., PROC Aug 96 1167-1186*  
WDM opt. fiber networks, opt. components, review. *Borella, M.S., +, PROC Aug 97 1274-1307*
- Computer networks; cf.** Internet; Local area networks
- Computer network security**  
security issues in networks with Internet access. *Landwehr, C.E., +, PROC Dec 97 2034-2051*
- Computer performance**  
high-end proc., CMOS and bipolar, perform. trends. *Sai-Halasz, G.A., PROC Jan 95 20-36*
- Computer pipeline processing; cf.** Pipeline processing
- Computers**  
electronic computing ccts. of ENIAC (reprinted from Proc., IRE vol., 35, no. 8, pp. 756-767, Aug. 1947. *Burks, A.W., PROC Jul 97 1172-1182*  
modern review of "Electronic computing circuits of ENIAC" (classic paper reprint, pp. 1172-1182). *Schreck, P.B., PROC Jul 97 1169-1171*
- Computers; cf.** Distributed computing; Memories; Microcomputers; Optical computing; Parallel processing; Virtual computers
- Computer science education**  
undergraduate degree course in elec. and computer engng., curriculum. *Director, S.W., +, PROC Sep 95 1246-1269*

**Computer vision; cf.** Machine vision; Object recognition

**Concurrent engineering**

book review; Concurrent Engineering Design (Miller, L.G.; 1994). *Harper, A., PROC Mar 95 485-486*

**Conducting bodies**

sig. anal., time-freq. distribs., sonar and radar echoes appl. *Gaunard, G.C., +, PROC Sep 96 1231-1248*

**Conductors; cf.** Stranded conductors

**Conjugate gradient methods**

antenna arrays appl. to mobile commun., beamforming and DOA aspects. *Godara, L.C., PROC Aug 97 1195-1245*

**Contacts; cf.** Ohmic contacts

**Content-addressable memories; cf.** Associative memories

**Control engineering**

book review; Process Control Engineering (Rao, M., and Qui, H.; 1993). *Zhou, M.C., PROC Nov 95 1592-1593*

**Control equipment; cf.** Microcontrollers

**Control systems**

book review; Robust Control: Systems with Uncertain Physical Parameters (Ackermann, J., et al.; 1993). *Mansour, M., PROC Oct 96 1572*

book review; The Principles of Self-Support in Control Systems (Novakovic, Z.R.; 1992). *Toumodge, S., PROC Apr 95 696-697*

**Control systems; cf.** Aircraft control; Biological control systems; Closed loop systems; Communication system control; Industrial control; Intelligent control; Optimal control; Pointing systems; Power system control; Process control

**Cooling**

low-power IC design, power conscious CAD tools and methodologies. *Singh, D., +, PROC Apr 95 570-594*

**Cooperative work; cf.** Collaborative work

**Copyright protection**

digital TV broadcasting, cryptology. *Macq, B.M., +, PROC Jun 95 944-957*

**Correlation**

book review; Engineering Applications of Correlation and Spectral Analysis (Bendat, J.S., and Piersol, A.G.; 1993). *Chen, T.-H., PROC Jan 95 124*

**Correlators; cf.** Optical correlators

**Corrosion testing**

civ. engng. smart structs., distrib. fiber optic technols. *Culshaw, B., +, PROC Jan 96 78-86*

**Cosine transforms; cf.** Discrete cosine transforms

**Costs; cf.** Economics

**Counting circuits**

ENIAC electronic computing ccts., review. *Schneck, P.B., PROC Jul 97 1169-1171*

**Crossed field devices; cf.** Magnetrons

**Cryptography**

digital lightwave transm., scrambling techns. *Byeong Gi Lee, +, PROC Oct 95 1399-1428*

digital TV broadcasting, cryptology. *Macq, B.M., +, PROC Jun 95 944-957*

distributed interactive simul., networking technol. *Pullen, J.M., +, PROC Aug 95 1156-1167*

quantum inform. proc., cryptography/computation/teleportation. *Spiller, T.P., PROC Dec 96 1719-1746*

security issues in networks with Internet access. *Landwehr, C.E., +, PROC Dec 97 2034-2051*

**Current**

defibrillation/pacing electrodes, elec. behavior. *Kim, Y., +, PROC Mar 96 446-456*

**CVD**

metalorganic chemical vapor deposition for optoelectronic devices. *Coleman, J.J., PROC Nov 97 1715-1729*

**CW radar**

coherent laser radar in Europe, ground-based and airborne systs. *Vaughan, J.M., +, PROC Feb 96 205-226*

**Cybernetics; cf.** Artificial intelligence

**Cylinders**

air-filled elastic shells, acoustical scatt., structural excitations anal. *Dragonette, L.R., +, PROC Sep 96 1249-1263*

**D**

**Database management systems**

sens. fusion automation, database support. *Antony, R.T., PROC Jan 97 39-53*

**Database systems; cf.** Image databases; Information systems

**Data buses**

book review; SBus: Information, Applications, and Experience (Lyle, J.D.; 1992). *Zalevsky, J., PROC Apr 95 694*

**Data communication**

book review; Fundamentals of Telecommunication Networks (Saadawi, T.N., et al.; 1994). *Robertazzi, T., PROC Aug 95 1197-1198*

communications in the twenty-first century (special issue). *PROC Oct 97 1519-1661*

telecomms. and data networks signaling. *Kant, K., +, PROC Oct 97 1612-1621*

testbed for twenty-first century. *Henning, I., +, PROC Oct 97 1572-1581*

**Data communication; cf.** Computer networks; Integrated services digital networks; Integrated voice-data communication; Land mobile radio data communication; Local area networks; Multiaccess communication

**Data compression**

advances in image and video compression (special issue). *PROC Feb 95 135-335*

digital audio coding for visual commun. *Noll, P., PROC Jun 95 925-943*

digital TV perspectives. *Netravali, A., +, PROC Jun 95 834-842*

distributed interactive simul., networking technol. *Pullen, J.M., +, PROC Aug 95 1156-1167*

Grand Alliance syst. for US HDTV. *Challapali, K., +, PROC Feb 95 158-174*

HDTV Grand Alliance syst. *Petajan, E., PROC Jul 95 1094-1105*

image/video compression algms., mean field annealing recovery techns. *Ozcelik, T., +, PROC Feb 95 304-316*

JAGUAR, pipelined VLSI archit. for JPEG image compression. *Kovac, M., +, PROC Feb 95 247-258*

low bit rate video compression by neural net. *Cramer, C., +, PROC Oct 96 1529-1543*

med. image lossy compression by neural net. *Panagiotidis, N.G., +, PROC Oct 96 1474-1487*

radiologic image compression, review. *Wong, S., +, PROC Feb 95 194-219*

self-organizing map, props., engng. appls. *Kohonen, T., +, PROC Oct 96 1358-1384*

VLSI archits. for video compression, survey. *Pirsch, P., +, PROC Feb 95 220-246*

wavelets, subband coding, and best bases. *Ramchandran, K., +, PROC Apr 96 541-560*

**Data compression; cf.** Source coding

**Data conversion**

multirate analog-digital systems for signal processing and conversion, prolog. *Self, K., PROC Feb 97 240-241*

**Data conversion; cf.** Analog-digital conversion; Digital-analog conversion

**Data flow computing**

image proc., block data parallel archit. *Alexander, W.E., +, PROC Jul 96 947-968*

sig. proc. software environ. *Lee, E.A., +, PROC May 95 773-801*

**Data processing**

smart struct., sens. and proc. *Spillman, W.B., Jr., PROC Jan 96 68-77*

**Data processing; cf.** Financial data processing; Government data processing; Military data processing; Optical data processing

**Data security; cf.** Cryptography

**Data structures; cf.** Spatial data structures

**Data transmission; cf.** Data communication

**DCT; cf.** Discrete cosine transforms

**Decision making; cf.** Military decision-making; Pattern classification; Signal detection

**Decoding**

opt. scanning holography, tutorial. *Ting-Chung Poon, +, PROC May 96 753-764*

portable video-on-demand syst. in wireless commun. *Meng, T.H., +, PROC Apr 95 659-680*

VLSI archits. for video compression, survey. *Pirsch, P., +, PROC Feb 95 220-246*

**Defibrillators**

cardiac elec. activity, response, elec. stimuli. *Knisley, S.B., +, PROC Mar 96 417-427*

defibrillation/pacing electrodes, elec. behavior. *Kim, Y., +, PROC Mar 96 446-456*

electrical therapy of cardiac arrhythmias (special issue). *PROC Mar 96 331-499*

external defibrillators/emergency external pacemakers. *Charbonnier, F.M., PROC Mar 96 487-499*

implantable cardioverter defibrillators, detect. algms. *Jenkins, J.M., +, PROC Mar 96 428-445*

implantable cardioverter defibrillators, elec. design challenges. *Warren, J.A., +, PROC Mar 96 468-479*

**Delay effects**

asynchronous design methodologies, overview. *Hauck, S.*, *PROC Jan 95* 69-93

Boolean logic, nanoelectronic archit., double-barrier reson. tunneling diode. *Roychowdhury, V.P.*, +, *PROC Apr 97* 574-588

delay perform. anal. of new Internet services with guaranteed QoS. *van der Wal, K.*, +, *PROC Dec 97* 1947-1957

packet-switching networks, service disciplines for guaranteed perform. *Hui Zhang*, *PROC Oct 95* 1374-1396

**Design automation**

book review; How to Design a Single Phase Motor on a Personal Computer, 4th edn. (Veinott, C.) *Salon, S.*, *PROC Mar 95* 485

book review; The Wiley Project Engineer's Desk Reference (Heisler, S.I.; 1994). *Schoch, K.F., Jr.*, *PROC Mar 95* 485

CoWare hardware-software codesign tool for digital telecom systs. *Bolsens, I.*, +, *PROC Mar 97* 391-418

design data mgt., CAD frameworks. *van den Hamer, P.*, +, *PROC Jan 96* 42-56

hardware/software co-design. *De Michell, G.*, +, *PROC Mar 97* 349-365

low-power IC design, power conscious CAD tools and methodologies. *Singh, D.*, +, *PROC Apr 95* 570-594

**Design methodology**

book review; Concurrent Engineering Design (Miller, L.G.; 1994). *Harper, A.*, *PROC Mar 95* 485-486

data mgt., CAD frameworks. *van den Hamer, P.*, +, *PROC Jan 96* 42-56

implantable cardioverter defibrillators, elec. design challenges. *Warren, J.A.*, +, *PROC Mar 96* 468-479

**Detection; cf.** Fault diagnosis; Signal detection**Detectors**

proc. machine monitoring sens., vibr. anal., time-freq. anal. *Atlas, L.E.*, +, *PROC Sep 96* 1319-1329

**Diagnosis; cf.** Fault diagnosis; Medical diagnosis**Dielectric bodies**

sig. anal., time-freq. distribs., sonar and radar echoes appl. *Gaunaurd, G.C.*, +, *PROC Sep 96* 1231-1248

**Dielectric materials**

HT insulators, dielec. props. and radio appl. *Hills, S.M.*, *PROC Feb 97* 314-322

**Differential equations**

colored noise and stochastic procs. and  $1/f^\alpha$  power law noise generation, discrete simul. *Kasdin, N.J.*, *PROC May 95* 802-827

power syst. voltage stabil. anal., local bifurcation theory-based. *Kwatny, H.G.*, +, *PROC Nov 95* 1456-1483

**Diffraction; cf.** Electromagnetic diffraction**Digital-analog conversion**

multirate analog-digital systs. for sig. proc./conversion. *Franca, J.*, +, *PROC Feb 97* 242-262

**Digital arithmetic**

modified sign digit no. representation, opt. computing/interconnects. *Yatagai, T.*, +, *PROC Jun 96* 828-852

**Digital communication**

audio coding for visual commun. *Noll, P.*, *PROC Jun 95* 925-943

CoWare hardware-software codesign tool for digital telecom systs. *Bolsens, I.*, +, *PROC Mar 97* 391-418

IR wireless high-speed short-range digital commun. *Kahn, J.M.*, +, *PROC Feb 97* 265-298

overview of broadband access technols. *Gagnaire, M.*, *PROC Dec 97* 1958-1972

**Digital communication; cf.** Digital radio; ISDN; Source coding**Digital filters**

book review; Handbook for Digital Signal Processing (Mitra, S.K., and Kaiser, J.F., Eds.; 1993). *Shenoi, B.A.*, *PROC Aug 95* 1199-1200

**Digital filters; cf.** Multidimensional digital filters; Quadrature mirror filters**Digital image processing; cf.** Image processing**Digital integrated circuits; cf.** Mixed analog-digital integrated circuits**Digital modulation**

coded orthogonal FDM, TV broadcasting appl. *Le Floch, B.*, +, *PROC Jun 95* 982-996

**Digital modulation; cf.** Amplitude shift keying**Digital radio**

corrections to "Emerging applications of multirate signal processing and wavelets in digital communications" (Apr 96 586-603). *Wornell, G.W.*, *PROC Aug 96* 1187-1188

multirate sig. proc. and wavelets appl. *Wornell, G.W.*, *PROC Apr 96* 586-603

satellite CDMA transm. for mobile and pers. commun. *De Gaudenzi, R.*, +, *PROC Jan 96* 18-39

**Digital radio; cf.** Spread spectrum communication**Digital signal processors**

JAGUAR, pipelined VLSI archit. for JPEG image compression. *Kovac, M.*, +, *PROC Feb 95* 247-258

modular massively parallel computing approach, image-related proc. *Krikelis, A.*, +, *PROC Jul 96* 988-1004

portable video-on-demand syst. in wireless commun. *Meng, T.H.*, +, *PROC Apr 95* 659-680

VLSI archits. for video compression, survey. *Pirsch, P.*, +, *PROC Feb 95* 220-246

VLSI for digital HDTV. *Mlynek, D.J.*, +, *PROC Jul 95* 1055-1070

**Digital transmission; cf.** Digital communication**Digital TV**

coded orthogonal FDM, TV broadcasting appl. *Le Floch, B.*, +, *PROC Jun 95* 982-996

digital television, part 2: hardware and applications (special issue). *PROC Jul 95* 1007-1105

digital television, part I: enabling technologies (special issue). *PROC Jun 95* 831-996

digital video coding stds., video commun. role. *Schafer, R.*, +, *PROC Jun 95* 907-924

HDTV digital systs., stds., proc. and coding. *Ninomiya, Y.*, *PROC Jul 95* 1086-1093

HDTV Grand Alliance syst. *Petajan, E.*, *PROC Jul 95* 1094-1105

motion estim. techs., review. *Dufaux, F.*, +, *PROC Jun 95* 858-876

TV broadcasting, cryptology. *Macq, B.M.*, +, *PROC Jun 95* 944-957

TV perspectives. *Netravali, A.*, +, *PROC Jun 95* 834-842

VLSI for digital HDTV. *Mlynek, D.J.*, +, *PROC Jul 95* 1055-1070

**Diode lasers; cf.** Semiconductor lasers**Direction of arrival estimation**

antenna arrays appl. to mobile commun., beamforming and DOA aspects. *Godara, L.C.*, *PROC Aug 97* 1195-1245

**Discrete cosine transforms**

Grand Alliance syst. for US HDTV. *Challapali, K.*, +, *PROC Feb 95* 158-174

image proc., block data parallel archit. *Alexander, W.E.*, +, *PROC Jul 96* 947-968

JAGUAR, pipelined VLSI archit. for JPEG image compression. *Kovac, M.*, +, *PROC Feb 95* 247-258

VLSI archits. for video compression, survey. *Pirsch, P.*, +, *PROC Feb 95* 220-246

**Discrete event simulation**

colored noise and stochastic procs. and  $1/f^\alpha$  power law noise generation, discrete simul. *Kasdin, N.J.*, *PROC May 95* 802-827

**Discrete-time filters; cf.** Digital filters**Discrete transforms**

wavelets and study of distant Universe. *Bijaoui, A.*, +, *PROC Apr 96* 670-679

wavelets, math. background. *Cohen, A.*, +, *PROC Apr 96* 514-522

**Discrete transforms; cf.** Discrete cosine transforms**Disk recording**

principles and techs. of opt. data storage. *Mansuripur, M.*, +, *PROC Nov 97* 1780-1796

**Disk recording; cf.** Magnetic disk recording**Display human factors**

3D TV research, present status. *Motoki, T.*, +, *PROC Jul 95* 1009-1021

virtual reality, vision/motion research activities. *Ohzu, H.*, +, *PROC May 96* 782-798

**Displays**

cameras and display systs., rel., digital TV. *Hashimoto, Y.*, +, *PROC Jul 95* 1032-1043

electrooptic displays for opt. inform. proc. *Karim, M.A.*, +, *PROC Jun 96* 814-827

optoelectronics technology (special issue). *PROC Nov 97* 1671-1874

optoelectronics technology, special issue intro. *Lo, Y.-H.*, *PROC Nov 97* 1671-1672

**Displays; cf.** Computer graphics; Flat panel displays; Large-screen displays;

Liquid crystal displays; Plasma displays; Three-dimensional displays; TV displays

**Distortion; cf.** Jitter; Optical distortion**Distributed computing**

ATM public networks, perform. mgt., scaleable and flexible approach. *Azmoodeh, M.*, +, *PROC Oct 97* 1639-1645

Defense Department, distributed interactive simul. technol. appl. *Shiflett, J.E.*, +, *PROC Aug 95* 1168-1178

distributed interactive simulation (special issue). *PROC Aug 95* 1111-1195

distributed interactive simul., future technol. challenges. *Reddy, R.*, +, *PROC Aug 95* 1188-1195

distributed interactive simul., networking technol. *Pullen, J.M.*, +, *PROC Aug 95* 1156-1167

review of distributed multimedia systs. *Li, V.O.K.*, +, *PROC Jul 97* 1063-1108

warfare modeling and simul., distributed interactive simul. *Davis, P.K.*, *PROC Aug 95* 1138-1155

**Distributed computing; cf.** Internet**Distributed detection**

- data fusion (special issue). *PROC Jan 97* 3-183  
 data fusion, special issue intro. *Varshney, P.K., PROC Jan 97* 3-5  
 distributed detect. with multiple sens., fund. *Viswanathan, R., + , PROC Jan 97* 54-63  
 distributed detect. with multiple sens., review. *Blum, R.S., + , PROC Jan 97* 64-79

**Distributed estimation**

- distributed fusion archits. and algms. for target tracking. *Liggins, M.E., II, + , PROC Jan 97* 97-109

**Diversity methods**

- three-site space-diversity expt., 20 GHz, ACTS. *Goldhirsh, J., + , PROC Jun 97* 970-980

**Diversity methods; cf.** Land mobile radio diversity systems**DNA**

- GRAIL, multi-agent neural net gene ident. syst. *Ying Xu, + , PROC Oct 96* 1544-1552

**Doping; cf.** Integrated circuit doping; Semiconductor device doping**Doppler radar**

- CO<sub>2</sub> range-Doppler imaging laser radar component technol. *Melngailis, I., + , PROC Feb 96* 227-267

**DRAM chips**

- low-power RAM cct. technol. trends. *Itoh, K., + , PROC Apr 95* 524-543  
 Si scaled submicron ultra-low power CMOS technol. *Stork, J.M.C., PROC Apr 95* 607-618

**Drugs**

- lasers and optics in health care. *Deutsch, T.F., PROC Nov 97* 1797-1816

**Dynamic programming**

- book review; Optimal Control Theory for Infinite Dimensional Systems (Li, X., and Yong, J.; 1995). *Lenhart, S., PROC Feb 97* 338-339

**Dynamic response; cf.** Transient response**Dynamics**

- book review; Optimization and Dynamical Systems (Helmke, U., and Moore, J.; 1994). *Faybusovich, L., PROC Jun 96* 907-908  
 book review; Qualitative Theory of Dynamical Systems: The Role of Stability Preserving Mappings (Michel, A.N., and Wang, K.; 1995). *Sandberg, I.W., PROC Jan 97* 198-199

**E****Economics**

- book review; The World in 2020 (McRae, H.; 1994). *Dorf, R.C., PROC Jan 96* 88-89

**Economics; cf.** Communication system economics**Education; cf.** Computer science education**Educational technology**

- digital audio coding for visual commun. *Noll, P., PROC Jun 95* 925-943  
 distributed interactive simul., nondefense training/education appls. *Fitzsimmons, E.A., + , PROC Aug 95* 1179-1187  
 MPEG integrated audiovisual coding std., develop. *Chiariglione, L., PROC Feb 95* 151-157

**Educational TV**

- interactive TV, digital actors. *Magenat Thalmann, N., + , PROC Jul 95* 1022-1031

**Electrical engineering**

- IRE Proceedings 1913-1937, elec. and electronics engng. evolv. *Brittain, J.E., PROC Dec 96* 1747-1772  
 IRE proceedings, 1938-1962. *Brittain, J.E., PROC May 97* 762-797

**Electrical engineering; cf.** Control engineering**Electrical engineering education**

- undergraduate degree course in elec. and computer engng., curriculum. *Director, S.W., + , PROC Sep 95* 1246-1269  
 Vladimir Karapetoff, career/contribs. *Brittain, J.E., PROC Oct 97* 1662-1663

**Electric field effects**

- cardiac muscle, detrimental effects of elec. fields. *Tung, L., PROC Mar 96* 366-378  
 myocardial tissue, externally applied elec. fields effect. *Roth, B.J., + , PROC Mar 96* 379-391

**Electric machines; cf.** Generators; Motors**Electric variables; cf.** Impedance**Electric variables control; cf.** Power control; Voltage control**Electric variables measurement; cf.** Attenuation measurement; Electromagnetic measurements; Impedance measurement; Resistance measurement**Electrobiology; cf.** Bioelectric phenomena**Electrocardiography**

- elec. stimulation, cardiac elec. activity. *Knisley, S.B., + , PROC Mar 96* 417-427

- implantable cardioverter defibrillators, detect. algms. *Jenkins, J.M., + , PROC Mar 96* 428-445  
 wavelets in biomedical appls. review. *Unser, M., + , PROC Apr 96* 626-638

**Electrochemical devices; cf.** Batteries**Electrodes; cf.** Biomedical electrodes; Implantable electrodes**Electroencephalography**

- brain functional activity localization, EEG time-freq. anal. *Mingui Sun, + , PROC Sep 96* 1302-1311  
 cortical region neuronal oscills., EEG activity time-freq. anal. *Haykin, S., + , PROC Sep 96* 1295-1301  
 reduced interf. distribs., biological appls./interps. *Williams, W.J., PROC Sep 96* 1264-1280  
 wavelets in biomedical appls. review. *Unser, M., + , PROC Apr 96* 626-638

**Electroluminescent materials/devices; cf.** Light-emitting diodes**Electromagnetic analysis**

- book review; Computational Methods for Electromagnetics and Microwaves (Boaton, R.C.; 1992). *Kuchta, D.M., PROC Jan 95* 123-124  
 book review; Dyadic Green Functions in Electromagnetic Theory (Tai, C.-T.; 1994). *Eleftheriades, G., PROC Jun 95* 998-999

**Electromagnetic atmospheric interference**

- Ka-band Earth-satellite propag. data, syst. requirements. *Rogers, D.V., + , PROC Jun 97* 810-820

**Electromagnetic diffraction**

- corrections to "comments on diffraction principles and limitations of RCS reduction techniques" (Dec 96 1830-1851). *Ufimtsev, P.Y., PROC Mar 97* 475  
 RCS reduction, diffr. principles and limitations. *Ufimtsev, P.Y., PROC Dec 96* 1830-1851

**Electromagnetic fields**

- cancer risk assess., weak EM fields. *Foster, K.R., + , PROC May 97* 733-746  
 corrections to "comments on diffraction principles and limitations of RCS reduction techniques" (Dec 96 1830-1851). *Ufimtsev, P.Y., PROC Mar 97* 475  
 RCS reduction, diffr. principles and limitations. *Ufimtsev, P.Y., PROC Dec 96* 1830-1851

**Electromagnetic interference; cf.** Electromagnetic atmospheric interference; Radio spectrum management; TV interference**Electromagnetic measurements**

- Donald B. Sinclair, contribs. *Brittain, J.E., PROC Jul 95* 1107

**Electromagnetic measurements; cf.** Antenna measurements; Microwave measurements; Optical measurements**Electromagnetic propagation; cf.** Electromagnetic reflection; Microwave propagation; Radio propagation**Electromagnetic propagation in absorbing media**

- cellular pers. commun., handset antenna/human EM interact. *Jensen, M.A., + , PROC Jan 95* 7-17

**Electromagnetic radiation; cf.** Antenna radiation patterns**Electromagnetic radiation effects; cf.** Biological effects of electromagnetic radiation**Electromagnetic reflection**

- corrections to "comments on diffraction principles and limitations of RCS reduction techniques" (Dec 96 1830-1851). *Ufimtsev, P.Y., PROC Mar 97* 475  
 RCS reduction, diffr. principles and limitations. *Ufimtsev, P.Y., PROC Dec 96* 1830-1851

**Electromagnetic refraction; cf.** Optical refraction**Electromagnetic scattering; cf.** Electromagnetic diffraction; Electromagnetic reflection; Electromagnetic scattering by absorbing media; Radar scattering**Electromagnetic scattering by absorbing media**

- ACTS propag. expt., atten. distrib. obs. and predict. model comparisons. *Crane, R.K., + , PROC Jun 97* 879-892  
 ACTS propag. expt. for Ka-band satellite commun. syst. design. *Crane, R.K., + , PROC Jun 97* 863-878  
 corrections to "comments on diffraction principles and limitations of RCS reduction techniques" (Dec 96 1830-1851). *Ufimtsev, P.Y., PROC Mar 97* 475  
 RCS reduction, diffr. principles and limitations. *Ufimtsev, P.Y., PROC Dec 96* 1830-1851

**Electromagnetic spectrum management; cf.** Radio spectrum management**Electromyography**

- reduced interf. distribs., biological appls./interps. *Williams, W.J., PROC Sep 96* 1264-1280

**Electron beam lithography**

- nanostructure fab., electron beam techs. *Matsui, S., PROC Apr 97* 629-643  
 proximal probes, nanofabrication, STM and AFM. *Snow, E.S., + , PROC Apr 97* 601-611  
 UHV STM nanofabrication, nanolithography tool, selective oxid., metallization. *Lyding, J.W., PROC Apr 97* 589-600

**Electronics**

IRE proceedings, 1938-1962. *Brittain, J.E., PROC May 97 762-797*

**Electronics; cf.** Molecular electronics**Electronics industry**

IRE Proceedings 1913-1937, elec. and electronics engng. evoln. *Brittain, J.E., PROC Dec 96 1747-1772*

μP, technol. and business. *Tredennick, N., PROC Dec 95 1641-1652*

**Electron tubes**

comments on "The pure electron discharge and its applications in radio telegraphy and telephony" (classic paper reprint, pp. 1496-1508). *Birdsall, C.K., PROC Sep 97 1493-1495*

Irving Langmuir, career/contribs. *Brittain, J.E., PROC Sep 95 1298*

Lee de Forest, career/contribs. *Brittain, J.E., PROC Mar 97 476-477*

pure electron discharge and its appls. in radio (reprinted from Proc. of the IRE, vol. 3, no. 3, pp. 261-293, Sept. 1915). *Langmuir, I., PROC Sep 97 1496-1508*

**Electron tubes; cf.** Magnetrons; Traveling wave tubes**Electrooptic devices**

displays for opt. inform. proc. *Karim, M.A., +, PROC Jun 96 814-827*

**Electrooptic devices; cf.** Integrated optoelectronics**Encoding**

digital lightwave transm., scrambling techs. *Byeong Gi Lee, +, PROC Oct 95 1399-1428*

GRAIL, multi-agent neural net gene ident. syst. *Ying Xu, +, PROC Oct 96 1544-1552*

multirate analog-digital systs. for sig. proc./conversion. *Franca, J., +, PROC Feb 97 242-262*

satellite CDMA transm. for mobile and pers. commun. *De Gaudenzi, R., +, PROC Jan 96 18-39*

wavelets, subband coding, and best bases. *Ramchandran, K., +, PROC Apr 96 541-560*

**Encoding; cf.** Image coding; Source coding**Endfire antennas; cf.** Yagi-Uda arrays**Energy storage; cf.** Batteries**Engineering**

correction to "Fuzzy logic systems for engineering: A tutorial" (Mar 95 345-377). *Mendel, J.M., PROC Sep 95 1293*

fuzzy logic systs. for engng., tutorial. *Mendel, J.M., PROC Mar 95 345-377*

**Engineering; cf.** Electrical engineering; Mechanical engineering; Structural engineering; Systems engineering**Engineering education; cf.** Electrical engineering education**Engineering profession**

Allen B. Dumont, career/contribs. *Brittain, J.A., PROC Dec 97 2081-2082*  
Benjamin G. Lamme, career/contribs. *Brittain, J.E., PROC Nov 95 1594-1595*

book review; The Collected Papers of Claude E. Shannon (Sloane, N.J.A., and Wyner, A.D., Eds.; 1993). *Ephremides, A., PROC Oct 96 1570-1571*  
C.W. Hansell and P.S. Carter, careers/contribs. *Brittain, J.E., PROC Apr 96 686*

develop. of Yagi-Uda arrays. *Brittain, J.E., PROC May 97 800-801*

Donald B. Sinclair, contribs. *Brittain, J.E., PROC Jul 95 1107*

Edith Clarke, career/contribs. *Brittain, J.E., PROC Jan 96 90*

Edward H. Herold, career/contribs. *Brittain, J.E., PROC Nov 97 1876-1877*

Edwin H. Colpitts, career/contribs. *Brittain, J.E., PROC Jun 97 1020-1021*  
Ernst F.W. Alexanderson, career/contribs. *Brittain, J.E., PROC Aug 95 1202*

Frank J. Sprague, career/contribs. *Brittain, J.E., PROC Jul 97 1183-1184*

Frederick E. Terman, career/contribs. *Brittain, J.E., PROC Jan 95 125-126*

George H. Brown, brief biog./contribs. *Brittain, J.E., PROC Feb 95 338*

George W. Pierce, career/contribs. *Brittain, J.E., PROC Apr 97 700-701*

Greenleaf W. Pickard, careers/contribs. *Brittain, J.E., PROC Oct 95 1434*

Harold A. Wheeler, career/contribs. *Brittain, J.A., PROC Jan 97 200-201*

Harold S. Black, career/contribs. *Brittain, J.E., PROC Aug 97 1335-1336*

Harold T. Friis, career/contribs. *Brittain, J.E., PROC Dec 95 1514*

Harris J. Ryan, career/contribs. *Brittain, J.E., PROC Nov 96 1709-1710*

IRE proceedings, 1938-1962. *Brittain, J.E., PROC May 97 762-797*

Irving Langmuir, career/contribs. *Brittain, J.E., PROC Sep 95 1298*

James K. Clapp, career/contribs. *Brittain, J.E., PROC Apr 95 698*

John G. Brainerd, career/contribs. *Brittain, J.E., PROC Mar 96 502*

John R. Carson, career/contribs. *Brittain, J.E., PROC Jun 96 909-910*

John R. Stone, career/contribs. *Brittain, J.E., PROC Oct 96 1573-1574*

Lee de Forest, career/contribs. *Brittain, J.E., PROC Mar 97 476-477*

Ralph Bown, career/contribs. *Brittain, J.E., PROC Sep 97 1511-1513*

Raymond A. Heising, contribs. *Brittain, J.E., PROC Jun 95 1003*

Reginald A. Fessenden, radio pioneer, career/contribs. *Brittain, J.E., PROC Dec 96 1852-1853*

Rudolf Kompfner, career/contribs. *Brittain, J.E., PROC Feb 97 340-341*

Semi J. Begun, career/contribs. *Brittain, J.E., PROC Aug 96 1189-1190*

Sergei A. Schelkunoff, career/contribs. *Brittain, J.E., PROC Sep 96 1344*

Vladimir Karapetoff, career/contribs. *Brittain, J.E., PROC Oct 97 1662-1663*

William D. Coolidge, contribs. *Brittain, J.E., PROC May 95 828*

William Le Roy Emmet, career/contribs. *Brittain, J.E., PROC Jul 96 1053-1054*

William S. Lee, career/contribs. *Brittain, J.E., PROC Mar 95 490*

**Engineering societies**

IRE proceedings, 1938-1962. *Brittain, J.E., PROC May 97 762-797*

**Entropy; cf.** Maximum entropy methods**Entropy codes**

JAGUAR, pipelined VLSI archit. for JPEG image compression. *Kovac, M., +, PROC Feb 95 247-258*

**Environmental factors**

hybrid neural network/spectrosc. chem. anal. *Taiwei Lu, +, PROC Jun 96 895-905*

low power electronics, batt. technol. *Powers, R.A., PROC Apr 95 687-693*

**Epitaxial growth**

gallium-nitride-based materials for blue to ultraviolet optoelectronics devices. *DenBaars, S.P., PROC Nov 97 1740-1749*

metalorganic chemical vapor deposition for optoelectronic devices. *Coleman, J.J., PROC Nov 97 1715-1729*

molecular beam epitaxy technol. of III-V compound semiconds. for optoelectronic appls. *Cheng, K.-Y., PROC Nov 97 1694-1714*

**EPROM**

flash memory cells, review. *Pavan, P., +, PROC Aug 97 1248-1271*

**Equalizers**

advanced TV systs. for terrestrial broadcasting, problems and solns. *Schreiber, W.F., PROC Jun 95 958-981*

**Equivalent circuits**

defibrillation/pacing electrodes, elec. behavior. *Kim, Y., +, PROC Mar 96 446-456*

**Error analysis**

antenna arrays appl. to mobile commun., beamforming and DOA aspects. *Godara, L.C., PROC Aug 97 1195-1245*

GPS wide area augmentation for aircraft navig. *Enge, P., +, PROC Aug 96 1063-1088*

laser satellite commun. network, vibr. effect and solns. *Arnon, S., +, PROC Oct 97 1646-1661*

portable video-on-demand syst. in wireless commun. *Meng, T.H., +, PROC Apr 95 659-680*

**Estimation**

PAC learning fn. approx., feedforward sigmoidal nets. *Rao, N.S.V., +, PROC Oct 96 1562-1569*

**Estimation; cf.** Direction of arrival estimation; Distributed estimation; Filtering; Least squares methods; Maximum entropy methods; Maximum likelihood estimation; Mean square error methods; Recursive estimation; State estimation

**Etching**

GaN based devices and technol. *Mohammad, S.N., +, PROC Oct 95 1306-1355*

proximal probes, nanofabrication, STM and AFM. *Snow, E.S., +, PROC Apr 97 601-611*

**Expert systems**

fighter aircraft fault tolerant fuzzy control. *Kwong, W.A., +, PROC Mar 95 466-483*

**Extrapolation**

self-organizing map, props., engng. appls. *Kohonen, T., +, PROC Oct 96 1358-1384*

**Extraterrestrial measurements**

wavelets and study of distant Universe. *Bijaoui, A., +, PROC Apr 96 670-679*

**F**

**Fabrication; cf.** Integrated circuit fabrication; Semiconductor device fabrication

**Face recognition**

automated biometrics (special issue). *PROC Sep 97 1343-1492*

automated biometrics, special issue intro. *Shen, W., +, PROC Sep 97 1343-1347*

eigenface, elastic matching, neural nets, face recogn. *Jun Zhang, +, PROC Sep 97 1423-1435*

human and machine recogn. of faces, survey. *Chellappa, R., +, PROC May 95 705-741*

**Fading channels**

ACTS propag. data at 20 and 27.5 GHz, fade slope anal. *Feil, J., +, PROC Jun 97 926-935*

corrections to "Emerging applications of multirate signal processing and wavelets in digital communications" (Apr 96 586-603). *Wornell, G.W., PROC Aug 96 1187-1188*

- cumulative fade distribs. and freq. scaling techs., 20 GHz from ACTS and 12 GHz from DSS. *Goldhirsh, J.*, +, *PROC Jun 97* 910-916
- digital commun., multirate sig. proc. and wavelets appls. *Wornell, G.W.*, *PROC Apr 96* 586-603
- Ka-band Earth-satellite propag. data, syst. requirements. *Rogers, D.V.*, +, *PROC Jun 97* 810-820
- Ka-band Earth-space propag. research in Japan. *Karasawa, Y.*, +, *PROC Jun 97* 821-842
- Ka-band propag., three-site comparison of fade-duration meas. *Helmken, H.*, +, *PROC Jun 97* 917-925
- Ka-band satellite links, open-loop uplink power control. *Dissanayake, A.W.*, *PROC Jun 97* 959-969
- Ka-band scintillations, meas. and model predictions. *Mayer, C.E.*, +, *PROC Jun 97* 936-945
- Ka-band VSATs, channel charactn. and modelling. *Alouini, M.-S.*, +, *PROC Jun 97* 981-997
- satellite CDMA transm. for mobile and pers. commun. *De Gaudenzi, R.*, +, *PROC Jan 96* 18-39
- three-site space-diversity expt., 20 GHz, ACTS. *Goldhirsh, J.*, +, *PROC Jun 97* 970-980
- Fading channels; cf.** Multipath channels
- Failure analysis; cf.** Fault diagnosis; Fault trees
- Fault diagnosis**  
fighter aircraft fault tolerant fuzzy control. *Kwong, W.A.*, +, *PROC Mar 95* 466-483
- Fault tolerance**  
fighter aircraft fault tolerant fuzzy control. *Kwong, W.A.*, +, *PROC Mar 95* 466-483  
nanoelectronics, quantum-effect devices, fault tolerance, design. *Goser, K.F.*, +, *PROC Apr 97* 558-573
- Fault trees**  
fuzzy logic, reliab. engng. appl. *Bowles, J.B.*, +, *PROC Mar 95* 435-449
- FDTD methods**  
cellular pers. commun., handset antenna/human EM interact. *Jensen, M.A.*, +, *PROC Jan 95* 7-17
- Feature extraction**  
GRAIL, multi-agent neural net gene ident. syst. *Ying Xu*, +, *PROC Oct 96* 1544-1552  
human and machine recogn. of faces, survey. *Chellappa, R.*, +, *PROC May 95* 705-741
- Feedback; cf.** State feedback
- Feedback amplifiers**  
Harold S. Black, career/contribs. *Brittain, J.E.*, *PROC Aug 97* 1335-1336
- Feedback amplifiers; cf.** Operational amplifiers
- Feedback systems; cf.** Control systems
- Feedforward neural networks**  
control appls., practise. *Narendra, K.S.*, *PROC Oct 96* 1385-1406  
GRAIL, multi-agent neural net gene ident. syst. *Ying Xu*, +, *PROC Oct 96* 1544-1552  
image compression, neural network approaches. *Dony, R.D.*, +, *PROC Feb 95* 288-303  
low bit rate video compression by neural net. *Cramer, C.*, +, *PROC Oct 96* 1529-1543  
nonlin. vector predictor, neural net approach. *Rizvi, S.A.*, +, *PROC Oct 96* 1513-1528  
PAC learning fn. approx., feedforward sigmoidal nets. *Rao, N.S.V.*, +, *PROC Oct 96* 1562-1569
- FET integrated circuits; cf.** CMOS integrated circuits; MOS integrated circuits
- FETs; cf.** MESFETs; MISFETs; MODFETs; MOSFETs
- Filtering**  
adaptive morph. subband decomp., image coding. *Egger, O.*, +, *PROC Feb 95* 272-287  
corrections to "Emerging applications of multirate signal processing and wavelets in digital communications" (Apr 96 586-603). *Wornell, G.W.*, *PROC Aug 96* 1187-1188  
digital commun., multirate sig. proc. and wavelets appls. *Wornell, G.W.*, *PROC Apr 96* 586-603  
musical sigs., time-freq. anal. *Pielemeier, W.J.*, +, *PROC Sep 96* 1216-1230  
noise reduction filters for dyn. image seqs., review. *Brailean, J.C.*, +, *PROC Sep 95* 1272-1292  
wavelets and time-freq. anal. *Hess-Nielsen, N.*, +, *PROC Apr 96* 523-540  
wavelets in biomedical appls. review. *Unser, M.*, +, *PROC Apr 96* 626-638  
wavelets, subband coding, and best bases. *Ramchandran, K.*, +, *PROC Apr 96* 541-560
- Filtering; cf.** Estimation; Kalman filtering
- Filters; cf.** Acoustooptic filters; Adaptive filters; Digital filters; Equalizers; Linear phase filters; Matched filters
- Financial data processing**  
tax forms, names and addresses, reading syst. *Srihari, S.N.*, +, *PROC Jul 96* 1038-1049
- Fingerprint identification**  
automated biometrics (special issue). *PROC Sep 97* 1343-1492  
automated biometrics, special issue intro. *Shen, W.*, +, *PROC Sep 97* 1343-1347  
biometric authentication, fingerprint features, syst. perform. estim. *Roddy, A.R.*, +, *PROC Sep 97* 1390-1421  
identity-authentication syst., fingerprints. *Jain, A.K.*, +, *PROC Sep 97* 1365-1388  
neural net based fingerprint class./ident. *Halici, U.*, +, *PROC Oct 96* 1497-1512
- Finite automata; cf.** Cellular automata
- Finite difference methods**  
defibrillation/pacing electrodes, elec. behavior. *Kim, Y.*, +, *PROC Mar 96* 446-456
- Finite element methods**  
defibrillation/pacing electrodes, elec. behavior. *Kim, Y.*, +, *PROC Mar 96* 446-456
- Finite state machines**  
testing, principles and methods, survey. *Lee, D.*, +, *PROC Aug 96* 1090-1123
- Flat panel displays**  
cameras and display systs., rel., digital TV. *Hashimoto, Y.*, +, *PROC Jul 95* 1032-1043  
pers. communicators, batt.-powered, trends. *Warwick, C.W.*, *PROC Apr 95* 681-686
- Flip-flops**  
ENIAC electronic computing ccts., review. *Schneck, P.B.*, *PROC Jul 97* 1169-1171
- Flow graphs; cf.** Signal flow graphs
- Fluid flow**  
wavelets and turbulence. *Farge, M.*, +, *PROC Apr 96* 639-669
- Forecasting**  
book review; The World in 2020 (McRae, H.; 1994). *Dorf, R.C.*, *PROC Jan 96* 88-89  
present and future service demand, dyn. modeling. *Lyons, M.H.*, +, *PROC Oct 97* 1544-1555
- Forecasting; cf.** Technology forecasting
- Fourier series**  
musical sigs., time-freq. anal. *Pielemeier, W.J.*, +, *PROC Sep 96* 1216-1230
- Fourier transforms**  
air-filled elastic shells, acoustical scatt., structural excitations anal. *Dragonette, L.R.*, +, *PROC Sep 96* 1249-1263  
musical sigs., time-freq. anal. *Pielemeier, W.J.*, +, *PROC Sep 96* 1216-1230
- Frame synchronization**  
digital lightwave transm., scrambling techs. *Byeong Gi Lee*, +, *PROC Oct 95* 1399-1428
- Frequency conversion; cf.** Optical frequency conversion
- Frequency division multiplexing**  
advanced TV systs. for terrestrial broadcasting, problems and solns. *Schreiber, W.F.*, *PROC Jun 95* 958-981  
coded orthogonal FDM, TV broadcasting appl. *Le Floch, B.*, +, *PROC Jun 95* 982-996
- Frequency domain analysis**  
acoustic sigs. charact., continuous lin. time-freq. representation. *Guillemin, P.*, +, *PROC Apr 96* 561-585  
automatic speech recogn., time-freq. anal. and auditory modeling. *Pitton, J.W.*, +, *PROC Sep 96* 1199-1215  
brain functional activity localization, EEG time-freq. anal. *Mingui Sun*, +, *PROC Sep 96* 1302-1311  
cortical region neuronal oscills., EEG activity time-freq. anal. *Haykin, S.*, +, *PROC Sep 96* 1295-1301  
implantable cardioverter defibrillators, detect. algms. *Jenkins, J.M.*, +, *PROC Mar 96* 428-445  
internal combustion engine, knock detect., mech. signature anal., time-freq. methods. *Samimy, B.*, +, *PROC Sep 96* 1330-1343  
musical sigs., time-freq. anal. *Pielemeier, W.J.*, +, *PROC Sep 96* 1216-1230  
postural sway, human bal. control, time-freq. spectral anal. *El-Jaroudi, A.*, +, *PROC Sep 96* 1312-1318  
proc. machine monitoring sens., vibr. anal., time-freq. anal. *Atlas, L.E.*, +, *PROC Sep 96* 1319-1329  
reduced interf. distribs., biological appls./interps. *Williams, W.J.*, *PROC Sep 96* 1264-1280

- sig. anal., time-freq. distrib., sonar and radar echoes appl. *Gaunaud, G.C.*, +, *PROC Sep 96* 1231-1248  
skeletal muscle/cardiac vibr., time-freq. anal. *Wood, J.C.*, +, *PROC Sep 96* 1281-1294  
time-frequency analysis (special issue). *PROC Sep 96* 1195-1343  
wavelets and time-freq. anal. *Hess-Nielsen, N.*, +, *PROC Apr 96* 523-540
- Frequency modulation**  
acoustic sigs. charact., continuous lin. time-freq. representation. *Guillemain, P.*, +, *PROC Apr 96* 561-585
- Frequency stability**  
corrections to "The fractional frequency stability of a 34-m-diameter beam waveguide antenna" (May 94 788-795). *Otoshi, T.Y.*, *P PROC Aug 96* 1187
- Functional analysis**  
correction to "Fuzzy logic systems for engineering: A tutorial" (Mar 95 345-377). *Mendel, J.M.*, *PROC Sep 95* 1293  
fuzzy logic systs. for engng., tutorial. *Mendel, J.M.*, *PROC Mar 95* 345-377
- Functions; cf. Boolean functions**
- Fuzzy control**  
engng. appls. of fuzzy logic (special issue). *PROC Mar 95* 343-483  
fighter aircraft fault tolerant fuzzy control. *Kwong, W.A.*, +, *PROC Mar 95* 466-483  
hardware solns. for fuzzy control. *Costa, A.*, +, *PROC Mar 95* 422-434  
implement., control policies. *Thomas, D.E.*, +, *PROC Mar 95* 407-421  
indust. appls. of fuzzy control. *Bonissone, P.P.*, +, *PROC Mar 95* 450-465  
neuro-fuzzy modeling/control, adaptive network. *Jang, J.-S.R.*, +, *PROC Mar 95* 378-406
- Fuzzy logic**  
control policies, implement. *Thomas, D.E.*, +, *PROC Mar 95* 407-421  
correction to "Fuzzy logic systems for engineering: A tutorial" (Mar 95 345-377). *Mendel, J.M.*, *PROC Sep 95* 1293  
engng. appl. of fuzzy logic syst., tutorial. *Mendel, J.M.*, *PROC Mar 95* 345-377  
engng. appls. of fuzzy logic (special issue). *PROC Mar 95* 343-483  
hardware solns. for fuzzy control. *Costa, A.*, +, *PROC Mar 95* 422-434  
indust. appls. of fuzzy control. *Bonissone, P.P.*, +, *PROC Mar 95* 450-465  
mobile robot navig., sens. fusion, self-location techs. *Kam, M.*, +, *PROC Jan 97* 110-119  
nuc. med. image restoration by neural net. *Wei Qian*, +, *PROC Oct 96* 1458-1473  
reliab. engng. appl. of fuzzy logic. *Bowles, J.B.*, +, *PROC Mar 95* 435-449
- Fuzzy neural networks**  
neuro-fuzzy modeling/control, adaptive network. *Jang, J.-S.R.*, +, *PROC Mar 95* 378-406  
nuc. med. image restoration by neural net. *Wei Qian*, +, *PROC Oct 96* 1458-1473
- Fuzzy sets**  
correction to "Fuzzy logic systems for engineering: A tutorial" (Mar 95 345-377). *Mendel, J.M.*, *PROC Sep 95* 1293  
fuzzy control policies, implement. *Thomas, D.E.*, +, *PROC Mar 95* 407-421  
logic syst., fuzzy for engng., tutorial. *Mendel, J.M.*, *PROC Mar 95* 345-377  
reliab. engng. appl. of fuzzy logic. *Bowles, J.B.*, +, *PROC Mar 95* 435-449
- Fuzzy systems**  
correction to "Fuzzy logic systems for engineering: A tutorial" (Mar 95 345-377). *Mendel, J.M.*, *PROC Sep 95* 1293  
logic syst., fuzzy for engng., tutorial. *Mendel, J.M.*, *PROC Mar 95* 345-377
- G**
- Galaxies**  
wavelets and study of distant Universe. *Bijaoui, A.*, +, *PROC Apr 96* 670-679
- Gallium compounds**  
gallium-nitride-based materials for blue to ultraviolet optoelectronics devices. *DenBaars, S.P.*, *PROC Nov 97* 1740-1749  
GaN based devices and technol. *Mohammad, S.N.*, +, *PROC Oct 95* 1306-1355  
high-brightness AlGaInP light emitting diodes. *Vanderwater, D.A.*, +, *PROC Nov 97* 1752-1764
- Game theory**  
heterog. servers network, service provision, user selection. *Olafsson, S.*, *PROC Oct 97* 1556-1562
- Gas-discharge displays; cf. Plasma displays**
- Gas lasers; cf. Carbon dioxide lasers**
- Generators**  
multimachine power syst. structural stabil., nonlin. load effects. *Pai, M.A.*, +, *PROC Nov 95* 1562-1572
- Generators; cf. AC generators**
- Genetics**  
GRAIL, multi-agent neural net gene ident. syst. *Ying Xu*, +, *PROC Oct 96* 1544-1552  
lasers and optics in health care. *Deutsch, T.F.*, *PROC Nov 97* 1797-1816
- Geophysical measurements; cf. Hydrologic measurements**
- Global Positioning System**  
wide area augmentation for aircraft navig. *Enge, P.*, +, *PROC Aug 96* 1063-1088
- Governmental factors**  
book review; World Class (Kanter, R.M.; 1995). *Dorf, R.C.*, *PROC Jul 96* 1050-1051
- Government data processing**  
tax forms, names and addresses, reading syst. *Srihari, S.N.*, +, *PROC Jul 96* 1038-1049
- GPS; cf. Global Positioning System**
- Gradient methods**  
dyn. neural net for vehicle idle speed control. *Puskorius, G.V.*, +, *PROC Oct 96* 1407-1420
- Gradient methods; cf. Conjugate gradient methods; Least mean square methods**
- Graphical user interfaces**  
book review; The Icon Book: Visual Symbols for Computer Systems and Documentation (Horton, W.; 1994). *Winn, D.*, *PROC Oct 95* 1429-1430
- Graphics; cf. Computer graphics**
- Green function**  
book review; Dyadic Green Functions in Electromagnetic Theory (Tai, C.-T.; 1994). *Eleftheriades, G.*, *PROC Jun 95* 998-999
- Ground vehicles; cf. Land vehicles**
- Gyroscopes**  
fiber optic smart struct. sens. *Udd, E.*, *PROC Jun 96* 884-894
- H**
- Haar transforms**  
PAC learning fn. approx., feedforward sigmoidal nets. *Rao, N.S.V.*, +, *PROC Oct 96* 1562-1569
- Handwriting recognition**  
automatic on-line signature verification, prolog. *Esch, J.*, *PROC Feb 97* 213-214  
digital TV broadcasting, cryptology. *Macq, B.M.*, +, *PROC Jun 95* 944-957  
signature automatic on-line verification. *Nalwa, V.S.*, *PROC Feb 97* 215-239
- Hard disks**  
batt.-powered portable computers, technol. trends. *Harris, E.P.*, +, *PROC Apr 95* 636-658
- Hazardous areas**  
book review; Robotics and Remote Systems for Hazardous Environments (Jamshidi, M., and Eicker, P., Eds.; 1993). *Maciejewski, A.A.*, *PROC Feb 95* 336-337
- HDTV**  
3D TV research, present status. *Motoki, T.*, +, *PROC Jul 95* 1009-1021  
Grand Alliance syst. *Petajan, E.*, *PROC Jul 95* 1094-1105  
Grand Alliance syst. for US HDTV. *Challapali, K.*, +, *PROC Feb 95* 158-174  
stds., proc. and coding. *Ninomiya, Y.*, *PROC Jul 95* 1086-1093  
VLSI for digital HDTV. *Mlynek, D.J.*, +, *PROC Jul 95* 1055-1070
- Heterodyning**  
coherent laser radar in Europe, ground-based and airborne systs. *Vaughan, J.M.*, +, *PROC Feb 96* 205-226
- Heterojunction bipolar transistors**  
GaN based devices and technol. *Mohammad, S.N.*, +, *PROC Oct 95* 1306-1355
- Hidden Markov models**  
ANN for stat. recogn. of continuous speech. *Morgan, N.*, +, *PROC May 95* 742-772
- Hierarchical memories; cf. Memory hierarchies**
- High-definition TV; cf. HDTV**
- High-temperature techniques**  
future challenges and directions for nitride materials and light emitters. *Akasaki, I.*, +, *PROC Nov 97* 1750-1751
- History**  
birth of term "microwaves". *Pelosi, G.*, *PROC Feb 96* 326  
digital computer memory systs., historical survey. *Eckert, J.P., Jr*, *PROC Jan 97* 184-197  
distributed interactive simul., networking technol. *Pullen, J.M.*, +, *PROC Aug 95* 1156-1167  
ENIAC electronic computing cts., review. *Schneck, P.B.*, *PROC Jul 97* 1169-1171

- Federal Telegraph Company, commun. equip. develop. *de Forest, L.*, *PROC Feb 97* 327-336
- first issue of Proceedings, intro. *Brittain, J.E.*, *PROC Feb 97* 299-300
- intro. to classic paper by M.I. Pupa on antenna radiation resistance meas. (classic paper reprint, pp. 306-310). *Collin, R.E.*, *PROC Feb 97* 301-305
- intro. to classic paper by S.M. Hills on high-voltage insulators for radio commun. (classic paper reprint, pp. 314-322). *Nelson, J.K.*, *PROC Feb 97* 311-313
- mol. electronics, hist., forty yrs. of develop. *Chapin Cutler, C.*, *PROC Jul 97* 1141-1143
- SIMNET, simulator networking, mil. training. *Miller, D.C.*, + , *PROC Aug 95* 1114-1123
- single-chip microcomputers, historical develop. *Mazor, S.*, *PROC Dec 95* 1601-1608
- transoceanic commun. of pass. satellites. *Pierce, J.R.*, + , *PROC Jun 97* 1011-1019
- wavelets, historical roots. *Daubechies, I.*, *PROC Apr 96* 510-513
- William Le Roy Emmet, career/contribs. *Brittain, J.E.*, *PROC Jul 96* 1053-1054
- Holographic memories**  
principles and techs. of opt. data storage. *Mansuripur, M.*, + , *PROC Nov 97* 1780-1796
- Holography**  
display of 3D video images. *Travis, A.R.L.*, *PROC Nov 97* 1817-1832
- nanostructure fab., electron beam techs. *Matsui, S.*, *PROC Apr 97* 629-643
- opt. scanning holography, tutorial. *Ting-Chung Poon*, + , *PROC May 96* 753-764
- Hopfield networks**  
multi-target pass. tracking, neural net optim. *Shams, S.*, *PROC Oct 96* 1442-1457
- nuc. med. image restoration by neural net. *Wei Qian*, + , *PROC Oct 96* 1458-1473
- Hot carriers**  
book review: Hot-Carrier Reliability of MOS VLSI Circuits (Leblebici, Y., and Kang, S.-M.; 1993). *Kwark, Y.H.*, *PROC Mar 95* 486-487
- UHV STM nanofabrication, nanolithography tool, selective oxid., metallization. *Lyding, J.W.*, *PROC Apr 97* 589-600
- Huffman codes**  
asynchronous design methodologies, overview. *Hauck, S.*, *PROC Jan 95* 69-93
- Grand Alliance syst. for US HDTV. *Challapali, K.*, + , *PROC Feb 95* 158-174
- Human factors**  
warfare modeling and simul., distributed interactive simul. *Davis, P.K.*, *PROC Aug 95* 1138-1155
- Hydrologic measurements**  
groundwater flow, hydraulic cond., sig.-level fusion, multiresolution method. *Daniel, M.M.*, + , *PROC Jan 97* 164-180
- Hypertext systems**  
review of distributed multimedia syst. *Li, V.O.K.*, + , *PROC Jul 97* 1063-1108
- semiotic paradigm for hypermedia data and coding models. *Gonzalez, R.*, *PROC Jul 97* 1111-1140
- I**
- Iconic languages; cf.** Visual languages
- Identification**  
blind syst. ident. techs., review. *Abed-Meraim, K.*, + , *PROC Aug 97* 1310-1322
- FSM testing, principles and methods, survey. *Lee, D.*, + , *PROC Aug 96* 1090-1123
- neural nets, control appls., practise. *Narendra, K.S.*, *PROC Oct 96* 1385-1406
- Identification; cf.** Identification of persons; Object recognition
- Identification of persons**  
automated biometrics (special issue). *PROC Sep 97* 1343-1492
- automated biometrics, special issue intro. *Shen, W.*, + , *PROC Sep 97* 1343-1347
- eval. of automated biometrics-based ident. systs. *Weicheng Shen*, + , *PROC Sep 97* 1464-1478
- Identification of persons; cf.** Face recognition; Fingerprint identification; Handwriting recognition; Speaker recognition
- IEEE publications**  
first issue of Proceedings, intro. *Brittain, J.E.*, *PROC Feb 97* 299-300
- IRE Proceedings 1913-1937, elec. and electronics engng. evoln. *Brittain, J.E.*, *PROC Dec 96* 1747-1772
- IEEE standards**  
distributed interactive simul. environ. *Hofer, R.C.*, + , *PROC Aug 95* 1124-1137
- Image analysis**  
human brain NMR image anal. by neural net. *Gelenbe, E.*, + , *PROC Oct 96* 1488-1496
- signals and systems (special section). *PROC Nov 96* 1579-1580, 1623-1704
- wavelets in biomedical appls. review. *Unser, M.*, + , *PROC Apr 96* 626-638
- Image classification**  
mobile robot, environ. representation, multiple abstraction levels. *Dudek, G.L.*, *PROC Nov 96* 1684-1704
- opt. inform. proc. and beyond, review. *Ichioka, Y.*, + , *PROC May 96* 694-719
- Image coding**  
adaptive morph. subband decomp., image coding. *Egger, O.*, + , *PROC Feb 95* 272-287
- advances in image and video compression (special issue). *PROC Feb 95* 135-335
- compression algms., mean field annealing recovery techs. *Ozcelik, T.*, + , *PROC Feb 95* 304-316
- compression, neural network approaches. *Dony, R.D.*, + , *PROC Feb 95* 288-303
- digital TV perspectives. *Netravali, A.*, + , *PROC Jun 95* 834-842
- digital video coding stds., video commun. role. *Schafer, R.*, + , *PROC Jun 95* 907-924
- digital video recording. *Umemoto, M.*, + , *PROC Jul 95* 1044-1054
- Grand Alliance syst. for US HDTV. *Challapali, K.*, + , *PROC Feb 95* 158-174
- HDTV digital systs., stds., proc. and coding. *Ninomiya, Y.*, *PROC Jul 95* 1086-1093
- HDTV Grand Alliance syst. *Petajan, E.*, *PROC Jul 95* 1094-1105
- JAGUAR, pipelined VLSI archit. for JPEG image compression. *Kovac, M.*, + , *PROC Feb 95* 247-258
- low bit rate video compression by neural net. *Cramer, C.*, + , *PROC Oct 96* 1529-1543
- med. image lossy compression by neural net. *Panagiotidis, N.G.*, + , *PROC Oct 96* 1474-1487
- model-based video coding, develop. *Pearson, D.E.*, *PROC Jun 95* 892-906
- motion estim. techs. for digital TV, review. *Dufaux, F.*, + , *PROC Jun 95* 858-876
- MPEG integrated audiovisual coding std., develop. *Chiariglione, L.*, *PROC Feb 95* 151-157
- nonlin. vector predictor, neural net approach. *Rizvi, S.A.*, + , *PROC Oct 96* 1513-1528
- opt. scanning holography, tutorial. *Ting-Chung Poon*, + , *PROC May 96* 753-764
- radiologic image compression, review. *Wong, S.*, + , *PROC Feb 95* 194-219
- region-based video coding, math. morph. *Salembier, P.*, + , *PROC Jun 95* 843-857
- semiotic paradigm for hypermedia data and coding models. *Gonzalez, R.*, *PROC Jul 97* 1111-1140
- telephone loop plant, technol./appls. *Lin, D.W.*, + , *PROC Feb 95* 175-193
- vector-based sig. proc./quantization. *Weiping Li*, + , *PROC Feb 95* 317-335
- very low bit rate video coding, trends. *Ebrahimi, T.*, + , *PROC Jun 95* 877-891
- video coding stds., ref. model methodology. *Okubo, S.*, *PROC Feb 95* 139-150
- VLSI archits. for video compression, survey. *Pirsch, P.*, + , *PROC Feb 95* 220-246
- Image communication**  
digital audio coding for visual commun. *Noll, P.*, *PROC Jun 95* 925-943
- digital video coding stds., video commun. role. *Schafer, R.*, + , *PROC Jun 95* 907-924
- model-based video coding techs. for low bit-rate appl. *Aizawa, K.*, + , *PROC Feb 95* 259-271
- Image communication; cf.** Cable TV
- Image databases**  
design data mgt., CAD frameworks. *van den Hamer, P.*, + , *PROC Jan 96* 42-56
- fingerprint class./ident. by SOFM neural net. *Halic, U.*, + , *PROC Oct 96* 1497-1512
- Image edge analysis**  
nonlin. vector predictor, neural net approach. *Rizvi, S.A.*, + , *PROC Oct 96* 1513-1528
- wavelets for computer vision research. *Mallat, S.*, *PROC Apr 96* 604-614
- Image enhancement**  
wavelets in biomedical appls. review. *Unser, M.*, + , *PROC Apr 96* 626-638
- Image matching**  
eigenface, elastic matching, neural nets, face recogn. *Jun Zhang*, + , *PROC Sep 97* 1423-1435



- motion estim. techs. for digital TV, review. *Dufaux, F.*, +, *PROC Jun 95* 858-876
- XTRS LADAR, model-based automatic target recogn. syst. *Verly, J.G.*, +, *PROC Feb 96* 126-163
- Image matching; cf.** Fingerprint identification
- Image motion analysis**
- digital TV, motion estim. techs., review. *Dufaux, F.*, +, *PROC Jun 95* 858-876
- Grand Alliance syst. for US HDTV. *Challapali, K.*, +, *PROC Feb 95* 158-174
- low bit rate video compression by neural net. *Cramer, C.*, +, *PROC Oct 96* 1529-1543
- region-based video coding, math. morph. *Salembier, P.*, +, *PROC Jun 95* 843-857
- virtual reality, vision/motion research activities. *Ohzu, H.*, +, *PROC May 96* 782-798
- VLSI analog archit., motion proc. *Sarpeshkar, R.*, +, *PROC Jul 96* 969-987
- Image processing**
- 1D proc. array. *Hammerstrom, D.W.*, +, *PROC Jul 96* 1005-1018
- block data parallel archit. *Alexander, W.E.*, +, *PROC Jul 96* 947-968
- data fusion (special issue). *PROC Jan 97* 3-183
- high-perform. RISC systs., image proc. eval. *Baglietto, P.*, +, *PROC Jul 96* 917-930
- modular massively parallel computing approach, image-related proc. *Krikelis, A.*, +, *PROC Jul 96* 988-1004
- optical information processing, part 1: image processing and vision (special issue). *PROC May 96* 691-798
- parallel architectures for image processing (special issue). *PROC Jul 96* 915-1049
- wavelets and study of distant Universe. *Bijaoui, A.*, +, *PROC Apr 96* 670-679
- Image processing; cf.** Image coding; Image matching; Image recognition; Image reconstruction; Image resolution; Image restoration; Video signal processing
- Image recognition**
- multisensor imagery positioning for target recogn. and exploitation. *Chellappa, R.*, +, *PROC Jan 97* 120-138
- Image recognition; cf.** Face recognition; Fingerprint identification; Object recognition
- Image reconstruction**
- adaptive morph. subband decomp., image coding. *Egger, O.*, +, *PROC Feb 95* 272-287
- compression algms., mean field annealing recovery techs. *Ozcelik, T.*, +, *PROC Feb 95* 304-316
- low bit rate video compression by neural net. *Cramer, C.*, +, *PROC Oct 96* 1529-1543
- SAR images, spatial resoln., fusion, data sets. *Costantini, M.*, +, *PROC Jan 97* 139-146
- scene interp., multiple sens. modalities, phys.-based integrat. *Nandhakumar, N.*, +, *PROC Jan 97* 147-163
- wavelets in biomedical appls. review. *Unser, M.*, +, *PROC Apr 96* 626-638
- Image reconstruction; cf.** Holography
- Image region analysis**
- region-based video coding, math. morph. *Salembier, P.*, +, *PROC Jun 95* 843-857
- Image representations**
- digital video coding stds., video commun. role. *Schafer, R.*, +, *PROC Jun 95* 907-924
- mobile robot, environ. representation, multiple abstraction levels. *Dudek, G.L.*, *PROC Nov 96* 1684-1704
- obj. fn. recogn., reasoning, partial shape model. *Stark, L.*, +, *PROC Nov 96* 1640-1656
- Image resolution**
- groundwater flow, hydraulic cond., sig.-level fusion, multiresolution method. *Daniel, M.M.*, +, *PROC Jan 97* 164-180
- nuc. med. image restoration by neural net. *Wei Qian*, +, *PROC Oct 96* 1458-1473
- SAR images, spatial resoln., fusion, data sets. *Costantini, M.*, +, *PROC Jan 97* 139-146
- wavelets in biomedical appls. review. *Unser, M.*, +, *PROC Apr 96* 626-638
- Image restoration**
- blind syst. ident. techs., review. *Abed-Meraim, K.*, +, *PROC Aug 97* 1310-1322
- nuc. med. image restoration by neural net. *Wei Qian*, +, *PROC Oct 96* 1458-1473
- Image sampling**
- adaptive morph. subband decomp., image coding. *Egger, O.*, +, *PROC Feb 95* 272-287
- speckle reduction in coherent inform. proc. *Iwai, T.*, +, *PROC May 96* 765-781
- Image sequence analysis**
- low bit rate video compression by neural net. *Cramer, C.*, +, *PROC Oct 96* 1529-1543
- model-based video coding, develop. *Pearson, D.E.*, *PROC Jun 95* 892-906
- motion estim. techs. for digital TV, review. *Dufaux, F.*, +, *PROC Jun 95* 858-876
- noise reduction filters for dyn. image seqs., review. *Brailean, J.C.*, +, *PROC Sep 95* 1272-1292
- region-based video coding, math. morph. *Salembier, P.*, +, *PROC Jun 95* 843-857
- Image shape analysis**
- human and machine recogn. of faces, survey. *Chellappa, R.*, +, *PROC May 95* 705-741
- obj. fn. recogn., reasoning, partial shape model. *Stark, L.*, +, *PROC Nov 96* 1640-1656
- Image texture analysis**
- adaptive morph. subband decomp., image coding. *Egger, O.*, +, *PROC Feb 95* 272-287
- region-based video coding, math. morph. *Salembier, P.*, +, *PROC Jun 95* 843-857
- wavelets for computer vision research. *Mallat, S.*, *PROC Apr 96* 604-614
- Image transmission; cf.** Image communication
- Image understanding; cf.** Image analysis
- Imaging; cf.** Biomedical X-ray imaging; Holography; Optical imaging; Synthetic aperture imaging; TV imaging
- Impedance**
- intro. to classic paper by M.I. Pupin on antenna radiation resistance meas. (classic paper reprint, pp. 306-310). *Collin, R.E.*, *PROC Feb 97* 301-305
- Impedance measurement**
- Donald B. Sinclair, contribs. *Brittain, J.E.*, *PROC Jul 95* 1107
- Implantable biomedical devices**
- cardioverter defibrillators, elec. design challenges. *Warren, J.A.*, +, *PROC Mar 96* 468-479
- detect. algms. in implantable cardioverter defibrillators. *Jenkins, J.M.*, +, *PROC Mar 96* 428-445
- Implantable electrodes**
- cardiac pacing electrodes, pulse generator/lead perform. *Stokes, K.*, *PROC Mar 96* 457-467
- Indexes**
- fingerprint class./ident. by SOFM neural net. *Halicic, U.*, +, *PROC Oct 96* 1497-1512
- Indoor radio communication**
- mobile commun., antenna arrays, channel requirement, appls. *Godara, L.C.*, *PROC Jul 97* 1031-1060
- Induction motors**
- multimachine power syst. structural stabil., nonlin. load effects. *Pai, M.A.*, +, *PROC Nov 95* 1562-1572
- Industrial control**
- book review; Manufacturing Systems Engineering (Gershwin, S.B.; 1994). *Meerkov, S.M.*, *PROC Jul 96* 1051-1052
- fuzzy logic control, indust. appls. *Bonissone, P.P.*, +, *PROC Mar 95* 450-465
- Industrial production; cf.** Manufacturing
- Industries; cf.** Communication industry
- Inference mechanisms**
- fuzzy control, hardware soln. *Costa, A.*, +, *PROC Mar 95* 422-434
- mobile robot navig., sens. fusion, self-location techs. *Kam, M.*, +, *PROC Jan 97* 110-119
- neuro-fuzzy modeling/control, adaptive network. *Jang, J.-S.R.*, +, *PROC Mar 95* 378-406
- Information rates**
- automatic speech recogn., time-freq. anal. and auditory modeling. *Pitton, J.W.*, +, *PROC Sep 96* 1199-1215
- Information retrieval**
- book review; Universal Compression and Retrieval (Krichevsky, R.; 1994). *Csiszar, I.*, *PROC Jun 95* 1000-1002
- Information retrieval; cf.** Hypertext systems
- Information systems**
- quantum inform. proc., cryptography/computation/teleportation. *Spiller, T.P.*, *PROC Dec 96* 1719-1746
- Information theory**
- book review; The Collected Papers of Claude E. Shannon (Sloane, N.J.A., and Wyner, A.D., Eds.; 1993). *Ephremides, A.*, *PROC Oct 96* 1570-1571
- Information theory; cf.** Encoding
- Infrared lasers; cf.** Carbon dioxide lasers
- Injection lasers; cf.** Semiconductor lasers
- Innovation; cf.** Technological innovation
- Inspection**
- laser radar imaging sens. for robotic appls. *Carmer, D.C.*, +, *PROC Feb 96* 299-320

**Insulation**

intro. to classic paper by S.M. Hills on high-voltage insulators for radio commun. (classic paper reprint, pp. 314-322). *Nelson, J.K., PROC Feb 97 311-313*

**Insulators**

HT insulators, dielec. props. and radio appl. *Hills, S.M., PROC Feb 97 314-322*

**Integrated circuit design**

CMOS technol. challenges for integrat. near and below 0.1  $\mu\text{m}$  design rule. *Asai, S., +, PROC Apr 97 505-520*

hardware/software codesign (special issue). *PROC Mar 97 347-466*

hardware/software codesign, special issue intro. *De Micheli, G., PROC Mar 97 347-348*

low-power IC design, power conscious CAD tools and methodologies. *Singh, D., +, PROC Apr 95 570-594*

nanoelectronics, quantum-effect devices, fault tolerance, design. *Goser, K.F., +, PROC Apr 97 558-573*

**Integrated circuit doping**

CMOS technol. challenges for integrat. near and below 0.1  $\mu\text{m}$  design rule. *Asai, S., +, PROC Apr 97 505-520*

**Integrated circuit fabrication**

CMOS scaling for high perform. and low power, next decade. *Davari, B., +, PROC Apr 95 595-606*

low power microelectronics, develop. and prospects. *Meindl, J.D., PROC Apr 95 619-635*

nanometer-scale science and technology (special issue). *PROC Apr 97 483-680*

nanometer-scale science and technology, special issue intro. *Marrian, C.R.K., PROC Apr 97 483-485*

Si scaled submicron ultra-low power CMOS technol. *Stork, J.M.C., PROC Apr 95 607-618*

$\mu\text{P}$ , technol. and business. *Tredennick, N., PROC Dec 95 1641-1652*

**Integrated circuit fabrication; cf.** Integrated circuit doping; Integrated circuit metallization; Integrated circuit packaging; Lithography

**Integrated circuit interconnections**

CMOS scaling into nanometer regime, fund. phys. effects, practicality. *Yuan Taur, +, PROC Apr 97 486-504*

CMOS technol. challenges for integrat. near and below 0.1  $\mu\text{m}$  design rule. *Asai, S., +, PROC Apr 97 505-520*

high-end proc., CMOS and bipolar, perform. trends. *Sai-Halasz, G.A., PROC Jan 95 20-36*

**Integrated circuit metallization**

UHV STM nanofabrication, nanolithography tool, selective oxid., metallization. *Lyding, J.W., PROC Apr 97 589-600*

**Integrated circuit modeling**

high-end proc., CMOS and bipolar, perform. trends. *Sai-Halasz, G.A., PROC Jan 95 20-36*

Si scaled submicron ultra-low power CMOS technol. *Stork, J.M.C., PROC Apr 95 607-618*

**Integrated circuit noise**

CMOS op-amp imperfections reduction, autozeroing, correl. double sampling, chopper stabil. *Enz, C.C., +, PROC Nov 96 1584-1614*

**Integrated circuit packaging**

low-power IC design, power conscious CAD tools and methodologies. *Singh, D., +, PROC Apr 95 570-594*

**Integrated circuit reliability**

book review; Hot-Carrier Reliability of MOS VLSI Circuits (Leblebici, Y., and Kang, S.-M.; 1993). *Kwark, Y.H., PROC Mar 95 486-487*

CMOS scaling for high perform. and low power, next decade. *Davari, B., +, PROC Apr 95 595-606*

flash memory cells, review. *Pavan, P., +, PROC Aug 97 1248-1271*

**Integrated circuits; cf.** Analog integrated circuits; Application specific integrated circuits; Integrated optics; Integrated optoelectronics; Large-scale integration; MOS integrated circuits; Semiconductor memories

**Integrated circuits industry; cf.** Electronics industry

**Integrated optics**

Bragg cell Integrated acoustooptic/magneto optic modulator devices for opt. inform. proc. *Tsai, C.S., PROC Jun 96 853-869*

micromachining for opt. and optoelectronic systs. *Wu, M.C., PROC Nov 97 1833-1856*

**Integrated optoelectronics**

micromachining for opt. and optoelectronic systs. *Wu, M.C., PROC Nov 97 1833-1856*

modified sign digit no. representation, opt. computing/interconnects. *Yatagai, T., +, PROC Jun 96 828-852*

optoelectronics technology (special issue). *PROC Nov 97 1671-1874*

optoelectronics technology, special issue intro. *Lo, Y.-H., PROC Nov 97 1671-1672*

**Integrated services digital networks; cf.** Asynchronous transfer mode; ISDN

**Integrated voice-data communication**

delay perform. anal. of new Internet services with guaranteed QoS. *van der Wal, K., +, PROC Dec 97 1947-1957*

**Integrated voice/data communication; cf.** Burst switching; Integrated services digital networks; ISDN

**Intelligent control**

autonomous robots, adaptive neural control. *Schmajuk, N.A., PROC Oct 96 1553-1561*

fighter aircraft fault tolerant fuzzy control. *Kwong, W.A., +, PROC Mar 95 466-483*

**Intelligent control; cf.** Neurocontrollers

**Intelligent networks**

convergence of telecomms. and computing to networking models for integrated services and appls. *Decina, M., +, PROC Dec 97 1887-1914*

**Intelligent sensors**

civ. engng. smart structs., distrib. fiber optic technols. *Culshaw, B., +, PROC Jan 96 78-86*

fiber optic smart struct. *Udd, E., PROC Jan 96 60-67*

fiber optic smart struct. sens. *Udd, E., PROC Jun 96 884-894*

smart struct., sens. and proc. *Spillman, W.B., Jr., PROC Jan 96 68-77*

**Intelligent structures**

civ. engng. smart structs., distrib. fiber optic technols. *Culshaw, B., +, PROC Jan 96 78-86*

fiber optic smart struct. *Udd, E., PROC Jan 96 60-67*

fiber optic smart struct. sens. *Udd, E., PROC Jun 96 884-894*

smart struct., sens. and proc. *Spillman, W.B., Jr., PROC Jan 96 68-77*

smart structures (special section). *PROC Jan 96 57-86*

**Intelligent systems; cf.** Intelligent control; Intelligent networks

**Interactive computing**

distributed interactive simulation (special issue). *PROC Aug 95 1111-1195*

**Interactive systems**

CoWare hardware-software codesign tool for digital telecom systs. *Bolsens, I., +, PROC Mar 97 391-418*

Defense Department, distributed interactive simul. technol. appl. *Shiflett, J.E., +, PROC Aug 95 1168-1178*

distributed interactive simul. environ. *Hofer, R.C., +, PROC Aug 95 1124-1137*

distributed interactive simul., future technol. challenges. *Reddy, R., +, PROC Aug 95 1188-1195*

distributed interactive simul., networking technol. *Pullen, J.M., +, PROC Aug 95 1156-1167*

distributed interactive simul., nondefense training/education appls. *Fitzsimmons, E.A., +, PROC Aug 95 1179-1187*

warfare modeling and simul., distributed interactive simul. *Davis, P.K., PROC Aug 95 1138-1155*

**Interactive systems; cf.** Interactive TV

**Interactive TV**

distributed multimedia systs., tech. survey. *Li, V.O.K., +, PROC Jul 97 1063-1108*

interactive TV, digital actors. *Magnenat Thalmann, N., +, PROC Jul 95 1022-1031*

portable video-on-demand syst. in wireless commun. *Meng, T.H., +, PROC Apr 95 659-680*

residential consumer video service. *Blahut, D.E., +, PROC Jul 95 1071-1085*

**Interconnected systems; cf.** Large-scale systems

**Interconnections; cf.** Integrated circuit interconnections

**Interconnections, integrated circuits; cf.** Integrated circuit interconnections

**Interference; cf.** Electromagnetic atmospheric interference; Intersymbol interference

**Interference suppression**

dyn. image seqs., noise reduction filters, review. *Brailean, J.C., +, PROC Sep 95 1272-1292*

satellite CDMA transm. for mobile and pers. commun. *De Gaudenzi, R., +, PROC Jan 96 18-39*

sig. anal., time-freq. distribs., sonar and radar echoes appl. *Gaunaurd, G.C., +, PROC Sep 96 1231-1248*

**Internal combustion engines**

dyn. neural net for vehicle idle speed control. *Puskorius, G.V., +, PROC Oct 96 1407-1420*

knock detect., mech. signature anal., time-freq. methods. *Samimy, B., +, PROC Sep 96 1330-1343*

**Internat. Consultative Cttee. for Telephone & Telegraph; cf.** CCITT

**International Organization for Standardization; cf.** ISO

**Internet**

data anal., status and community challenges. *Claffy, K., +, PROC Oct 97 1563-1571*

delay perform. anal. of new Internet services with guaranteed QoS. *van der Wal, K., +, PROC Dec 97 1947-1957*

global information infrastructure (special issue). *PROC Dec 97 1883-2051*

- global information infrastructure, special issue intro. *Goode, B.*, *PROC Dec 97* 1883-1886
- integrated services in Internet, state of art. *White, P.P.*, +, *PROC Dec 97* 1934-1946
- internetworking based on cell switch router - archit. and protocol review. *Katsube, Y.*, +, *PROC Dec 97* 1998-2006
- IP switching for scalable IP services. *Ahmed, H.M.*, +, *PROC Dec 97* 1984-1997
- security issues in networks with Internet access. *Landwehr, C.E.*, +, *PROC Dec 97* 2034-2051
- tag switching archit. overview. *Rekhter, Y.*, +, *PROC Dec 97* 1973-1983
- telecomms. and data networks signaling. *Kant, K.*, +, *PROC Oct 97* 1612-1621
- Internetworking**
- convergence of telecomms. and computing to networking models for integrated services and appls. *Decina, M.*, +, *PROC Dec 97* 1887-1914
- distributed interactive simul., networking technol. *Pullen, J.M.*, +, *PROC Aug 95* 1156-1167
- global information infrastructure (special issue). *PROC Dec 97* 1883-2051
- global information infrastructure, special issue intro. *Goode, B.*, *PROC Dec 97* 1883-1886
- internetworking based on cell switch router - archit. and protocol review. *Katsube, Y.*, +, *PROC Dec 97* 1998-2006
- IP switching for scalable IP services. *Ahmed, H.M.*, +, *PROC Dec 97* 1984-1997
- Interpolation**
- self-organizing map, props., engng. appls. *Kohonen, T.*, +, *PROC Oct 96* 1358-1384
- Intersymbol interference**
- corrections to "Emerging applications of multirate signal processing and wavelets in digital communications" (Apr 96 586-603). *Wornell, G.W.*, *PROC Aug 96* 1187-1188
- digital commun., multirate sig. proc. and wavelets appls. *Wornell, G.W.*, *PROC Apr 96* 586-603
- Inverse problems; cf.** Image reconstruction
- ISDN**
- global information infrastructure (special issue). *PROC Dec 97* 1883-2051
- global information infrastructure, special issue intro. *Goode, B.*, *PROC Dec 97* 1883-1886
- telephone loop plant, technol./appls. *Lin, D.W.*, +, *PROC Feb 95* 175-193
- ISDN; cf.** B-ISDN; SONET
- ISI; cf.** Intersymbol interference
- ISO**
- telephone loop plant, technol./appls. *Lin, D.W.*, +, *PROC Feb 95* 175-193
- video coding stds., ref. model methodology. *Okubo, S.*, *PROC Feb 95* 139-150
- VLSI archits. for video compression, survey. *Pirsch, P.*, +, *PROC Feb 95* 220-246
- Iterative methods**
- image compression, neural network approaches. *Dony, R.D.*, +, *PROC Feb 95* 288-303
- image/video compression algms., mean field annealing recovery techs. *Ozcelik, T.*, +, *PROC Feb 95* 304-316
- Iterative methods; cf.** Conjugate gradient methods
- ITU**
- telecomms. and data networks signaling. *Kant, K.*, +, *PROC Oct 97* 1612-1621
- wireless commun. in twenty-first century. *Shafi, M.*, +, *PROC Oct 97* 1622-1638
- J**
- Jitter**
- packet-switching networks, service disciplines for guaranteed perform. *Hui Zhang*, *PROC Oct 95* 1374-1396
- Journals**
- IRE proceedings, 1938-1962. *Brittain, J.E.*, *PROC May 97* 762-797
- Junction lasers; cf.** Semiconductor lasers
- K**
- Kalman filtering**
- book review; Kalman Filtering: Theory and Practice (Grewal, M.S., and Andrews, A.P.; 1993). *Bass, R.W.*, *PROC Feb 96* 321-324
- book review; Stochastic Systems for Engineers: Modelling, Estimation and Control (Borrie, J.A.; 1992). *Toumodge, S.*, *PROC Apr 95* 695
- mobile robot navig., sens. fusion, self-location techs. *Kam, M.*, +, *PROC Jan 97* 110-119
- Karhunen-Loeve transforms**
- image compression, neural network approaches. *Dony, R.D.*, +, *PROC Feb 95* 288-303
- Knowledge acquisition**
- 2D image recogn., hybrid syst. *Roli, F.*, +, *PROC Nov 96* 1659-1681
- Knowledge based systems**
- ATM public networks, perform. mgt., scaleable and flexible approach. *Azmoodeh, M.*, +, *PROC Oct 97* 1639-1645
- fuzzy logic control, indust. appls. *Bonissone, P.P.*, +, *PROC Mar 95* 450-465
- heterog. servers network, service provision, user selection. *Olafsson, S.*, *PROC Oct 97* 1556-1562
- multisensor data fusion, state of art/appls. *Hall, D.L.*, +, *PROC Jan 97* 6-23
- Knowledge-based systems; cf.** Expert systems
- L**
- LAN; cf.** Local area networks
- Land mobile radio**
- antenna arrays appl. to mobile commun., beamforming and DOA aspects. *Godara, L.C.*, *PROC Aug 97* 1195-1245
- antenna arrays, channel requirement, appls. *Godara, L.C.*, *PROC Jul 97* 1031-1060
- book review; Narrowband Land-Mobile Radio Networks (Linnartz, J.-P.; 1992). *LaMaire, R.O.*, *PROC Apr 95* 695-696
- Land mobile radio cellular systems**
- book review; The GSM System for Mobile Communications (Mouly, M., and Pautet, M.-B.). *Chia, S.*, *PROC Jun 95* 999-1000
- corrections to "Emerging applications of multirate signal processing and wavelets in digital communications" (Apr 96 586-603). *Wornell, G.W.*, *PROC Aug 96* 1187-1188
- digital commun., multirate sig. proc. and wavelets appls. *Wornell, G.W.*, *PROC Apr 96* 586-603
- handset antenna/human EM interact., pers. commun. *Jensen, M.A.*, +, *PROC Jan 95* 7-17
- low-power RF ICs for portable commun., all-CMOS radio. *Abidi, A.A.*, *PROC Apr 95* 544-569
- Land mobile radio data communication**
- wireless commun. in twenty-first century. *Shafi, M.*, +, *PROC Oct 97* 1622-1638
- Land mobile radio diversity systems**
- corrections to "Emerging applications of multirate signal processing and wavelets in digital communications" (Apr 96 586-603). *Wornell, G.W.*, *PROC Aug 96* 1187-1188
- digital commun., multirate sig. proc. and wavelets appls. *Wornell, G.W.*, *PROC Apr 96* 586-603
- satellite CDMA transm. for mobile and pers. commun. *De Gaudenzi, R.*, +, *PROC Jan 96* 18-39
- Land mobile radio interference**
- corrections to "Emerging applications of multirate signal processing and wavelets in digital communications" (Apr 96 586-603). *Wornell, G.W.*, *PROC Aug 96* 1187-1188
- digital commun., multirate sig. proc. and wavelets appls. *Wornell, G.W.*, *PROC Apr 96* 586-603
- satellite CDMA transm. for mobile and pers. commun. *De Gaudenzi, R.*, +, *PROC Jan 96* 18-39
- Land mobile radio propagation factors**
- satellite CDMA transm. for mobile and pers. commun. *De Gaudenzi, R.*, +, *PROC Jan 96* 18-39
- wireless commun. in twenty-first century. *Shafi, M.*, +, *PROC Oct 97* 1622-1638
- Land mobile radio propagation factors; cf.** Land mobile radio diversity systems
- Land mobile radio spectrum management**
- wireless commun. in twenty-first century. *Shafi, M.*, +, *PROC Oct 97* 1622-1638
- Land transportation**
- Frank J. Sprague, career/contribs. *Brittain, J.E.*, *PROC Jul 97* 1183-1184
- Land vehicles**
- autonomous vehicles. *Meyrowitz, A.L.*, +, *PROC Aug 96* 1147-1164
- Land vehicles; cf.** Military land vehicles
- Large-scale integration**
- low-power RAM cct. technol. trends. *Itoh, K.*, +, *PROC Apr 95* 524-543
- single-chip microcomputers, historical develop. *Mazor, S.*, *PROC Dec 95* 1601-1608
- Large-scale integration; cf.** Ultra-large-scale integration; Very-large-scale integration
- Large-scale systems**
- nonlin. large power syst. stabil. anal., taxonomy theory-based. *Venkatasubramanian, V.*, +, *PROC Nov 95* 1530-1561

**Large-screen displays**

cameras and display systs., rel., digital TV. *Hashimoto, Y.*, +, *PROC Jul 95* 1032-1043

**Laser applications**

LITE, NASA space lidar for cloud and aerosol. *Winker, D.M.*, +, *PROC Feb 96* 164-180

satellite commun. network, vibr. effect and solns. *Arnon, S.*, +, *PROC Oct 97* 1646-1661

WDM opt. fiber networks, opt. components, review. *Borella, M.S.*, +, *PROC Aug 97* 1274-1307

wind vel. rem. sens., solid-state/CO<sub>2</sub> lidar systs. *Huffaker, R.M.*, +, *PROC Feb 96* 181-204

**Laser applications; cf.** Laser biomedical applications; Magneto optic recording; Optical memories

**Laser biomedical applications**

lasers and optics in health care. *Deutsch, T.F.*, *PROC Nov 97* 1797-1816

**Laser chemistry applications**

hybrid neural network/spectrosc. chem. anal. *Taiwei Lu*, +, *PROC Jun 96* 895-905

**Laser diodes; cf.** Semiconductor lasers

**Laser excitation; cf.** Optical pumping

**Laser radar**

1D opt. phased array technol., sens. appls. *McManamon, P.F.*, +, *PROC Feb 96* 268-298

coherent laser radar in Europe, ground-based and airborne systs. *Vaughan, J.M.*, +, *PROC Feb 96* 205-226

CO<sub>2</sub> range-Doppler imaging laser radar component technol. *Melngailis, I.*, +, *PROC Feb 96* 227-267

imaging laser radar transmitters in near/far IR. *Osche, G.R.*, +, *PROC Feb 96* 103-125

laser radar imaging sens. for robotic appls. *Carmer, D.C.*, +, *PROC Feb 96* 299-320

laser radar (special issue). *PROC Feb 96* 99-320

LITE, NASA space lidar for cloud and aerosol. *Winker, D.M.*, +, *PROC Feb 96* 164-180

wind vel. rem. sens., solid-state/CO<sub>2</sub> lidar systs. *Huffaker, R.M.*, +, *PROC Feb 96* 181-204

XTRS LADAR, model-based automatic target recogn. syst. *Verly, J.G.*, +, *PROC Feb 96* 126-163

**Laser resonators**

coherent laser radar in Europe, ground-based and airborne systs. *Vaughan, J.M.*, +, *PROC Feb 96* 205-226

**Lasers; cf.** Carbon dioxide lasers; Semiconductor lasers

**Laser stability**

CO<sub>2</sub> range-Doppler imaging laser radar component technol. *Melngailis, I.*, +, *PROC Feb 96* 227-267

**Learning control systems**

fighter aircraft fault tolerant fuzzy control. *Kwong, W.A.*, +, *PROC Mar 95* 466-483

**Learning control systems; cf.** Neurocontrollers

**Learning systems**

autonomous robots, adaptive neural control. *Schmajuk, N.A.*, *PROC Oct 96* 1553-1561

fuzzy logic control, indust. appls. *Bonissone, P.P.*, +, *PROC Mar 95* 450-465

hybrid neural network/spectrosc. chem. anal. *Taiwei Lu*, +, *PROC Jun 96* 895-905

image compression, neural network approaches. *Dony, R.D.*, +, *PROC Feb 95* 288-303

PAC learning fn. approx., feedforward sigmoidal nets. *Rao, N.S.V.*, +, *PROC Oct 96* 1562-1569

self-organizing map, props., engng. appls. *Kohonen, T.*, +, *PROC Oct 96* 1358-1384

**Learning systems; cf.** Neural networks

**Least mean square methods**

SAR images, spatial resoln., fusion, data sets. *Costantini, M.*, +, *PROC Jan 97* 139-146

**Least squares methods**

antenna arrays appl. to mobile commun., beamforming and DOA aspects. *Godara, L.C.*, *PROC Aug 97* 1195-1245

brain functional activity localization, EEG time-freq. anal. *Mingui Sun*, +, *PROC Sep 96* 1302-1311

**LEDs; cf.** Light-emitting diodes

**Legal factors**

distributed interactive simul., nondefense training/education appls. *Fitzsimmons, E.A.*, +, *PROC Aug 95* 1179-1187

privacy aspects of biometrics. *Woodward, J.D.*, *PROC Sep 97* 1480-1492

radiologic image compression, review. *Wong, S.*, +, *PROC Feb 95* 194-219

**Legal factors; cf.** Copyright protection

**Lidar; cf.** Laser radar

**Light-emitting diodes**

future challenges and directions for nitride materials and light emitters. *Akasaki, I.*, +, *PROC Nov 97* 1750-1751

gallium-nitride-based materials for blue to ultraviolet optoelectronics devices. *DenBaars, S.P.*, *PROC Nov 97* 1740-1749

GaN based devices and technol. *Mohammad, S.N.*, +, *PROC Oct 95* 1306-1355

high-brightness AlGaInP light emitting diodes. *Vanderwater, D.A.*, +, *PROC Nov 97* 1752-1764

optoelectronics technology (special issue). *PROC Nov 97* 1671-1874

optoelectronics technology, special issue intro. *Lo, Y.-H.*, *PROC Nov 97* 1671-1672

**Lighting**

illum. of Panama-Pacific Internat. Exposition of 1915. *Brittain, J.E.*, *PROC May 96* 802

**Light sources; cf.** Light-emitting diodes

**Light triggered switches**

STM/AFM nano-oxid. proc., single-electron transistors, photoconductive switches, HEMT. *Matsumoto, K.*, *PROC Apr 97* 612-628

**Linear algebra; cf.** Matrices

**Linear integrated circuits; cf.** Analog integrated circuits

**Linear phase filters**

wavelets and time-freq. anal. *Hess-Nielsen, N.*, +, *PROC Apr 96* 523-540

**Linear systems**

book review; Linear Matrix Inequalities in System and Control Theory (Boyd, S., et al.; 1994). *Yaz, E.E.*, *PROC Apr 97* 698-699

**Liquid crystal devices**

1D opt. phased array technol., sens. appls. *McManamon, P.F.*, +, *PROC Feb 96* 268-298

**Liquid crystal displays**

batt.-powered portable computers, technol. trends. *Harris, E.P.*, +, *PROC Apr 95* 636-658

cameras and display systs., rel., digital TV. *Hashimoto, Y.*, +, *PROC Jul 95* 1032-1043

pers. communicators, batt.-powered, trends. *Warwick, C.W.*, *PROC Apr 95* 681-686

**Lithography**

1D opt. phased array technol., sens. appls. *McManamon, P.F.*, +, *PROC Feb 96* 268-298

CMOS scaling into nanometer regime, fund. phys. effects, practicality. *Yuan Taur*, +, *PROC Apr 97* 486-504

nanometer-scale science and technology (special issue). *PROC Apr 97* 483-680

nanometer-scale science and technology, special issue intro. *Marrinan, C.R.K.*, *PROC Apr 97* 483-485

patterned mag. nanostructures and quantized mag. disks. *Chou, S.Y.*, *PROC Apr 97* 652-671

**Lithography; cf.** Electron beam lithography; X-ray lithography

**Load flow analysis**

multimachine power syst. structural stabil., nonlin. load effects. *Pai, M.A.*, +, *PROC Nov 95* 1562-1572

power syst. behavior anal. tools, nonlin. considerations. *Hiskens, I.A.*, *PROC Nov 95* 1573-1587

**Load modeling**

multimachine power syst. structural stabil., nonlin. load effects. *Pai, M.A.*, +, *PROC Nov 95* 1562-1572

power syst. behavior anal. tools, nonlin. considerations. *Hiskens, I.A.*, *PROC Nov 95* 1573-1587

power syst. voltage collapse modelling, bifurcation theory-based. *Chin-Woo Tan*, +, *PROC Nov 95* 1484-1496

**Load shedding**

power syst. voltage instabil., mechanisms and control strategies. *Vu, K.T.*, +, *PROC Nov 95* 1442-1455

**Local area networks**

book review; LAN Communications Handbook (Simonds, F.; 1994). *Hayes, D.F.*, *PROC Sep 95* 1296-1297

distributed interactive simul. environ. *Hofer, R.C.*, +, *PROC Aug 95* 1124-1137

distributed interactive simul., nondefense training/education appls. *Fitzsimmons, E.A.*, +, *PROC Aug 95* 1179-1187

IR wireless high-speed short-range digital commun. *Kahn, J.M.*, +, *PROC Feb 97* 265-298

SIMNET, simulator networking, mil. training. *Miller, D.C.*, +, *PROC Aug 95* 1114-1123

testbed for twenty-first century. *Henning, I.*, +, *PROC Oct 97* 1572-1581

**Local area networks; cf.** Wireless LAN

**Logic; cf.** Fuzzy logic; Inference mechanisms

**Logic arrays**

Boolean logic, nanoelectronic archit., double-barrier reson. tunneling diode. *Roychowdhury, V.P.*, +, *PROC Apr 97* 574-588

**Logic arrays; cf.** Cellular logic arrays; Programmable logic arrays

**Logic circuits**

ENIAC electronic computing ccts., review. *Schneck, P.B., PROC Jul 97 1169-1171*

nanometer-scale science and technology (special issue). *PROC Apr 97 483-680*

nanometer-scale science and technology, special issue intro. *Marrian, C.R.K., PROC Apr 97 483-485*

**Logic circuits; cf.** Asynchronous logic circuits; Combinational logic circuits; Logic arrays; Sequential logic circuits

**Logic circuit testing; cf.** Sequential logic circuit testing

**Logic design**

asynchronous design methodologies, overview. *Hauck, S., PROC Jan 95 69-93*

digital CMOS ccts., power consumption minimization. *Chandrakasan, A.P., +, PROC Apr 95 498-523*

hardware/software co-design. *De Michell, G., +, PROC Mar 97 349-365*

hardware/software codesign (special issue). *PROC Mar 97 347-466*

hardware/software codesign, special issue intro. *De Micheli, G., PROC Mar 97 347-348*

reactive real-time embedded syst. design, formal models. *Edwards, S., +, PROC Mar 97 366-390*

Stanford FLASH multiprocessor, hardware/software co-design. *Heinrich, M., +, PROC Mar 97 455-466*

**Logic programming**

book review; Parallel Logic Programming (Takeuchi, A.; 1992). *Mikolajczak, B., PROC Mar 95 488*

**LSI; cf.** Large-scale integration

**Lyapunov methods**

book review; Qualitative Theory of Dynamical Systems: The Role of Stability Preserving Mappings (Michel, A.N., and Wang, K.; 1995). *Sandberg, I.W., PROC Jan 97 198-199*

nonlin. large power syst. stabil. anal., taxonomy theory-based. *Venkatasubramanian, V., +, PROC Nov 95 1530-1561*

radar detect. of sigs. in chaos, small target in sea clutter. *Haykin, S., +, PROC Jan 95 95-122*

**M**

**Machine vision**

high-perform. computing. *Cho-Li Wang, +, PROC Jul 96 931-946*

human and machine recogn. of faces, survey. *Chellappa, R., +, PROC May 95 705-741*

iris recogn. *Wildes, R.P., PROC Sep 97 1348-1363*

knowledge-directed vision, control, learning and integrat. *Draper, B.A., +, PROC Nov 96 1625-1637*

optical information processing, part 1: image processing and vision (special issue). *PROC May 96 691-798*

scene interp., multiple sens. modalities, phys.-based integrat. *Nandhakumar, N., +, PROC Jan 97 147-163*

signals and systems (special section). *PROC Nov 96 1579-1580, 1623-1704*

wavelets for computer vision research. *Mallat, S., PROC Apr 96 604-614*

**Machine vision; cf.** Object recognition

**Machining; cf.** Micromachining

**Magnetic devices; cf.** Magnetic switches; Magnetic transducers; Magneto resistive devices

**Magnetic disk recording**

patterned mag. nanostructures and quantized mag. disks. *Chou, S.Y., PROC Apr 97 652-671*

**Magnetic domains**

patterned mag. nanostructures and quantized mag. disks. *Chou, S.Y., PROC Apr 97 652-671*

**Magnetic force microscopy**

patterned mag. nanostructures and quantized mag. disks. *Chou, S.Y., PROC Apr 97 652-671*

**Magnetic forces**

biosensor, micromachined device. *Baselt, D.R., +, PROC Apr 97 672-680*

**Magnetic materials; cf.** Powdered magnetic materials

**Magnetic recording**

Semi J. Begun, career/contribs. *Brittain, J.E., PROC Aug 96 1189-1190*

**Magnetic recording; cf.** Magnetic disk recording; Magneto optic recording

**Magnetic switches**

patterned mag. nanostructures and quantized mag. disks. *Chou, S.Y., PROC Apr 97 652-671*

**Magnetic transducers**

biosensor, micromachined device. *Baselt, D.R., +, PROC Apr 97 672-680*  
 patterned mag. nanostructures and quantized mag. disks. *Chou, S.Y., PROC Apr 97 652-671*

**Magneto optic devices**

Bragg cell Integrated acoustooptic/magneto optic modulator devices for opt. inform. proc. *Tsai, C.S., PROC Jun 96 853-869*

**Magneto optic modulation**

Bragg cell Integrated acoustooptic/magneto optic modulator devices for opt. inform. proc. *Tsai, C.S., PROC Jun 96 853-869*

**Magneto optic recording**

principles and techs. of opt. data storage. *Mansuripur, M., +, PROC Nov 97 1780-1796*

**Magneto resistive devices**

patterned mag. nanostructures and quantized mag. disks. *Chou, S.Y., PROC Apr 97 652-671*

**Magnetrons**

beam transmission of ultra short waves (reprinted from Proc. IRE, vol. 16, pp. 715-741, June 1928). *Yagi, H., PROC Nov 97 1864-1874*

**Management**

book review; Meeting of the Minds: Creating the Market-Based Enterprise Barabba, V.; 1995). *Geisler, E., PROC Aug 97 1334*

book review; The Balanced Scorecard: Translating Strategy into Action (Kaplan, R.S., and Norton, D.P.; 1996). *Dorf, R.C., +, PROC Sep 97 1509-1510*

**Management; cf.** Communication system operations and management; Production management; Project management; RD&E management; Research and development management

**Manipulators**

book review; Parallel Computation Systems for Robotics Algorithms and Architectures (Fijany, A., and Bejczy, A., Eds.; 1992). *Sharf, I., PROC Aug 95 1196-1197*

**Man-machine systems; cf.** Human factors

**Manufacturing**

book review; Manufacturing Systems Engineering (Gershwin, S.B.; 1994). *Meerkov, S.M., PROC Jul 96 1051-1052*

book review; Project Management in Manufacturing and High Technology Management, 2nd edn. (Badiru, A.B.; 1996). *Pinto, J.K., PROC Nov 97 1875*

**Marine vehicle propulsion**

William Le Roy Emmet, career/contribs. *Brittain, J.E., PROC Jul 96 1053-1054*

**Marine vehicles; cf.** Underwater vehicles

**Marketing**

book review; Meeting of the Minds: Creating the Market-Based Enterprise Barabba, V.; 1995). *Geisler, E., PROC Aug 97 1334*

**Markov processes**

groundwater flow, hydraulic cond., sig.-level fusion, multiresolution method. *Daniel, M.M., +, PROC Jan 97 164-180*

image/video compression algms., mean field annealing recovery techs. *Ozcelik, T., +, PROC Feb 95 304-316*

**Masers**

mol. amplif. and generation of microwaves. *Wittke, J.P., PROC Jul 97 1144-1168*

**Masks**

nanolithography. *Cerrina, F., PROC Apr 97 644-651*

proximal probes, nanofabrication, STM and AFM. *Snow, E.S., +, PROC Apr 97 601-611*

X-ray nanolithography. *Cerrina, F., PROC Apr 97 644-651*

**Matched filters**

opt. pattern recogn. archits./techs. *Yu, F.T.S., +, PROC May 96 733-752*

smart struct., sens. and proc. *Spillman, W.B., Jr., PROC Jan 96 68-77*

wavelets in biomedical appls. review. *Unser, M., +, PROC Apr 96 626-638*

**Matching; cf.** Image matching

**Materials processing**

vertical-cavity surface emitting lasers, moving from research to mfg. *Choquette, K.D., +, PROC Nov 97 1730-1739*

**Materials processing; cf.** Etching

**Materials science and technology**

future challenges and directions for nitride materials and light emitters. *Akasaki, I., +, PROC Nov 97 1750-1751*

**Mathematical programming; cf.** Dynamic programming; Quadratic programming

**Mathematics; cf.** Optimization methods

**Matrices**

book review; Linear Matrix Inequalities in System and Control Theory (Boyd, S., et al.; 1994). *Yaz, E.E., PROC Apr 97 698-699*

**Matrix decomposition**

image proc., block data parallel archit. *Alexander, W.E., +, PROC Jul 96 947-968*

**Maximum entropy methods**

antenna arrays appl. to mobile commun., beamforming and DOA aspects. *Godara, L.C., PROC Aug 97 1195-1245*

**Maximum likelihood estimation**

antenna arrays appl. to mobile commun., beamforming and DOA aspects. *Godara, L.C.*, *PROC Aug 97* 1195-1245  
 blind syst. ident. techs., review. *Abed-Meraim, K.*, + , *PROC Aug 97* 1310-1322

**Maximum principle**

book review; Optimal Control Theory for Infinite Dimensional Systems (Li, X., and Yong, J.; 1995). *Lenhart, S.*, *PROC Feb 97* 338-339

**Mean square error methods**

multitarget-multisensor air traffic surveillance, interact. multiple model estim. *Yeddapanudi, M.*, + , *PROC Jan 97* 80-96

**Measurement; cf.** Antenna measurements; Biomedical measurements; Electromagnetic measurements; Extraterrestrial measurements; Mechanical variables measurement; Optical variables measurement; Radar measurements; Remote sensing

**Mechanical engineering**

internal combustion engine, knock detect., mech. signature anal., time-freq. methods. *Samimy, B.*, + , *PROC Sep 96* 1330-1343

**Mechanical factors**

internal combustion engine, knock detect., mech. signature anal., time-freq. methods. *Samimy, B.*, + , *PROC Sep 96* 1330-1343  
 skeletal muscle/cardiac vibrs., time-freq. anal. *Wood, J.C.*, + , *PROC Sep 96* 1281-1294

**Mechanical factors; cf.** Biomechanics; Dynamics; Vibrations

**Mechanical systems**

internal combustion engine, knock detect., mech. signature anal., time-freq. methods. *Samimy, B.*, + , *PROC Sep 96* 1330-1343

**Mechanical variables control; cf.** Motion control; Position control; Velocity control

**Mechanical variables measurement**

proc. machine monitoring sens., vibr. anal., time-freq. anal. *Atlas, L.E.*, + , *PROC Sep 96* 1319-1329

**Mechanical variables measurement; cf.** Strain measurement

**Medical diagnosis**

skeletal muscle/cardiac vibrs., time-freq. anal. *Wood, J.C.*, + , *PROC Sep 96* 1281-1294

**Medical treatment**

cardiac tissue, elec. stimulation laws. *Tacker, W.A.*, + , *PROC Mar 96* 355-365  
 defibrillation/cardioversion mechanism. *Jones, J.L.*, + , *PROC Mar 96* 392-403

**Medical treatment; cf.** Surgery

**Memories**

batt.-powered portable computers, technol. trends. *Harris, E.P.*, + , *PROC Apr 95* 636-658  
 computer memory systs., historical survey. *Eckert, J.P., Jr.*, *PROC Jan 97* 184-197  
 intro. to classic paper on digital computer memories by J.P. Eckert (classic paper reprint, pp. 184-197). *Schneck, P.B.*, *PROC Jan 97* 181-183

**Memories; cf.** Associative memories; DRAM chips; Optical memories; Semiconductor memories; SRAM chips

**Memory architecture**

flash memory cells, review. *Pavan, P.*, + , *PROC Aug 97* 1248-1271

**Memory hierarchies**

low-power RAM cct. technol. trends. *Itoh, K.*, + , *PROC Apr 95* 524-543

**Memory management**

Stanford FLASH multiprocessor, hardware/software co-design. *Heinrich, M.*, + , *PROC Mar 97* 455-466

**MESFETs**

GaN based devices and technol. *Mohammad, S.N.*, + , *PROC Oct 95* 1306-1355

**Metallization; cf.** Integrated circuit metallization

**Meteorology; cf.** Rain**Microcomputer applications**

book review; How to Design a Single Phase Motor on a Personal Computer, 4th edn. (Veinott, C.). *Salon, S.*, *PROC Mar 95* 485  
 book review; The Wiley Project Engineer's Desk Reference (Heisler, S.I.; 1994). *Schoch, K.F., Jr.*, *PROC Mar 95* 485

**Microcomputers**

batt.-powered portable computers, technol. trends. *Harris, E.P.*, + , *PROC Apr 95* 636-658

**Microcontrollers**

Stanford FLASH multiprocessor, hardware/software co-design. *Heinrich, M.*, + , *PROC Mar 97* 455-466

**Microelectromechanical devices**

micromachining for opt. and optoelectronic systs. *Wu, M.C.*, *PROC Nov 97* 1833-1856

**Microelectromechanical devices; cf.** Microsensors

**Micromachining**

biosensor, micromachined device. *Baselt, D.R.*, + , *PROC Apr 97* 672-680  
 micromachining for opt. and optoelectronic systs. *Wu, M.C.*, *PROC Nov 97* 1833-1856

optoelectronics technology (special issue). *PROC Nov 97* 1671-1874  
 optoelectronics technology, special issue intro. *Lo, Y.-H.*, *PROC Nov 97* 1671-1672

**Microprocessors**

compiler technol. for future  $\mu$ P. *Hwu, W.W.*, + , *PROC Dec 95* 1625-1640  
 Cyrix 6x86  $\mu$ P. *McMahan, S.C.*, + , *PROC Dec 95* 1664-1672  
 fuzzy control, hardware soln. *Costa, A.*, + , *PROC Mar 95* 422-434  
 high-end proc., CMOS and bipolar, perform. trends. *Sai-Halasz, G.A.*, *PROC Jan 95* 20-36  
 hist. of single chip microcomputers. *Mazor, S.*, *PROC Dec 95* 1601-1608  
 microprocessors (special issue). *PROC Dec 95* 1439-1512  
 Si scaled submicron ultra-low power CMOS technol. *Stork, J.M.C.*, *PROC Apr 95* 607-618  
 superscalar proc., microarchitecture. *Smith, J.E.*, + , *PROC Dec 95* 1609-1624  
 technol. and business. *Tredennick, N.*, *PROC Dec 95* 1641-1652  
 UltraSPARC-1  $\mu$ P, microarchitecture design. *Tremblay, M.*, + , *PROC Dec 95* 1653-1663

**Microprocessors; cf.** Microcontrollers

**Microscopy**

opt. scanning holography, tutorial. *Ting-Chung Poon*, + , *PROC May 96* 753-764

**Microscopy; cf.** Atomic force microscopy; Magnetic force microscopy

**Microsensors**

biosensor, micromachined device. *Baselt, D.R.*, + , *PROC Apr 97* 672-680

**Microwave circuits; cf.** Microwave oscillators

**Microwave communication; cf.** Microwave radio communication

**Microwave devices; cf.** Masers

**Microwave generation**

mol. amplif. and generation of microwaves. *Wittke, J.P.*, *PROC Jul 97* 1144-1168

**Microwave generation; cf.** Microwave oscillators

**Microwave measurements**

S-band polarimetric radar meas. appl., Ka-band atten. predict. *Beaver, J.D.*, + , *PROC Jun 97* 893-909

**Microwave measurements; cf.** Microwave radiometry

**Microwave oscillators**

mol. amplif. and generation of microwaves. *Wittke, J.P.*, *PROC Jul 97* 1144-1168

**Microwave propagation**

transoceanic commun. of pass. satellites. *Pierce, J.R.*, + , *PROC Jun 97* 1011-1019

**Microwave propagation; cf.** Microwave radio propagation

**Microwave radio communication**

IRE Proceedings 1913-1937, elec. and electronics engng. evoln. *Brittain, J.E.*, *PROC Dec 96* 1747-1772

**Microwave radiometry**

ACTS propag. expt. for Ka-band satellite commun. syst. design. *Crane, R.K.*, + , *PROC Jun 97* 863-878

**Microwave radio propagation**

Ka-band Earth-satellite propag. data, syst. requirements. *Rogers, D.V.*, + , *PROC Jun 97* 810-820

Ka-band propag. meas., ACTS. *Bauer, R.*, *PROC Jun 97* 853-862

**Microwave radio propagation meteorological factors**

ACTS propag. data at 20 and 27.5 GHz, fade slope anal. *Feil, J.*, + , *PROC Jun 97* 926-935

ACTS propag. expt., atten. distrib. obs. and predict. model comparisons. *Crane, R.K.*, + , *PROC Jun 97* 879-892

ACTS propag. expt. for Ka-band satellite commun. syst. design. *Crane, R.K.*, + , *PROC Jun 97* 863-878

ACTS propag. expt., rain-rate distrib. obs. and prediction model comparisons. *Crane, R.K.*, + , *PROC Jun 97* 946-958

cumulative fade distrib. and freq. scaling techs., 20 GHz from ACTS and 12 GHz from DSS. *Goldhirsh, J.*, + , *PROC Jun 97* 910-916

Ka-band Earth-space propag. research in Japan. *Karasawa, Y.*, + , *PROC Jun 97* 821-842

Ka-band propag., three-site comparison of fade-duration meas. *Helmken, H.*, + , *PROC Jun 97* 917-925

Ka-band satellite links, open-loop uplink power control. *Dissanayake, A.W.*, *PROC Jun 97* 959-969

Ka-band scintillations, meas. and model predictions. *Mayer, C.E.*, + , *PROC Jun 97* 936-945

Ka-band slant path propag., European research. *Arbesser-Rastburg, B.R.*, + , *PROC Jun 97* 843-852

Ka-band VSATs, channel charactn. and modelling. *Alouini, M.-S.*, + , *PROC Jun 97* 981-997

S-band polarimetric radar meas. appl., Ka-band atten. predict. *Beaver, J.D.*, + , *PROC Jun 97* 893-909

three-site space-diversity expt., 20 GHz, ACTS. *Goldhirsh, J.*, + , *PROC Jun 97* 970-980

**Microwave technology**

birth of term "microwaves". *Pelosi, G.*, *PROC Feb 96* 326

**Microwave technology; cf.** Microwave...

**Military aircraft**

fighter aircraft fault tolerant fuzzy control. *Kwong, W.A.*, + , *PROC Mar 95* 466-483

**Military communication**

distributed interactive simul., networking technol. *Pullen, J.M.*, + , *PROC Aug 95* 1156-1167

**Military computing**

Defense Department, distributed interactive simul. technol. appl. *Shiflett, J.E.*, + , *PROC Aug 95* 1168-1178

distributed interactive simul., future technol. challenges. *Reddy, R.*, + , *PROC Aug 95* 1188-1195

distributed interactive simul., networking technol. *Pullen, J.M.*, + , *PROC Aug 95* 1156-1167

multisensor data fusion, state of art/appls. *Hall, D.L.*, + , *PROC Jan 97* 6-23

SIMNET, simulator networking, mil. training. *Miller, D.C.*, + , *PROC Aug 95* 1114-1123

**Military data processing**

XTRS LADAR, model-based automatic target recogn. syst. *Verly, J.G.*, + , *PROC Feb 96* 126-163

**Military decision-making**

warfare modeling and simul., distributed interactive simul. *Davis, P.K.*, *PROC Aug 95* 1138-1155

**Military equipment**

corrections to "comments on diffraction principles and limitations of RCS reduction techniques" (Dec 96 1830-1851). *Ufimtsev, P.Y.*, *PROC Mar 97* 475

imaging laser radar transmitters in near/far IR. *Osche, G.R.*, + , *PROC Feb 96* 103-125

laser radar imaging sens. for robotic appls. *Carmer, D.C.*, + , *PROC Feb 96* 299-320

multisensor data fusion, state of art/appls. *Hall, D.L.*, + , *PROC Jan 97* 6-23

radar develop. *Schneider, E.G.*, *PROC Dec 96* 1775-1827

RCS reduction, diffr. principles and limitations. *Ufimtsev, P.Y.*, *PROC Dec 96* 1830-1851

XTRS LADAR, model-based automatic target recogn. syst. *Verly, J.G.*, + , *PROC Feb 96* 126-163

**Military land vehicles**

XTRS LADAR, model-based automatic target recogn. syst. *Verly, J.G.*, + , *PROC Feb 96* 126-163

**Millimeter wave antennas**

corrections to "Precision DSN radiometer systems: impact on microwave calibrations" (May 94 776-787). *Stelzried, C.T.*, + , *PROC Aug 96* 1187

**Millimeter wave communication; cf.** Millimeter wave radio communication

**Millimeter wave measurements**

corrections to "Precision DSN radiometer systems: impact on microwave calibrations" (May 94 776-787). *Stelzried, C.T.*, + , *PROC Aug 96* 1187

**Millimeter wave radio communication**

Ka-band propagation effects on earth-satellite links (special issue. *PROC Jun 97* 807-1019

Ka-band propagation effects on earth-satellite links, special issue intro. *Davarian, F.*, + , *PROC Jun 97* 807-809

**Millimeter wave radiometry**

corrections to "Precision DSN radiometer systems: impact on microwave calibrations" (May 94 776-787). *Stelzried, C.T.*, + , *PROC Aug 96* 1187

**Millimeter wave radio propagation**

Ka-band Earth-satellite propag. data, syst. requirements. *Rogers, D.V.*, + , *PROC Jun 97* 810-820

Ka-band propag. meas., ACTS. *Bauer, R.*, *PROC Jun 97* 853-862

**Millimeter wave radio propagation meteorological factors**

ACTS propag. expt., atten. distrib. obs. and predict. model comparisons. *Crane, R.K.*, + , *PROC Jun 97* 879-892

ACTS propag. expt. for Ka-band satellite commun. syst. design. *Crane, R.K.*, + , *PROC Jun 97* 863-878

ACTS propag. expt., rain-rate distrib. obs. and prediction model comparisons. *Crane, R.K.*, + , *PROC Jun 97* 946-958

Ka-band Earth-space propag. research in Japan. *Karasawa, Y.*, + , *PROC Jun 97* 821-842

Ka-band propagation effects on earth-satellite links (special issue. *PROC Jun 97* 807-1019

Ka-band propagation effects on earth-satellite links, special issue intro. *Davarian, F.*, + , *PROC Jun 97* 807-809

Ka-band propag., three-site comparison of fade-duration meas. *Helmken, H.*, + , *PROC Jun 97* 917-925

Ka-band satellite links, open-loop uplink power control. *Dissanayake, A.W.*, *PROC Jun 97* 959-969

Ka-band scintillations, meas. and model predictions. *Mayer, C.E.*, + , *PROC Jun 97* 936-945

Ka-band slant path propag., European research. *Arbesser-Rastburg, B.R.*, + , *PROC Jun 97* 843-852

Ka-band VSATs, channel charactn. and modelling. *Alouini, M.-S.*, + , *PROC Jun 97* 981-997

S-band polarimetric radar meas. appl., Ka-band atten. predict. *Beaver, J.D.*, + , *PROC Jun 97* 893-909

**Millimeter wave receivers**

corrections to "Precision DSN radiometer systems: Impact on microwave calibrations" (May 94 776-787). *Stelzried, C.T.*, + , *PROC Aug 96* 1187

**MISFETs**

GaN based devices and technol. *Mohammad, S.N.*, + , *PROC Oct 95* 1306-1355

**MISFETs; cf.** MOSFETs

**Mixed analog-digital integrated circuits**

multirate analog-digital systs. for sig. proc./conversion. *Franca, J.*, + , *PROC Feb 97* 242-262

**Mobile antennas**

arrays, channel requirement, appls. *Godara, L.C.*, *PROC Jul 97* 1031-1060

**Mobile communication**

batt.-powered portable computers, technol. trends. *Harris, E.P.*, + , *PROC Apr 95* 636-658

blind syst. ident. techs., review. *Abed-Meraim, K.*, + , *PROC Aug 97* 1310-1322

pers. commun. systs., review. *Li, V.O.K.*, + , *PROC Sep 95* 1210-1243

video-on-demand portable syst. in wireless commun. *Meng, T.H.*, + , *PROC Apr 95* 659-680

**Mobile communication; cf.** Land mobile radio; Portable radio communication; Satellite mobile communication; Space vehicle communication

**Mobile robot motion-planning**

mobile robot, environ. representation, multiple abstraction levels. *Dudek, G.L.*, *PROC Nov 96* 1684-1704

navig. of mobile robots, sens. fusion, self-location techs. *Kam, M.*, + , *PROC Jan 97* 110-119

**Mobile robots**

autonomous vehicles. *Meyrowitz, A.L.*, + , *PROC Aug 96* 1147-1164

laser radar imaging sens. for robotic appls. *Carmer, D.C.*, + , *PROC Feb 96* 299-320

**Modeling**

ACTS propag. expt., atten. distrib. obs. and predict. model comparisons. *Crane, R.K.*, + , *PROC Jun 97* 879-892

ACTS propag. expt., rain-rate distrib. obs. and prediction model comparisons. *Crane, R.K.*, + , *PROC Jun 97* 946-958

book review; Stochastic Systems for Engineers: Modelling, Estimation and Control (Borrie, J.A.; 1992). *Toumodge, S.*, *PROC Apr 95* 695

distributed detect. with multiple sens., review. *Blum, R.S.*, + , *PROC Jan 97* 64-79

Ka-band scintillations, meas. and model predictions. *Mayer, C.E.*, + , *PROC Jun 97* 936-945

Ka-band VSATs, channel charactn. and modelling. *Alouini, M.-S.*, + , *PROC Jun 97* 981-997

warfare modeling and simul., distributed interactive simul. *Davis, P.K.*, *PROC Aug 95* 1138-1155

**Modeling; cf.** Biological system modeling; Integrated circuit modeling; Power system modeling

**Model reference adaptive control**

book review; Model Reference Adaptive Control: From Theory to Practice (Butler, H.; 1992). *Toumodge, S.*, *PROC Apr 95* 694-695

**Modems**

satellite CDMA transm. for mobile and pers. commun. *De Gaudenzi, R.*, + , *PROC Jan 96* 18-39

**MODFETs**

STM/AFM nano-oxid. proc., single-electron transistors, photoconductive switches, HEMT. *Matsumoto, K.*, *PROC Apr 97* 612-628

**Modulation**

corrections to "Emerging applications of multirate signal processing and wavelets in digital communications" (Apr 96 586-603). *Wornell, G.W.*, *PROC Aug 96* 1187-1188

digital commun., multirate sig. proc. and wavelets appls. *Wornell, G.W.*, *PROC Apr 96* 586-603

**Modulation/demodulation; cf.** Acoustooptic modulation; Digital modulation; Frequency modulation; Optical modulation; Pulse position modulation

**Molecular electronics**

amplif. and generation of microwaves. *Witke, J.P.*, *PROC Jul 97* 1144-1168

hist., forty yrs. of develop. *Chapin Cutler, C.*, *PROC Jul 97* 1141-1143

nanoelectronic switching devices, mol., single-electron and quantum-effect devices. *Goldhaber-Gordon, D.*, + , *PROC Apr 97* 521-540

**Monitoring**

civ. engng. smart structs., distrib. fiber optic technols. *Culshaw, B.*, + , *PROC Jan 96* 78-86

- GPS wide area augmentation for aircraft navig. *Enge, P.*, + , *PROC Aug 96* 1063-1088
- hybrid neural network/spectrosc. chem. anal. *Taiwei Lu*, + , *PROC Jun 96* 895-905
- Monitoring; cf.** Biomedical monitoring; Process monitoring
- Monolithic integrated circuits**  
low power microelectronics, develop. and prospects. *Meindl, J.D.*, *PROC Apr 95* 619-635
- Monopole antennas**  
cellular pers. commun., handset antenna/human EM interact. *Jensen, M.A.*, + , *PROC Jan 95* 7-17
- Morphological operations**  
adaptive morph. subband decomp., image coding. *Egger, O.*, + , *PROC Feb 95* 272-287  
region-based video coding, math. morph. *Salembier, P.*, + , *PROC Jun 95* 843-857
- MOS devices; cf.** MOSFETs
- MOS digital integrated circuits**  
single-chip microcomputers, historical develop. *Mazor, S.*, *PROC Dec 95* 1601-1608
- MOS digital integrated circuits; cf.** CMOS digital integrated circuits
- MOSFET circuits; cf.** MOS integrated circuits
- MOSFET logic devices; cf.** CMOSFET logic devices
- MOSFETs**  
nanostructure fab., electron beam techs. *Matsui, S.*, *PROC Apr 97* 629-643
- MOSFETs; cf.** CMOSFETs; MOS integrated circuits
- MOS integrated circuits**  
book review; Hot-Carrier Reliability of MOS VLSI Circuits (Leblebici, Y., and Kang, S.-M.; 1993). *Kwark, Y.H.*, *PROC Mar 95* 486-487
- MOS integrated circuits; cf.** CMOS integrated circuits
- Motion analysis; cf.** Image motion analysis
- Motion compensation**  
Grand Alliance syst. for US HDTV. *Challapali, K.*, + , *PROC Feb 95* 158-174  
model-based video coding techs. for low bit-rate appl. *Aizawa, K.*, + , *PROC Feb 95* 259-271  
noise reduction filters for dyn. image seqs., review. *Brailean, J.C.*, + , *PROC Sep 95* 1272-1292  
region-based video coding, math. morph. *Salembier, P.*, + , *PROC Jun 95* 843-857
- Motion control**  
interactive TV, digital actors. *Magenat Thalmann, N.*, + , *PROC Jul 95* 1022-1031  
mol. motion control. *Dahleh, M.*, + , *PROC Jan 96* 7-15
- Motion measurement; cf.** Tracking
- Motion-planning**  
autonomous robots, adaptive neural control. *Schmajuk, N.A.*, *PROC Oct 96* 1553-1561
- Motion-planning; cf.** Mobile robot motion-planning
- Motors**  
book review; How to Design a Single Phase Motor on a Personal Computer, 4th edn. (Veinott, C.). *Salon, S.*, *PROC Mar 95* 485  
book review; The Wiley Project Engineer's Desk Reference (Heisler, S.I.; 1994). *Schoch, K.F., Jr.*, *PROC Mar 95* 485
- Motors; cf.** Induction motors
- Multiaccess communication**  
pers. commun. systs., review. *Li, V.O.K.*, + , *PROC Sep 95* 1210-1243
- Multiaccess communication; cf.** Subscriber loops
- Multibeam antennas**  
ACTS, antenna config. and for Ka-band propag. meas. *Bauer, R.*, *PROC Jun 97* 853-862
- Multicast channels**  
distributed interactive simul., networking technol. *Pullen, J.M.*, + , *PROC Aug 95* 1156-1167  
tag switching archit. overview. *Rekhter, Y.*, + , *PROC Dec 97* 1973-1983
- Multichip modules**  
modular massively parallel computing approach, image-related proc. *Krikelis, A.*, + , *PROC Jul 96* 988-1004
- Multidimensional coding**  
opt. scanning holography, tutorial. *Ting-Chung Poon*, + , *PROC May 96* 753-764
- Multidimensional digital filters**  
image proc., block data parallel archit. *Alexander, W.E.*, + , *PROC Jul 96* 947-968
- Multidimensional systems**  
book review; Optimal Control Theory for Infinite Dimensional Systems (Li, X., and Yong, J.; 1995). *Lenhart, S.*, *PROC Feb 97* 338-339
- Multinput-multiooutput systems; cf.** Multivariable systems
- Multilayer perceptrons**  
image compression, neural network approaches. *Dony, R.D.*, + , *PROC Feb 95* 288-303
- nonlin. vector predictor, neural net approach. *Rizvi, S.A.*, + , *PROC Oct 96* 1513-1528
- Multimedia communication**  
convergence of telecomms. and computing to networking models for integrated services and appls. *Decina, M.*, + , *PROC Dec 97* 1887-1914  
embedded software in real-time sig. proc., telecom appl. *Paulin, P.G.*, + , *PROC Mar 97* 419-435  
integrated services in Internet, state of art. *White, P.P.*, + , *PROC Dec 97* 1934-1946  
interactive TV, digital actors. *Magenat Thalmann, N.*, + , *PROC Jul 95* 1022-1031  
issues and infrastructure. *Wolf, L.C.*, + , *PROC Dec 97* 1915-1933  
review of distributed multimedia syst. *Li, V.O.K.*, + , *PROC Jul 97* 1063-1108  
VLSI for digital HDTV. *Mlynek, D.J.*, + , *PROC Jul 95* 1055-1070  
wireless commun. in twenty-first century. *Shafi, M.*, + , *PROC Oct 97* 1622-1638
- Multimedia systems**  
distributed multimedia systs., tech. survey. *Li, V.O.K.*, + , *PROC Jul 97* 1063-1108
- Multipath channels**  
advanced TV systs. for terrestrial broadcasting, problems and solns. *Schreiber, W.F.*, *PROC Jun 95* 958-981  
corrections to "Emerging applications of multirate signal processing and wavelets in digital communications" (Apr 96 586-603). *Wornell, G.W.*, *PROC Aug 96* 1187-1188  
digital commun., multirate sig. proc. and wavelets appls. *Wornell, G.W.*, *PROC Apr 96* 586-603  
IR wireless high-speed short-range digital commun. *Kahn, J.M.*, + , *PROC Feb 97* 265-298  
satellite CDMA transm. for mobile and pers. commun. *De Gaudenzi, R.*, + , *PROC Jan 96* 18-39
- Multipath channels; cf.** Fading channels
- Multiplexing; cf.** Subcarrier multiplexing; Wavelength division multiplexing
- Multiprocessing**  
image proc., 1D proc. array. *Hammerstrom, D.W.*, + , *PROC Jul 96* 1005-1018  
Stanford FLASH multiprocessor, hardware/software co-design. *Heinrich, M.*, + , *PROC Mar 97* 455-466
- Multiprocessing; cf.** Neural networks
- Multireflector antennas**  
ACTS, antenna config. and for Ka-band propag. meas. *Bauer, R.*, *PROC Jun 97* 853-862
- Multisensor systems**  
archs. and appls. *Dasarathy, B.V.*, *PROC Jan 97* 24-38  
database support, data fusion automation. *Antony, R.T.*, *PROC Jan 97* 39-53  
data fusion (special issue). *PROC Jan 97* 3-183  
data fusion, special issue intro. *Varshney, P.K.*, *PROC Jan 97* 3-5  
distributed detect. with multiple sens., fund. *Viswanathan, R.*, + , *PROC Jan 97* 54-63  
distributed detect. with multiple sens., review. *Blum, R.S.*, + , *PROC Jan 97* 64-79  
distributed fusion archits. and algms. for target tracking. *Liggins, M.E., II*, + , *PROC Jan 97* 97-109  
groundwater flow, hydraulic cond., sig.-level fusion, multiresolution method. *Daniel, M.M.*, + , *PROC Jan 97* 164-180  
mobile robot navig., sens. fusion, self-location techs. *Kam, M.*, + , *PROC Jan 97* 110-119  
multisensor data fusion, state of art/appls. *Hall, D.L.*, + , *PROC Jan 97* 6-23  
multisensor imagery positioning for target recogn. and exploitation. *Chellappa, R.*, + , *PROC Jan 97* 120-138  
multitarget-multisensor air traffic surveillance, interact. multiple model estim. *Yeddapanudi, M.*, + , *PROC Jan 97* 80-96  
multi-target pass. tracking, neural net optim. *Shams, S.*, *PROC Oct 96* 1442-1457  
SAR images, spatial resoln., fusion, data sets. *Costantini, M.*, + , *PROC Jan 97* 139-146  
scene interp., multiple sens. modalities, phys.-based integrat. *Nandhakumar, N.*, + , *PROC Jan 97* 147-163
- Multivariable systems**  
parallel nonlin. systs., modeling and ident., param. estim. *Hai-Wen Chen*, *PROC Jan 95* 39-66
- Multivibrators; cf.** Flip-flops
- Muscles**  
arrhythmogenesis, computer models, tissue struct./membrane dyn. roles. *Henriquez, C.S.*, + , *PROC Mar 96* 334-354  
cardiac muscle, detrimental effects of elec. fields. *Tung, L.*, *PROC Mar 96* 366-378  
myocardial tissue, externally applied elec. fields effect. *Roth, B.J.*, + , *PROC Mar 96* 379-391



skeletal muscle/cardiac vibrs., time-freq. anal. *Wood, J.C., +, PROC Sep 96 1281-1294*

## Music

acoustic sigs. charact., continuous lin. time-freq. representation. *Guillemain, P., +, PROC Apr 96 561-585*  
 sigs., time-freq. anal. *Pielemeier, W.J., +, PROC Sep 96 1216-1230*

## N

### Nanotechnology

Boolean logic, nanoelectronic archit., double-barrier reson. tunneling diode. *Roychowdhury, V.P., +, PROC Apr 97 574-588*  
 CMOS scaling into nanometer regime, fund. phys. effects, practicality. *Yuan Taur, +, PROC Apr 97 486-504*  
 electron beam techs. *Matsui, S., PROC Apr 97 629-643*  
 nanometer-scale science and technology (special issue). *PROC Apr 97 483-680*  
 nanometer-scale science and technology, special issue intro. *Marrian, C.R.K., PROC Apr 97 483-485*  
 patterned mag. nanostructures and quantized mag. disks. *Chou, S.Y., PROC Apr 97 652-671*  
 proximal probes, nanofabrication, STM and AFM. *Snow, E.S., +, PROC Apr 97 601-611*  
 QCA, quantum-dot cellular automata, pipelined archit. appl. *Lent, C.S., +, PROC Apr 97 541-557*  
 quantum-effect devices, fault tolerance, design. *Goser, K.F., +, PROC Apr 97 558-573*  
 STM/AFM nano-oxid. proc., single-electron transistors, photoconductive switches, HEMT. *Matsumoto, K., PROC Apr 97 612-628*  
 switching devices, mol., single-electron and quantum-effect devices. *Goldhaber-Gordon, D., +, PROC Apr 97 521-540*  
 UHV STM nanofabrication, nanolithography tool, selective oxid., metallization. *Lyding, J.W., PROC Apr 97 589-600*  
 X-ray nanolithography. *Cerrina, F., PROC Apr 97 644-651*

### Navigation

fiber optic smart struct. sens. *Udd, E., PROC Jun 96 884-894*  
 mobile robot, environ. representation, multiple abstraction levels. *Dudek, G.L., PROC Nov 96 1684-1704*  
 mobile robot navig., sens. fusion, self-location techs. *Kam, M., +, PROC Jan 97 110-119*

**Navigation; cf.** Aircraft navigation; Mobile robot motion-planning

### Nervous system

human brain NMR image anal. by neural net. *Gelenbe, E., +, PROC Oct 96 1488-1496*

### Networks

communications in the twenty-first century (special issue). *PROC Oct 97 1519-1661*  
 communications in the twenty-first century, special issue intro. *Cochrane, P., PROC Oct 97 1519-1522*

**Networks; cf.** Computer networks; Neural networks

### Network servers

heterog. servers network, service provision, user selection. *Olafsson, S., PROC Oct 97 1556-1562*

### Neural network applications

ATM network traffic mgt. by neural net. *Habib, I.W., PROC Oct 96 1430-1441*  
 book review; Neural Networks: Current Applications (Lisboa, P.G.J., Ed; 1992). *Feldkamp, L.A., PROC Jan 96 87-88*  
 book review; Neural Networks for Optimization and Signal Processing (Cichocki, A., and Unbehauen, R.; 1993). *Swiniarski, R.W., PROC Jul 95 1106*  
 book review; Neural Networks for Signal Processing (Kosko, B., Ed.; 1992). *Williams, R.J., PROC Oct 95 1432-1433*  
 engineering applications of artificial neural networks (special issue). *PROC Oct 96 1355-1569*  
 fingerprint class./ident. by SOFM neural net. *Halici, U., +, PROC Oct 96 1497-1512*  
 GRAIL, multi-agent neural net gene ident. syst. *Ying Xu, +, PROC Oct 96 1544-1552*  
 human brain NMR image anal. by neural net. *Gelenbe, E., +, PROC Oct 96 1488-1496*  
 image compression, neural network approaches. *Dony, R.D., +, PROC Feb 95 288-303*  
 low bit rate video compression by neural net. *Cramer, C., +, PROC Oct 96 1529-1543*  
 med. image lossy compression by neural net. *Panagiotidis, N.G., +, PROC Oct 96 1474-1487*  
 mobile robot navig., sens. fusion, self-location techs. *Kam, M., +, PROC Jan 97 110-119*  
 multi-target pass. tracking, neural net optim. *Shams, S., PROC Oct 96 1442-1457*

neural nets, control appls., practise. *Narendra, K.S., PROC Oct 96 1385-1406*  
 nonlin. vector predictor, neural net approach. *Rizvi, S.A., +, PROC Oct 96 1513-1528*  
 nuc. med. image restoration by neural net. *Wei Qian, +, PROC Oct 96 1458-1473*  
 radar detect. of sigs. in chaos, small target in sea clutter. *Haykin, S., +, PROC Jan 95 95-122*  
 self-organizing map, props., engng. appls. *Kohonen, T., +, PROC Oct 96 1358-1384*  
 telephone network traffic neural net mgt. *Ambrose, B.E., +, PROC Oct 96 1421-1429*

**Neural network applications; cf.** Neurocontrollers

### Neural network hardware

book review; Analog VLSI Implementation of Neural Systems (Mead, C., and Ismail, M., Eds.; 1989). *Andreou, A.G., PROC Oct 95 1430-1431*

### Neural networks

ANN for stat. recogn. of continuous speech. *Morgan, N., +, PROC May 95 742-772*  
 autonomous robots, adaptive neural control. *Schmajuk, N.A., PROC Oct 96 1553-1561*  
 book review; Connectionism and Psychology (Quinlan, P.; 1991). *Kruschke, J.K., PROC Oct 95 1431-1432*  
 book review; Fundamentals of Artificial Neural Networks (Hassoun, M.H.; 1995). *Arabshahi, P., PROC Jun 96 906-907*  
 book review; Introduction to the Theory of Neural Computation (Hertz, J., et al.; 1991). *Abu-Mostafa, Y.S., PROC May 96 799*  
 book review; Neural Networks: A Comprehensive Foundation (Haykin, S.; 1994). *Hwang, J.-N., PROC Sep 95 1294-1296*  
 eigenface, elastic matching, neural nets, face recogn. *Jun Zhang, +, PROC Sep 97 1423-1435*

**Neural networks; cf.** Multilayer perceptrons; Optical neural networks; Recurrent neural networks; Self-organizing feature maps

### Neurocontrollers

autonomous robots, adaptive neural control. *Schmajuk, N.A., PROC Oct 96 1553-1561*  
 dyn. neural net for vehicle idle speed control. *Puskorius, G.V., +, PROC Oct 96 1407-1420*  
 mobile robot navig., sens. fusion, self-location techs. *Kam, M., +, PROC Jan 97 110-119*  
 neural nets, control appls., practise. *Narendra, K.S., PROC Oct 96 1385-1406*  
 neuro-fuzzy modeling/control, adaptive network. *Jang, J.-S.R., +, PROC Mar 95 378-406*

**Nonlinear programming; cf.** Quadratic programming

### Nonlinear systems

dyn. neural net for vehicle idle speed control. *Puskorius, G.V., +, PROC Oct 96 1407-1420*  
 large power syst. stabil. anal., taxonomy theory-based. *Venkatasubramanian, V., +, PROC Nov 95 1530-1561*  
 neural nets, control appls., practise. *Narendra, K.S., PROC Oct 96 1385-1406*  
 nonlinear phenomena in power systems: theory and practical implications (special issue). *PROC Nov 95 1439-1587*  
 parallel nonlin. systs., modeling and ident., param. estim. *Hai-Wen Chen, PROC Jan 95 39-66*  
 radar detect. of sigs. in chaos, small target in sea clutter. *Haykin, S., +, PROC Jan 95 95-122*

### Numerical methods

book review; Computational Methods for Electromagnetics and Microwaves (Boon, R.C.; 1992). *Kuchta, D.M., PROC Jan 95 123-124*

**Numerical methods; cf.** Approximation methods; Optimization methods

## O

### Obituaries

Mac Elwyn Van Valkenburg. *Trick, T.N., PROC Nov 97 1675-1677*

### Object oriented methods

ATM public networks, perform. mgt., scaleable and flexible approach. *Azmoodeh, M., +, PROC Oct 97 1639-1645*  
 semiotic paradigm for hypermedia data and coding models. *Gonzalez, R., PROC Jul 97 1111-1140*

### Object recognition

fn. recogn., reasoning, partial shape model. *Stark, L., +, PROC Nov 96 1640-1656*  
 iris recogn. *Wildes, R.P., PROC Sep 97 1348-1363*  
 scene interp., multiple sens. modalities, phys.-based integrat. *Nandhakumar, N., +, PROC Jan 97 147-163*  
 signals and systems (special section). *PROC Nov 96 1579-1580, 1623-1704*

**Occupational health and safety**

cancer risk assess., weak EM fields. *Foster, K.R.*, + , *PROC May 97* 733-746

**Ohmic contacts**

GaN based devices and technol. *Mohammad, S.N.*, + , *PROC Oct 95* 1306-1355

**Open systems**

distributed interactive simul. environ. *Hofer, R.C.*, + , *PROC Aug 95* 1124-1137

**Operating systems**

book review; Developing Online Help for Windows (Boggan, S., et al.; 1993). *Barker, T.T.*, *PROC Jun 95* 997-998

**Operational amplifiers**

CMOS op-amp imperfections reduction, autozeroing, correl. double sampling, chopper stabil. *Enz, C.C.*, + , *PROC Nov 96* 1584-1614

**Optical amplifiers**

WDM opt. fiber networks, opt. components, review. *Borella, M.S.*, + , *PROC Aug 97* 1274-1307

**Optical amplifiers; cf.** Optical fiber amplifiers**Optical arrays**

1D opt. phased array technol., sens. appls. *McManamon, P.F.*, + , *PROC Feb 96* 268-298

**Optical character recognition**

tax forms, names and addresses, reading syst. *Srihari, S.N.*, + , *PROC Jul 96* 1038-1049

**Optical communication**

laser satellite commun. network, vibr. effect and solns. *Arnon, S.*, + , *PROC Oct 97* 1646-1661

wireless infrared communications, prolog. *Falk, H.*, *PROC Feb 97* 263-264

**Optical communication; cf.** Optical fiber communication; SONET**Optical communication equipment**

Bragg cell Integrated acoustooptic/magneto-optic modulator devices for opt. inform. proc. *Tsai, C.S.*, *PROC Jun 96* 853-869

opt. fibers and amps. for WDM systs. *Yadlowsky, M.J.*, + , *PROC Nov 97* 1765-1779

WDM opt. fiber networks, opt. components, review. *Borella, M.S.*, + , *PROC Aug 97* 1274-1307

**Optical communication equipment; cf.** Optical receivers; Optical transmitters**Optical components**

modified sign digit no. representation, opt. computing/interconnects. *Yatagai, T.*, + , *PROC Jun 96* 828-852

**Optical computing**

modified sign digit no. representation, opt. computing/interconnects. *Yatagai, T.*, + , *PROC Jun 96* 828-852

optical information processing, part 2: applications - nonimage signal processing (special issue). *PROC Jun 96* 811-905

**Optical correlators**

wavelet proc. and optics. *Yao Li*, + , *PROC May 96* 720-732

**Optical data processing**

Bragg cell Integrated acoustooptic/magneto-optic modulator devices for opt. inform. proc. *Tsai, C.S.*, *PROC Jun 96* 853-869

electrooptic displays for opt. inform. proc. *Karim, M.A.*, + , *PROC Jun 96* 814-827

optical information processing, part 1: image processing and vision (special issue). *PROC May 96* 691-798

quantum inform. proc., cryptography/computation/teleportation. *Spiller, T.P.*, *PROC Dec 96* 1719-1746

**Optical detectors; cf.** Photodetectors**Optical distance measurement**

XTRS LADAR, model-based automatic target recogn. syst. *Verly, J.G.*, + , *PROC Feb 96* 126-163

**Optical distortion**

IR wireless high-speed short-range digital commun. *Kahn, J.M.*, + , *PROC Feb 97* 265-298

**Optical feedback**

review, opt. inform. proc. and beyond. *Ichioka, Y.*, + , *PROC May 96* 694-719

**Optical fiber amplifiers**

long-dist. lightwave telecomms., opt. fiber amps. *Giles, R.*, + , *PROC Jun 96* 870-883

opt. fibers and amps. for WDM systs. *Yadlowsky, M.J.*, + , *PROC Nov 97* 1765-1779

**Optical fiber communication**

long-dist. lightwave telecomms., opt. fiber amps. *Giles, R.*, + , *PROC Jun 96* 870-883

opt. fibers and amps. for WDM systs. *Yadlowsky, M.J.*, + , *PROC Nov 97* 1765-1779

overview of broadband access technols. *Gagnaire, M.*, *PROC Dec 97* 1958-1972

scrambling techs. for dig. lightwave transm. *Byeong Gi Lee*, + , *PROC Oct 95* 1399-1428

WDM opt. fiber networks, opt. components, review. *Borella, M.S.*, + , *PROC Aug 97* 1274-1307

**Optical fiber dispersion**

long-dist. lightwave telecomms., opt. fiber amps. *Giles, R.*, + , *PROC Jun 96* 870-883

opt. fibers and amps. for WDM systs. *Yadlowsky, M.J.*, + , *PROC Nov 97* 1765-1779

**Optical fiber lasers; cf.** Optical fiber amplifiers**Optical fiber measurement applications; cf.** Optical fiber transducers**Optical fibers**

opt. fibers and amps. for WDM systs. *Yadlowsky, M.J.*, + , *PROC Nov 97* 1765-1779

optoelectronics technology (special issue). *PROC Nov 97* 1671-1874

optoelectronics technology, special issue intro. *Lo, Y.-H.*, *PROC Nov 97* 1671-1672

**Optical fiber transducers**

civ. engng. smart structs., distrib. fiber optic technols. *Culshaw, B.*, + , *PROC Jan 96* 78-86

smart struct. *Udd, E.*, *PROC Jan 96* 60-67

smart struct., sens. and proc. *Spillman, W.B., Jr.*, *PROC Jan 96* 68-77

spectrally based sens., fiber optic smart struct. *Udd, E.*, *PROC Jun 96* 884-894

**Optical filters; cf.** Acoustooptic filters**Optical frequency conversion**

Bragg cell Integrated acoustooptic/magneto-optic modulator devices for opt. inform. proc. *Tsai, C.S.*, *PROC Jun 96* 853-869

imaging laser radar transmitters in near/far IR. *Osche, G.R.*, + , *PROC Feb 96* 103-125

WDM opt. fiber networks, opt. components, review. *Borella, M.S.*, + , *PROC Aug 97* 1274-1307

**Optical image processing**

opt. scanning holography, tutorial. *Ting-Chung Poon*, + , *PROC May 96* 753-764

pattern recogn. archits./techs. *Yu, F.T.S.*, + , *PROC May 96* 733-752

review, opt. inform. proc. and beyond. *Ichioka, Y.*, + , *PROC May 96* 694-719

speckle reduction in coherent inform. proc. *Iwai, T.*, + , *PROC May 96* 765-781

wavelet proc. and optics. *Yao Li*, + , *PROC May 96* 720-732

**Optical imaging**

coherent laser radar in Europe, ground-based and airborne systs. *Vaughan, J.M.*, + , *PROC Feb 96* 205-226

LITE, NASA space lidar for cloud and aerosol. *Winker, D.M.*, + , *PROC Feb 96* 164-180

wind vel. rem. sens., solid-state/CO<sub>2</sub> lidar systs. *Huffaker, R.M.*, + , *PROC Feb 96* 181-204

**Optical interconnections**

modified sign digit no. representation, opt. computing/interconnects. *Yatagai, T.*, + , *PROC Jun 96* 828-852

**Optical measurements**

civ. engng. smart structs., distrib. fiber optic technols. *Culshaw, B.*, + , *PROC Jan 96* 78-86

**Optical measurements; cf.** Optical transducers**Optical memories**

pattern recogn. archits./techs. *Yu, F.T.S.*, + , *PROC May 96* 733-752

principles and techs. of opt. data storage. *Mansuripur, M.*, + , *PROC Nov 97* 1780-1796

**Optical memories; cf.** Holographic memories**Optical modulation**

IR wireless high-speed short-range digital commun. *Kahn, J.M.*, + , *PROC Feb 97* 265-298

**Optical modulation; cf.** Acoustooptic modulation**Optical neural networks**

hybrid neural network/spectrosc. chem. anal. *Taiwei Lu*, + , *PROC Jun 96* 895-905

modified sign digit no. representation, opt. computing/interconnects. *Yatagai, T.*, + , *PROC Jun 96* 828-852

pattern recogn. archits./techs. *Yu, F.T.S.*, + , *PROC May 96* 733-752

review, opt. inform. proc. and beyond. *Ichioka, Y.*, + , *PROC May 96* 694-719

**Optical noise**

long-dist. lightwave telecomms., opt. fiber amps. *Giles, R.*, + , *PROC Jun 96* 870-883

**Optical phase shifters**

1D opt. phased array technol., sens. appls. *McManamon, P.F.*, + , *PROC Feb 96* 268-298

- Optical propagation in dispersive media; cf.** Optical fiber dispersion
- Optical propagation in nonlinear media; cf.** Optical frequency conversion
- Optical pumping**  
mol. amplif. and generation of microwaves. *Wittke, J.P.*, *PROC Jul 97* 1144-1168
- Optical radar; cf.** Laser radar
- Optical receivers**  
IR wireless high-speed short-range digital commun. *Kahn, J.M.*, +, *PROC Feb 97* 265-298  
laser satellite commun. network, vibr. effect and solns. *Arnon, S.*, +, *PROC Oct 97* 1646-1661
- Optical recording; cf.** Magneto-optic recording
- Optical refraction**  
1D opt. phased array technol., sens. appls. *McManamon, P.F.*, +, *PROC Feb 96* 268-298
- Optical repeaters**  
long-dist. lightwave telecomms., opt. fiber amps. *Giles, R.*, +, *PROC Jun 96* 870-883
- Optical signal processing**  
hybrid neural network/spectrosc. chem. anal. *Taiwei Lu*, +, *PROC Jun 96* 895-905
- Optical signal processing; cf.** Optical correlators
- Optical switches**  
micromachining for opt. and optoelectronic systs. *Wu, M.C.*, *PROC Nov 97* 1833-1856
- Optical switches; cf.** Acoustooptic switches
- Optical tracking**  
laser satellite commun. network, vibr. effect and solns. *Arnon, S.*, +, *PROC Oct 97* 1646-1661  
pattern recogn. archits./techs. *Yu, F.T.S.*, +, *PROC May 96* 733-752
- Optical transducers**  
1D opt. phased array technol., sens. appls. *McManamon, P.F.*, +, *PROC Feb 96* 268-298  
laser radar imaging sens. for robotic appls. *Carter, D.C.*, +, *PROC Feb 96* 299-320
- Optical transducers; cf.** Optical fiber transducers
- Optical transmitters**  
IR wireless high-speed short-range digital commun. *Kahn, J.M.*, +, *PROC Feb 97* 265-298  
laser satellite commun. network, vibr. effect and solns. *Arnon, S.*, +, *PROC Oct 97* 1646-1661
- Optical variables measurement**  
lasers and optics in health care. *Deutsch, T.F.*, *PROC Nov 97* 1797-1816
- Optical waveguides; cf.** Optical fibers
- Optics; cf.** Integrated optics
- Optimal control**  
book review; Optimal Control Theory for Infinite Dimensional Systems (Li, X., and Yong, J.; 1995). *Lenhart, S.*, *PROC Feb 97* 338-339  
mol. motion control. *Dahleh, M.*, +, *PROC Jan 96* 7-15
- Optimal control; cf.** Maximum principle
- Optimization methods**  
book review; Neural Networks for Optimization and Signal Processing (Cichocki, A., and Unbehauen, R.; 1993). *Swiniarski, R.W.*, *PROC Jul 95* 1106  
book review; Optimization and Dynamical Systems (Helmke, U., and Moore, J.; 1994). *Faybusovich, L.*, *PROC Jun 96* 907-908  
distributed detect. with multiple sens., review. *Blum, R.S.*, +, *PROC Jan 97* 64-79  
multi-target pass. tracking, neural net optim. *Shams, S.*, *PROC Oct 96* 1442-1457
- Optimization methods; cf.** Approximation methods; Circuit optimization; Dynamic programming; Gradient methods; Least squares methods; Quadratic programming
- Optoelectronic devices**  
modified sign digit no. representation, opt. computing/interconnects. *Yatagai, T.*, +, *PROC Jun 96* 828-852  
optoelectronics technology (special issue). *PROC Nov 97* 1671-1874  
optoelectronics technology, special issue intro. *Lo, Y.-H.*, *PROC Nov 97* 1671-1672
- Optoelectronic devices; cf.** Integrated optoelectronics; Light-emitting diodes
- Oscillators**  
radio oscillators, radiation law determ. and theory. *Pupin, M.I.*, *PROC Feb 97* 306-310
- Oscillators; cf.** Microwave oscillators
- Output feedback**  
dyn. neural net for vehicle idle speed control. *Puskorius, G.V.*, +, *PROC Oct 96* 1407-1420
- Oxidation**  
proximal probes, nanofabrication, STM and AFM. *Snow, E.S.*, +, *PROC Apr 97* 601-611
- STM/AFM nano-oxid. proc., single-electron transistors, photoconductive switches, HEMT. *Matsumoto, K.*, *PROC Apr 97* 612-628  
UHV STM nanofabrication, nanolithography tool, selective oxid., metallization. *Lyding, J.W.*, *PROC Apr 97* 589-600

## P

- Pacemakers; cf.** Cardiac pacemakers
- Packaging; cf.** Integrated circuit packaging
- Packet switching**  
guaranteed perform. service, service disciplines. *Hui Zhang*, *PROC Oct 95* 1374-1396
- Packet switching; cf.** Asynchronous transfer mode
- Paging communication**  
CoWare hardware-software codesign tool for digital telecom systs. *Bolsens, I.*, +, *PROC Mar 97* 391-418  
low-power RF ICs for portable commun., all-CMOS radio. *Abidi, A.A.*, *PROC Apr 95* 544-569
- Pain**  
defibrillation/pacing electrodes, elec. behavior. *Kim, Y.*, +, *PROC Mar 96* 446-456
- Parallel algorithms**  
modular massively parallel computing approach, image-related proc. *Krikelis, A.*, +, *PROC Jul 96* 988-1004  
vision, high-perform. computing. *Cho-Li Wang*, +, *PROC Jul 96* 931-946
- Parallel architectures**  
digital CMOS ccts., power consumption minimization. *Chandrakasan, A.P.*, +, *PROC Apr 95* 498-523  
heterog. computing. *Ekmecic, I.*, +, *PROC Aug 96* 1127-1144  
image proc., 1D proc. array. *Hammerstrom, D.W.*, +, *PROC Jul 96* 1005-1018  
image proc., block data parallel archit. *Alexander, W.E.*, +, *PROC Jul 96* 947-968  
modular massively parallel computing approach, image-related proc. *Krikelis, A.*, +, *PROC Jul 96* 988-1004  
nonlin. vector predictor, neural net approach. *Rizvi, S.A.*, +, *PROC Oct 96* 1513-1528  
opt. inform. proc. and beyond, review. *Ichioka, Y.*, +, *PROC May 96* 694-719  
opt. pattern recogn. archits./techs. *Yu, F.T.S.*, +, *PROC May 96* 733-752  
parallel architectures for image processing (special issue). *PROC Jul 96* 915-1049  
QCA, quantum-dot cellular automata, pipelined archit. appl. *Lent, C.S.*, +, *PROC Apr 97* 541-557  
superscalar proc., microarchitecture. *Smith, J.E.*, +, *PROC Dec 95* 1609-1624  
video real-time proc., P<sup>3</sup>I parallel archit. *Colaïtis, M.-J.*, +, *PROC Jul 96* 1019-1037  
VLSI analog archit., motion proc. *Sarpeshkar, R.*, +, *PROC Jul 96* 969-987
- Parallel machines**  
superscalar proc., microarchitecture. *Smith, J.E.*, +, *PROC Dec 95* 1609-1624
- Parallel processing**  
book review; Parallel Computation Systems for Robotics Algorithms and Architectures (Fijany, A., and Bejczy, A., Eds.; 1992). *Sharf, I.*, *PROC Aug 95* 1196-1197  
compiler technol. for future  $\mu$ P. *Hwu, W.W.*, +, *PROC Dec 95* 1625-1640  
image proc. on high-perform. RISC systs., eval. *Baglietto, P.*, +, *PROC Jul 96* 917-930
- Parallel processing; cf.** Multiprocessing; Pipeline processing
- Parallel programming**  
book review; Parallel Logic Programming (Takeuchi, A.; 1992). *Mikolajczak, B.*, *PROC Mar 95* 488  
dataflow proc. networks. *Lee, E.A.*, +, *PROC May 95* 773-801  
modular massively parallel computing approach, image-related proc. *Krikelis, A.*, +, *PROC Jul 96* 988-1004  
superscalar proc., microarchitecture. *Smith, J.E.*, +, *PROC Dec 95* 1609-1624
- Parameter estimation**  
acoustic sigs. charact., continuous lin. time-freq. representation. *Guillemain, P.*, +, *PROC Apr 96* 561-585  
musical sigs., time-freq. anal. *Pielemeier, W.J.*, +, *PROC Sep 96* 1216-1230  
parallel nonlin. systs., modeling and ident., param. estim. *Hai-Wen Chen*, *PROC Jan 95* 39-66
- Parameter space methods**  
nonlin. large power syst. stabil. anal., taxonomy theory-based. *Venkatasubramanian, V.*, +, *PROC Nov 95* 1530-1561

**Particle production; cf.** Aerosols**Pattern classification**

fingerprint class./ident. by SOFM neural net. *Halici, U.*, +, *PROC Oct 96* 1497-1512

GRAIL, multi-agent neural net gene ident. syst. *Ying Xu*, +, *PROC Oct 96* 1544-1552

implantable cardioverter defibrillators, detect. algms. *Jenkins, J.M.*, +, *PROC Mar 96* 428-445

**Pattern classification; cf.** Image classification**Pattern matching**

biometric authentication, fingerprint features, syst. perform. estim. *Roddy, A.R.*, +, *PROC Sep 97* 1390-1421

identity-authentication syst., fingerprints. *Jain, A.K.*, +, *PROC Sep 97* 1365-1388

**Pattern matching; cf.** Image matching**Pattern recognition**

2D image recogn., hybrid syst. *Roli, F.*, +, *PROC Nov 96* 1659-1681

iris recogn. *Wildes, R.P.*, *PROC Sep 97* 1348-1363

multisensor data fusion, state of art/appls. *Hall, D.L.*, +, *PROC Jan 97* 6-23

opt. pattern recogn. archits./techs. *Yu, F.T.S.*, +, *PROC May 96* 733-752

self-organizing map, props., engng. appls. *Kohonen, T.*, +, *PROC Oct 96* 1358-1384

**Pattern recognition; cf.** Fingerprint identification; Handwriting recognition; Image recognition; Object recognition; Pattern classification; Speech recognition**Personal communication networks**

batt.-powered pers. communicators, trends and limits. *Warwick, C.W.*, *PROC Apr 95* 681-686

laser satellite commun. network, vibr. effect and solns. *Armon, S.*, +, *PROC Oct 97* 1646-1661

review of pers. commun. systs. *Li, V.O.K.*, +, *PROC Sep 95* 1210-1243

satellite CDMA transm. for mobile and pers. commun. *De Gaudenzi, R.*, +, *PROC Jan 96* 18-39

**Phased array radar**

1D opt. phased array technol., sens. appls. *McManamon, P.F.*, +, *PROC Feb 96* 268-298

**Phased arrays**

1D opt. phased array technol., sens. appls. *McManamon, P.F.*, +, *PROC Feb 96* 268-298

**Phase measurement**

corrections to "The fractional frequency stability of a 34-m-diameter beam waveguide antenna" (May 94 788-795). *Otoshi, T.Y.*, *P PROC Aug 96* 1187

**Phase shifters; cf.** Optical phase shifters**Philosophical considerations**

SIMNET, simulator networking, mil. training. *Miller, D.C.*, +, *PROC Aug 95* 1114-1123

**Photodetectors**

GaN based devices and technol. *Mohammad, S.N.*, +, *PROC Oct 95* 1306-1355

imaging laser radar transmitters in near/far IR. *Osche, G.R.*, +, *PROC Feb 96* 103-125

**Photovoltaic cell fabrication**

Si, cryst. solar cells, low-cost indust. technols. *Szlufcik, J.*, +, *PROC May 97* 711-730

**Photovoltaic cell materials**

Si, cryst. solar cells, low-cost indust. technols. *Szlufcik, J.*, +, *PROC May 97* 711-730

**Picture archiving and communication systems**

radiologic image compression, review. *Wong, S.*, +, *PROC Feb 95* 194-219

**Piezoresistive devices**

biosensor, micromachined device. *Baselt, D.R.*, +, *PROC Apr 97* 672-680

**Pipeline processing**

asynchronous design methodologies, overview. *Hauck, S.*, *PROC Jan 95* 69-93

Cyrix 6x86  $\mu$ P. *McMahan, S.C.*, +, *PROC Dec 95* 1664-1672

JAGUAR, pipelined VLSI archit. for JPEG image compression. *Kovac, M.*, +, *PROC Feb 95* 247-258

QCA, quantum-dot cellular automata, pipelined archit. appl. *Lent, C.S.*, +, *PROC Apr 97* 541-557

**PLA; cf.** Programmable logic arrays**Planning**

distributed interactive simul., future technol. challenges. *Reddy, R.*, +, *PROC Aug 95* 1188-1195

warfare modeling and simul., distributed interactive simul. *Davis, P.K.*, *PROC Aug 95* 1138-1155

**Planning; cf.** Business planning; Communication system planning; Strategic planning

**Plasma displays**

cameras and display systs., rel., digital TV. *Hashimoto, Y.*, +, *PROC Jul 95* 1032-1043

**Pointing systems**

laser satellite commun. network, vibr. effect and solns. *Armon, S.*, +, *PROC Oct 97* 1646-1661

**Polarimetry; cf.** Radar polarimetry**Portable radio communication**

antenna arrays, channel requirement, appls. *Godara, L.C.*, *PROC Jul 97* 1031-1060

batt.-powered pers. communicators, trends and limits. *Warwick, C.W.*, *PROC Apr 95* 681-686

low-power RF ICs for portable commun., all-CMOS radio. *Abidi, A.A.*, *PROC Apr 95* 544-569

**Portable radio communication; cf.** Land mobile radio...; Paging communication; Personal communication networks

**Position control**

postural sway, human bal. control, time-freq. spectral anal. *El-Jaroudi, A.*, +, *PROC Sep 96* 1312-1318

**Positron emission tomography**

wavelets in biomedical appls. review. *Unser, M.*, +, *PROC Apr 96* 626-638

**Posture**

postural sway, human bal. control, time-freq. spectral anal. *El-Jaroudi, A.*, +, *PROC Sep 96* 1312-1318

**Powdered magnetic materials**

biosensor, micromachined device. *Baselt, D.R.*, +, *PROC Apr 97* 672-680

**Power control**

Ka-band satellite links, open-loop uplink power control. *Dissanayake, A.W.*, *PROC Jun 97* 959-969

**Power electronics**

batt.-powered portable computers, technol. trends. *Harris, E.P.*, +, *PROC Apr 95* 636-658

**Power electronics; cf.** Power semiconductor devices

**Power engineering**

William S. Lee, career/contribs. *Brittain, J.E.*, *PROC Mar 95* 490

**Power flow analysis; cf.** Load flow analysis

**Power generation; cf.** Generators

**Power semiconductor devices**

future challenges and directions for nitride materials and light emitters. *Akasaki, I.*, +, *PROC Nov 97* 1750-1751

**Power supplies; cf.** Biomedical power supplies

**Power system control**

nonlin. large power syst. stabil. anal., taxonomy theory-based. *Venkatasubramanian, V.*, +, *PROC Nov 95* 1530-1561

voltage instabil., mechanisms and control strategies. *Vu, K.T.*, +, *PROC Nov 95* 1442-1455

**Power system control; cf.** Power system stability

**Power system dynamic stability**

nonlin. large power syst. stabil. anal., taxonomy theory-based. *Venkatasubramanian, V.*, +, *PROC Nov 95* 1530-1561

voltage collapse modelling, bifurcation theory-based. *Chin-Woo Tan*, +, *PROC Nov 95* 1484-1496

**Power system modeling**

transient stabil., direct anal. methods. *Hsiao-Dong Chang*, +, *PROC Nov 95* 1497-1529

voltage stabil. anal., local bifurcation theory-based. *Kwatny, H.G.*, +, *PROC Nov 95* 1456-1483

**Power system modeling; cf.** Load modeling

**Power systems**

William Le Roy Emmet, career/contribs. *Brittain, J.E.*, *PROC Jul 96* 1053-1054

**Power system security**

transient stabil., direct anal. methods. *Hsiao-Dong Chang*, +, *PROC Nov 95* 1497-1529

**Power system simulation**

behavior anal. tools, nonlin. considerations. *Hiskens, I.A.*, *PROC Nov 95* 1573-1587

transient stabil., direct anal. methods. *Hsiao-Dong Chang*, +, *PROC Nov 95* 1497-1529

voltage stabil. anal., local bifurcation theory-based. *Kwatny, H.G.*, +, *PROC Nov 95* 1456-1483

**Power system stability**

Edith Clarke, career/contribs. *Brittain, J.E.*, *PROC Jan 96* 90

multimachine power syst. structural stabil., nonlin. load effects. *Pai, M.A.*, +, *PROC Nov 95* 1562-1572

nonlinear phenomena in power systems: theory and practical implications (special issue). *PROC Nov 95* 1439-1587

voltage instabil., mechanisms and control strategies. *Vu, K.T.*, +, *PROC Nov 95* 1442-1455

- voltage stabil. anal., local bifurcation theory-based. *Kwatny, H.G.*, + , *PROC Nov 95* 1456-1483
- Power system transient stability**  
direct anal. methods. *Hsiao-Dong Chang*, + , *PROC Nov 95* 1497-1529  
nonlin. large power syst. stabil. anal., taxonomy theory-based. *Venkatasubramanian, V.*, + , *PROC Nov 95* 1530-1561
- Power transmission; cf.** Load flow analysis
- Prediction methods**  
motion estim. techs. for digital TV, review. *Dufaux, F.*, + , *PROC Jun 95* 858-876  
nonlin. vector predictor, neural net approach. *Rizvi, S.A.*, + , *PROC Oct 96* 1513-1528
- Prediction methods; cf.** Forecasting
- Predictive control**  
book review; Predictive Control: A Unified Approach (Soeterboek, R.; 1992). *Toumodge, S.*, *PROC Aug 95* 1198-1199
- Privacy**  
biometrics. *Woodward, J.D.*, *PROC Sep 97* 1480-1492
- Privacy; cf.** Cryptography
- Probability**  
Ka-band propag., three-site comparison of fade-duration meas. *Helmken, H.*, + , *PROC Jun 97* 917-925  
PAC learning fn. approx., feedforward sigmoidal nets. *Rao, N.S.V.*, + , *PROC Oct 96* 1562-1569
- Problem-solving**  
autonomous robots, adaptive neural control. *Schmajuk, N.A.*, *PROC Oct 96* 1553-1561
- Process control**  
book review; Process Control Engineering (Rao, M., and Qui, H.; 1993). *Zhou, M.C.*, *PROC Nov 95* 1592-1593
- Process control; cf.** Industrial control; Process monitoring
- Process monitoring**  
proc. machine monitoring sens., vibr. anal., time-freq. anal. *Atlas, L.E.*, + , *PROC Sep 96* 1319-1329
- Product development**  
design data mgt., CAD frameworks. *van den Hamer, P.*, + , *PROC Jan 96* 42-56
- Production control**  
book review; Manufacturing Systems Engineering (Gershwin, S.B.; 1994). *Meerkov, S.M.*, *PROC Jul 96* 1051-1052
- Production management**  
design data mgt., CAD frameworks. *van den Hamer, P.*, + , *PROC Jan 96* 42-56
- Production systems**  
book review; Heuristic Scheduling Systems with Applications to Production Systems and Project Management (Morton, T.E., and Pentico, D.W.; 1993). *Bard, J.F.*, *PROC Feb 96* 324-325
- Professional societies**  
IRE Proceedings 1913-1937, elec. and electronics engng. evoln. *Brittain, J.E.*, *PROC Dec 96* 1747-1772  
IRE proceedings, 1938-1962. *Brittain, J.E.*, *PROC May 97* 762-797
- Professional societies; cf.** Engineering societies
- Program compilers**  
CoWare hardware-software codesign tool for digital telecom systs. *Bolsens, I.*, + , *PROC Mar 97* 391-418  
embedded software design tools, real-time sig. proc. systs. *Goossens, G.*, + , *PROC Mar 97* 436-454  
embedded software in real-time sig. proc., telecom appl. *Paulin, P.G.*, + , *PROC Mar 97* 419-435  
 $\mu$ P, compiler technol. *Hwu, W.W.*, + , *PROC Dec 95* 1625-1640
- Programmable circuits**  
VLSI for digital HDTV. *Mlynek, D.J.*, + , *PROC Jul 95* 1055-1070
- Programmable logic arrays**  
electrooptic displays for opt. inform. proc. *Karim, M.A.*, + , *PROC Jun 96* 814-827
- Programming**  
computer design, prog. tech. influence. *Hopper, G.M.*, + , *PROC Mar 97* 470-474  
hardware/software codesign (special issue). *PROC Mar 97* 347-466  
hardware/software codesign, special issue intro. *De Micheli, G.*, *PROC Mar 97* 347-348  
intro. to "Influence of programming techniques on the design of computers" (classic paper reprint, pp. 470-474). *Flynn, M.J.*, *PROC Mar 97* 467-469  
Stanford FLASH multiprocessor, hardware/software co-design. *Heinrich, M.*, + , *PROC Mar 97* 455-466
- Program processors; cf.** Program compilers
- Project management**  
book review; Heuristic Scheduling Systems with Applications to Production Systems and Project Management (Morton, T.E., and Pentico, D.W.; 1993). *Bard, J.F.*, *PROC Feb 96* 324-325
- book review; Project Management: Engineering, Technology, and Implementation (Shtub, A., et al.; 1994). *Klasterin, T.D.*, *PROC Dec 95* 1513
- book review; Project Management in Manufacturing and High Technology Management, 2nd edn. (Badiru, A.B.; 1996). *Pinto, J.K.*, *PROC Nov 97* 1875
- Prologs**  
advances in satellite CDMA transm. for mobile/personal communications. *O'Donnell, R.*, *PROC Jan 96* 16-17  
antennae. *Brittain, J.E.*, *PROC Nov 96* 1615-1616  
application of antenna arrays to mobile communications: beam-forming and direction-of-arrival considerations. *Likourezos, G.*, *PROC Aug 97* 1193-1194  
applications of antenna arrays to mobile communications: performance improvement, feasibility, and system considerations. *Likourezos, G.*, *PROC Jul 97* 1029-1030  
asynchronous design methodologies: an overview. *Caruthers, F.*, *PROC Jan 95* 67-68  
automatic on-line signature verification. *Esch, J.*, *PROC Feb 97* 213-214  
autonomous vehicles. *Esch, J.*, *PROC Aug 96* 1145-1146  
biometrics: privacy's foe or privacy's friend?. *Shen, W.*, + , *PROC Sep 97* 1479  
blind system identification. *O'Donnell, R.*, *PROC Aug 97* 1308-1309  
cct. techs. for reducing effects of op-amp imperfections; autozeroing, correlated double sampling, and chopper stabilization. *O'Donnell, R.*, *PROC Nov 96* 1582-1583  
comments on diffr. principles and limitations of RCS reduction techs. *O'Donnell, R.*, *PROC Dec 96* 1828-1829  
control of molecular motion. *Esch, J.*, *PROC Jan 96* 6  
convergence of telecomms. and computing: what are implications today?. *O'Donnell, R.*, *PROC Aug 96* 1165-1166  
dataflow proc. networks. *O'Donnell, R.A.*, *PROC May 95* 771-772  
detect. of sigs. in chaos. *Falk, H.*, *PROC Jan 95* 94  
discrete simul. of colored noise and stochastic proc. and  $1/f^{\alpha}$  power law noise generation. *Falk, H.*, *PROC May 95* 800-801  
distributed multimedia systems. *Falk, H.*, *PROC Jul 97* 1061-1062  
emerging gallium nitride base devices. *Self, K.*, *PROC Oct 95* 1305  
EM interaction of handset antennas and a human in personal communications. *O'Donnell, R.*, *PROC Jan 95* 5-6  
environ. representation using multiple abstraction levels. *Esch, J.*, *PROC Nov 96* 1682-1683  
evaluation of automated biometrics-based identification and verification systems. *Shen, W.*, + , *PROC Sep 97* 1463  
face recognition, eigenface, elastic matching, and neural nets. *Shen, W.*, + , *PROC Sep 97* 1422  
Fingerprint features: Statistical analysis and system performance estimates. *Shen, W.*, + , *PROC Sep 97* 1389  
flash memory cells; overview. *O'Donnell, R.*, *PROC Aug 97* 1246-1247  
human and machine recogn. of faces; survey. *Esch, J.*, *PROC May 95* 704  
hybrid syst. for 2D image recogn. *O'Donnell, R.*, *PROC Nov 96* 1657-1658  
hypermedia data modeling, coding, and semiotics. *Esch, J.*, *PROC Jul 97* 1109-1110  
identity-authentication system using fingerprints. *Shen, W.*, + , *PROC Sep 97* 1364  
iris recognition, emerging biometric technology. *Shen, W.*, + , *PROC Sep 97* 1347  
knowledge-directed vision; control, learning, and integrat. *Falk, H.*, *PROC Nov 96* 1623-1624  
low-cost industrial technologies of crystalline silicon solar cells. *Self, K.*, *PROC May 97* 709-710  
managing design data: five dimensions of CAD frameworks, config. mgt./product data mgt. *Esch, J.*, *PROC Jan 96* 40-41  
modeling and ident. of parallel nonlin. systs.: structural class. and param. estim. methods. *Self, K.*, *PROC Jan 95* 37-38  
multirate analog-digital systems for signal processing and conversion. *Self, K.*, *PROC Feb 97* 240-241  
neural networks for stat. recogn. of continuous speech. *Falk, H.*, *PROC May 95* 741  
noise reduction filters for dyn. image seqs.: review. *Caruthers, F.*, *PROC Sep 95* 1270-1271  
optical components for WDM lightwave networks. *O'Donnell, R.*, *PROC Aug 97* 1272-1273  
perform. trends in high-end processors. *Esch, J.*, *PROC Jan 95* 18-19  
personal communication systems (PCS). *O'Donnell, R.*, *PROC Sep 95* 1208-1209  
principles and methods of testing finite state machines; survey. *Esch, J.*, *PROC Aug 96* 1089  
protocol pruning. *Falk, H.*, *PROC Oct 95* 1356  
quantum inform. proc.: cyptography, computation, and teleportation. *Esch, J.*, *PROC Dec 96* 1717-1718  
radar. *O'Donnell, R.*, *PROC Dec 96* 1773-1774

recent advances in theory and applications of scrambling techniques for lightwave transmission. *Falk, H.*, *PROC Oct 95* 1397-1398  
 recognizing obj. fn. through reasoning about partial shape descriptions and dyn. phys. properties. *Caruthers, F.*, *PROC Nov 96* 1638-1639  
 reengineering curriculum: design/anal. of new undergraduate elec./computer engng. degree at Carnegie Mellon Univ. *Falk, H.*, *PROC Sep 95* 1244-1245  
 service disciplines for guaranteed performance service in packet-switching networks. *Esch, J.*, *PROC Oct 95* 1373  
 smart structures (special section intro.). *Kersey, A.D.*, *PROC Jan 96* 57-59  
 speaker recognition, tutorial. *Shen, W.*, + , *PROC Sep 97* 1436  
 survey of heterog. computing: concepts and systs. *Falk, H.*, *PROC Aug 96* 1124-1126  
 weak electromagnetic fields and cancer in the context of risk assessment. *Likourezos, G.*, *PROC May 97* 731-732  
 wide area augmentation of GPS. *Self, K.*, *PROC Aug 96* 1061-1062  
 wireless infrared communications. *Falk, H.*, *PROC Feb 97* 263-264

**PROM; cf. EPROM****Propagation; cf. Radio propagation****Propulsion; cf. Marine vehicle propulsion****Protocols**

communications in the twenty-first century (special issue). *PROC Oct 97* 1519-1661  
 communications in the twenty-first century, special issue intro. *Cochrane, P.*, *PROC Oct 97* 1519-1522  
 convergence of telecomms. and computing to networking models for integrated services and appls. *Decina, M.*, + , *PROC Dec 97* 1887-1914  
 distributed interactive simul. environ. *Hofer, R.C.*, + , *PROC Aug 95* 1124-1137  
 distributed interactive simul., networking technol. *Pullen, J.M.*, + , *PROC Aug 95* 1156-1167  
 FSM testing, principles and methods, survey. *Lee, D.*, + , *PROC Aug 96* 1090-1123  
 integrated services in Internet, state of art. *White, P.P.*, + , *PROC Dec 97* 1934-1946  
 internetworking based on cell switch router - archit. and protocol review. *Katsube, Y.*, + , *PROC Dec 97* 1998-2006  
 IP switching for scalable IP services. *Ahmed, H.M.*, + , *PROC Dec 97* 1984-1997  
 multimedia commun. *Wolf, L.C.*, + , *PROC Dec 97* 1915-1933  
 pruning. *Lee, D.*, + , *PROC Oct 95* 1357-1372  
 self-organizing broadband transport networks. *Grover, W.D.*, *PROC Oct 97* 1582-1611  
 SIMNET, simulator networking, mil. training. *Miller, D.C.*, + , *PROC Aug 95* 1114-1123  
 tag switching archit. overview. *Rekhter, Y.*, + , *PROC Dec 97* 1973-1983  
 testbed for twenty-first century. *Henning, I.*, + , *PROC Oct 97* 1572-1581

**Psychology**

book review; Connectionism and Psychology (Quinlan, P.; 1991). *Kruschke, J.K.*, *PROC Oct 95* 1431-1432

**Publishing; cf. Copyright protection; IEEE publications****Pulse generation**

cardiac pacing electrodes, pulse generator/lead perform. *Stokes, K.*, *PROC Mar 96* 457-467

**Pulse position modulation**

IR wireless high-speed short-range digital commun. *Kahn, J.M.*, + , *PROC Feb 97* 265-298

**Q****Quadratic programming**

SAR images, spatial resolu., fusion, data sets. *Costantini, M.*, + , *PROC Jan 97* 139-146

**Quadrature mirror filters**

multirate analog-digital systs. for sig. proc./conversion. *Franca, J.*, + , *PROC Feb 97* 242-262

**Quantization**

Grand Alliance syst. for US HDTV. *Challapali, K.*, + , *PROC Feb 95* 158-174

**Quantization; cf. Vector quantization****Quantum dots**

QCA, quantum-dot cellular automata, pipelined archit. appl. *Lent, C.S.*, + , *PROC Apr 97* 541-557

**Quantum effect semiconductor devices**

nanoelectronics, quantum-effect devices, fault tolerance, design. *Goser, K.F.*, + , *PROC Apr 97* 558-573

nanoelectronic switching devices, mol., single-electron and quantum-effect devices. *Goldhaber-Gordon, D.*, + , *PROC Apr 97* 521-540

nanosstructure fab., electron beam techs. *Matsui, S.*, *PROC Apr 97* 629-643

QCA, quantum-dot cellular automata, pipelined archit. appl. *Lent, C.S.*, + , *PROC Apr 97* 541-557

**Quantum effect semiconductor devices; cf. MODFETs; Quantum well devices****Quantum theory**

inform. proc., cryptography/computation/teleportation. *Spiller, T.P.*, *PROC Dec 96* 1719-1746

**Quantum well devices**

metalorganic chemical vapor deposition for optoelectronic devices. *Coleman, J.J.*, *PROC Nov 97* 1715-1729

**Quantum well lasers**

molecular beam epitaxy technol. of III-V compound semiconds. for optoelectronic appls. *Cheng, K.-Y.*, *PROC Nov 97* 1694-1714

semicond. laser, thirty-five year prospective. *Holonyak, N., Jr.*, *PROC Nov 97* 1678-1693

**Quantum wires**

STM/AFM nano-oxid. proc., single-electron transistors, photoconductive switches, HEMT. *Matsumoto, K.*, *PROC Apr 97* 612-628

**Queuing analysis**

packet-switching networks, service disciplines for guaranteed perform. *Hui Zhang*, *PROC Oct 95* 1374-1396

teletraffic engng. in broadband era. *Michiel, H.*, + , *PROC Dec 97* 2007-2033

**R**

**Radar; cf. CW radar; Doppler radar; Laser radar; Phased array radar; Secondary radar; Synthetic aperture radar**

**Radar applications**

multitarget-multisensor air traffic surveillance, interact. multiple model estim. *Yeddanapudi, M.*, + , *PROC Jan 97* 80-96

wartime develop. *Schneider, E.G.*, *PROC Dec 96* 1775-1827

**Radar applications; cf. Radar imaging; Radar measurements; Radar tracking****Radar clutter**

radar detect. of sigs. in chaos, small target in sea clutter. *Haykin, S.*, + , *PROC Jan 95* 95-122

**Radar cross sections**

corrections to "comments on diffraction principles and limitations of RCS reduction techniques" (Dec 96 1830-1851). *Ufimtsev, P.Y.*, *PROC Mar 97* 475

stealth technol., RCS reduction, diffr. principles and limitations. *Ufimtsev, P.Y.*, *PROC Dec 96* 1830-1851

**Radar data processing**

XTRS LADAR, model-based automatic target recogn. syst. *Verly, J.G.*, + , *PROC Feb 96* 126-163

**Radar detection**

CO<sub>2</sub> range-Doppler imaging laser radar component technol. *Melngailis, I.*, + , *PROC Feb 96* 227-267

sea clutter, radar sig. detect. in chaos. *Haykin, S.*, + , *PROC Jan 95* 95-122

**Radar equipment**

corrections to "comments on diffraction principles and limitations of RCS reduction techniques" (Dec 96 1830-1851). *Ufimtsev, P.Y.*, *PROC Mar 97* 475

stealth technol., RCS reduction, diffr. principles and limitations. *Ufimtsev, P.Y.*, *PROC Dec 96* 1830-1851

wartime develop. *Schneider, E.G.*, *PROC Dec 96* 1775-1827

**Radar imaging**

coherent laser radar in Europe, ground-based and airborne systs. *Vaughan, J.M.*, + , *PROC Feb 96* 205-226

laser radar imaging sens. for robotic appls. *Carmer, D.C.*, + , *PROC Feb 96* 299-320

near/far IR imaging laser radar transmitter technol. *Osche, G.R.*, + , *PROC Feb 96* 103-125

SAR images, spatial resolu., fusion, data sets. *Costantini, M.*, + , *PROC Jan 97* 139-146

XTRS LADAR, model-based automatic target recogn. syst. *Verly, J.G.*, + , *PROC Feb 96* 126-163

**Radar measurements**

S-band polarimetric radar meas. appl., Ka-band atten. predict. *Beaver, J.D.*, + , *PROC Jun 97* 893-909

**Radar polarimetry**

S-band polarimetric radar meas. appl., Ka-band atten. predict. *Beaver, J.D.*, + , *PROC Jun 97* 893-909

**Radar scattering**

sig. anal., time-freq. distribs., sonar and radar echoes appl. *Gaunaud, G.C.*, + , *PROC Sep 96* 1231-1248

**Radar scattering; cf. Radar cross sections****Radar signal analysis**

sig. anal., time-freq. distribs., sonar and radar echoes appl. *Gaunaud, G.C.*, + , *PROC Sep 96* 1231-1248

**Radar target recognition**

multi-target pass. tracking, neural net optim. *Shams, S.*, *PROC Oct 96* 1442-1457

**Radar tracking**

coherent laser radar in Europe, ground-based and airborne systs. *Vaughan, J.M.*, +, *PROC Feb 96* 205-226

multitarget-multisensor air traffic surveillance, interact. multiple model estim. *Yeddapanudi, M.*, +, *PROC Jan 97* 80-96

multi-target pass. tracking, neural net optim. *Shams, S.*, *PROC Oct 96* 1442-1457

**Radar transmitters**

CO<sub>2</sub> range-Doppler imaging laser radar component technol. *Melngailis, I.*, +, *PROC Feb 96* 227-267

imaging laser radar transmitters in near/far IR. *Osche, G.R.*, +, *PROC Feb 96* 103-125

**Radiation detectors; cf.** Photodetectors**Radio astronomy**

corrections to "Precision DSN radiometer systems: impact on microwave calibrations" (May 94 776-787). *Stelzried, C.T.*, +, *PROC Aug 96* 1187

corrections to "The fractional frequency stability of a 34-m-diameter beam waveguide antenna" (May 94 788-795). *Otoshi, T.Y.*, *P PROC Aug 96* 1187

**Radio broadcasting**

IRE Proceedings 1913-1937, elec. and electronics engng. evoln. *Brittain, J.E.*, *PROC Dec 96* 1747-1772

**Radio communication**

communications in the twenty-first century (special issue). *PROC Oct 97* 1519-1661

Harold A. Wheeler, career/contribs. *Brittain, J.A.*, *PROC Jan 97* 200-201

Harold T. Friis, career/contribs. *Brittain, J.E.*, *PROC Dec 95* 1514

introduction to "Radio Telephony" (classic paper reprint, pp. 1526-1535). *Jabbari, B.*, *PROC Oct 97* 1523-1525

intro. to classic paper by L. de Forest on develops. in telegraphy (classic paper reprint (pp. 327-336). *Delogne, P.*, *PROC Feb 97* 323-326

overview of broadband access technols. *Gagnaire, M.*, *PROC Dec 97* 1958-1972

radio telegraphy (reprinted from Proc. IRE, vol. 10, pp. 215-238, Aug. 1922). *Marconi, S.G.*, *PROC Oct 97* 1526-1535

Raymond A. Heising, contribs. *Brittain, J.E.*, *PROC Jun 95* 1003

wireless infrared communications, prolog. *Falk, H.*, *PROC Feb 97* 263-264

**Radio communication; cf.** Digital radio; Indoor radio communication; Land mobile radio; Microwave radio communication; Millimeter wave radio communication; Mobile communication; Portable radio communication; Radio broadcasting; Satellite communication; Space vehicle communication; UHF radio communication; Wireless LAN

**Radio communication equipment**

comments on "The pure electron discharge and its applications in radio telegraphy and telephony" (classic paper reprint, pp. 1496-1508). *Birdsall, C.K.*, *PROC Sep 97* 1493-1495

George W. Pierce, career/contribs. *Brittain, J.E.*, *PROC Apr 97* 700-701

HT insulators, dielec. props. and radio appl. *Hills, S.M.*, *PROC Feb 97* 314-322

intro. to classic paper by S.M. Hills on high-voltage insulators for radio commun. (classic paper reprint, pp. 314-322). *Nelson, J.K.*, *PROC Feb 97* 311-313

pure electron discharge and its appls. in radio (reprinted from Proc. of the IRE, vol. 3, no. 3, pp. 261-293, Sept. 1915). *Langmuir, I.*, *PROC Sep 97* 1496-1508

trans-Atlantic radio telephony, SSB prod. *Heising, R.A.*, *PROC May 97* 752-761

**Radio communication equipment; cf.** Radio receivers; Radio transmitters; Transceivers

**Radiometry; cf.** Microwave radiometry

**Radio propagation**

corrections to "comments on diffraction principles and limitations of RCS reduction techniques" (Dec 96 1830-1851). *Ufimtsev, P.Y.*, *PROC Mar 97* 475

Greenleaf W. Pickard, careers/contribs. *Brittain, J.E.*, *PROC Oct 95* 1434

Ralph Bown, career/contribs. *Brittain, J.E.*, *PROC Sep 97* 1511-1513

RCS reduction, diffr. principles and limitations. *Ufimtsev, P.Y.*, *PROC Dec 96* 1830-1851

**Radio propagation; cf.** Land mobile radio propagation factors; Microwave radio propagation; Millimeter wave radio propagation

**Radio propagation meteorological factors; cf.** Microwave radio propagation meteorological factors; Millimeter wave radio propagation meteorological factors

**Radio receivers**

corrections to "Precision DSN radiometer systems: impact on microwave calibrations" (May 94 776-787). *Stelzried, C.T.*, +, *PROC Aug 96* 1187

CoWare hardware-software codesign tool for digital telecom systs. *Bolsens, I.*, +, *PROC Mar 97* 391-418

intro. to classic paper by Edwin H. Armstrong on audion receiver (classic paper reprint, pp. 685-699). *Cotanis, N.*, *PROC Apr 97* 681-684

Lee de Forest, career/contribs. *Brittain, J.E.*, *PROC Mar 97* 476-477

some recent develops. in audion receiver (reprinted from Proc. IRE, vol. 3, no. 9, pp. 215-247, Sept. 1915). *Armstrong, E.H.*, *PROC Apr 97* 685-697

**Radio spectrum management**

John R. Carson, career/contribs. *Brittain, J.E.*, *PROC Jun 96* 909-910

**Radio spectrum management; cf.** Land mobile radio spectrum management

**Radio telephony**

intro. to classic paper by R.A. Heising (classic paper reprint, pp. 752-761). *Messerschmitt, D.G.*, *PROC May 97* 747-751

**Radio transmitters**

Federal Telegraph Company, commun. equipt. develop. *de Forest, L.*, *PROC Feb 97* 327-336

**Rain**

ACTS propag. data at 20 and 27.5 GHz, fade slope anal. *Feil, J.*, +, *PROC Jun 97* 926-935

ACTS propag. expt., atten. distrib. obs. and predict. model comparisons. *Crane, R.K.*, +, *PROC Jun 97* 879-892

ACTS propag. expt. for Ka-band satellite commun. syst. design. *Crane, R.K.*, +, *PROC Jun 97* 863-878

ACTS propag. expt., rain-rate distrib. obs. and prediction model comparisons. *Crane, R.K.*, +, *PROC Jun 97* 946-958

cumulative fade distribs. and freq. scaling techs., 20 GHz from ACTS and 12 GHz from DSS. *Goldhirsh, J.*, +, *PROC Jun 97* 910-916

Ka-band Earth-space propag. research in Japan. *Karasawa, Y.*, +, *PROC Jun 97* 821-842

Ka-band propag., three-site comparison of fade-duration meas. *Helmken, H.*, +, *PROC Jun 97* 917-925

Ka-band slant path propag., European research. *Arbesser-Rastburg, B.R.*, +, *PROC Jun 97* 843-852

Ka-band VSATs, channel charactn. and modelling. *Alouini, M.-S.*, +, *PROC Jun 97* 981-997

S-band polarimetric radar meas. appl., Ka-band atten. predict. *Beaver, J.D.*, +, *PROC Jun 97* 893-909

three-site space-diversity expt., 20 GHz, ACTS. *Goldhirsh, J.*, +, *PROC Jun 97* 970-980

**Random-access communication; cf.** Multiaccess communication

**Random noise**

CMOS op-amp imperfections reduction, autozeroing, correl. double sampling, chopper stabil. *Enz, C.C.*, +, *PROC Nov 96* 1584-1614

colored noise and stochastic procs. and 1/f<sup>α</sup> power law noise generation, discrete simul. *Kasdin, N.J.*, *PROC May 95* 802-827

**Rayleigh-Ritz methods**

skeletal muscle/cardiac vibrs., time-freq. anal. *Wood, J.C.*, +, *PROC Sep 96* 1281-1294

**Reactive power**

power syst. voltage collapse modelling, bifurcation theory-based. *Chin-Woo Tan*, +, *PROC Nov 95* 1484-1496

**Real time systems**

colored noise and stochastic procs. and 1/f<sup>α</sup> power law noise generation, discrete simul. *Kasdin, N.J.*, *PROC May 95* 802-827

embedded software design tools, real-time sig. proc. systs. *Goossens, G.*, +, *PROC Mar 97* 436-454

embedded software in real-time sig. proc., telecom appl. *Paulin, P.G.*, +, *PROC Mar 97* 419-435

portable video-on-demand syst. in wireless commun. *Meng, T.H.*, +, *PROC Apr 95* 659-680

reactive real-time embedded syst. design, formal models. *Edwards, S.*, +, *PROC Mar 97* 366-390

SIMNET, simulator networking, mil. training. *Miller, D.C.*, +, *PROC Aug 95* 1114-1123

video real-time proc., P<sup>3</sup>I parallel archit. *Colaitis, M.-J.*, +, *PROC Jul 96* 1019-1037

**Receivers; cf.** Optical receivers; Radio receivers; TV receivers

**Recording; cf.** Disk recording; Magnetic recording; Video recording

**Recurrent neural networks**

dyn. neural net for vehicle idle speed control. *Puskorius, G.V.*, +, *PROC Oct 96* 1407-1420

human brain NMR image anal. by neural net. *Gelenbe, E.*, +, *PROC Oct 96* 1488-1496

low bit rate video compression by neural net. *Cramer, C.*, +, *PROC Oct 96* 1529-1543

**Recursive estimation**

region-based video coding, math. morph. *Salembier, P.*, +, *PROC Jun 95* 843-857

**Recursive estimation; cf.** Kalman filtering

**Redundancy**

motion estim. techs. for digital TV, review. *Dufaux, F.*, +, *PROC Jun 95* 858-876

**Reflection; cf.** Electromagnetic reflection

**Reflector antennas**

corrections to "The fractional frequency stability of a 34-m-diameter beam waveguide antenna" (May 94 788-795). *Otoshi, T.Y., P PROC Aug 96 1187*

**Reflector antennas; cf.** Multireflector antennas

**Regulators**

book review; Optimal Control Theory for Infinite Dimensional Systems (Li, X., and Yong, J.; 1995). *Lenhart, S., PROC Feb 97 338-339*

**Relaxation oscillators; cf.** Flip-flops

**Reliability; cf.** Communication system reliability; Fault tolerance

**Reliability theory**

fuzzy logic, reliab. engng. appl. *Bowles, J.B., +, PROC Mar 95 435-449*

**Remote sensing**

groundwater flow, hydraulic cond., sig.-level fusion, multiresolution method. *Daniel, M.M., +, PROC Jan 97 164-180*

**Research and development**

Ka-band Earth-space propag. research in Japan. *Karasawa, Y., +, PROC Jun 97 821-842*

Ka-band slant path propag., European research. *Arbesser-Rastburg, B.R., +, PROC Jun 97 843-852*

**Research and development management**

book review; Managing Innovation and Entrepreneurship in Technology Based Firms (Martin, M.J.C.; 1994). *Pinto, J.K., PROC Nov 96 1706-1707*

book review; Mastering the Dynamics of Innovation: How Companies Can Seize Opportunities in the Face of Technological Change (Utterback, J.M.; 1994). *O'Neill, R.R., PROC Jun 95 999*

book review; Project Management in Manufacturing and High Technology Management, 2nd edn. (Badiru, A.B.; 1996). *Pinto, J.K., PROC Nov 97 1875*

book review; Strategic Technology Management (Betz, F.; 1993). *Gaynor, G.H., PROC Mar 96 500-501*

book review; Technology and Strategy: Conceptual Models and Diagnostics (Goodman, R.A., and Lawless, M.W.; 1994). *Pinto, J.K., PROC Nov 96 1707-1708*

**Resistance measurement**

intro. to classic paper by M.I. Pupin on antenna radiation resistance meas. (classic paper reprint, pp. 306-310). *Collin, R.E., PROC Feb 97 301-305*

**Resonance**

sig. anal., time-freq. distribns., sonar and radar echoes appl. *Gaunaurd, G.C., +, PROC Sep 96 1231-1248*

**Resonant tunneling devices**

nanoelectronic switching devices, mol., single-electron and quantum-effect devices. *Goldhaber-Gordon, D., +, PROC Apr 97 521-540*

**Resonant tunneling diodes**

Boolean logic, nanoelectronic archit., double-barrier reson. tunneling diode. *Roychowdhury, V.P., +, PROC Apr 97 574-588*

**Resonators; cf.** Laser resonators

**Resource management**

heterog. computing. *Ekmeçic, I., +, PROC Aug 96 1127-1144*

heterog. servers network, service provision, user selection. *Olafsson, S., PROC Oct 97 1556-1562*

**Reviews**

antenna arrays appl. to mobile commun., beamforming and DOA aspects. *Godara, L.C., PROC Aug 97 1195-1245*

blind syst. ident. techs. *Abed-Meraim, K., +, PROC Aug 97 1310-1322*

distributed multimedia systs., tech. survey. *Li, V.O.K., +, PROC Jul 97 1063-1108*

ENIAC electronic computing cets. *Schneck, P.B., PROC Jul 97 1169-1171*

flash memory cells. *Pavan, P., +, PROC Aug 97 1248-1271*

satellite commun. develop. *Wu, W.W., PROC Jun 97 998-1010*

**Reviews; cf.** Book reviews

**Road vehicles**

internal combustion engine, knock detect., mech. signature anal., time-freq. methods. *Samimy, B., +, PROC Sep 96 1330-1343*

**Robots**

autonomous robots, adaptive neural control. *Schmajuk, N.A., PROC Oct 96 1553-1561*

book review; Robotics and Remote Systems for Hazardous Environments (Jamshidi, M., and Eicker, P., Eds.; 1993). *Maciejewski, A.A., PROC Feb 95 336-337*

self-organizing map, props., engng. appls. *Kohonen, T., +, PROC Oct 96 1358-1384*

**Robots; cf.** Mobile robots

**Robot sensing systems**

data fusion (special issue). *PROC Jan 97 3-183*

**Robot vision systems**

laser radar imaging sens. for robotic appls. *Carmar, D.C., +, PROC Feb 96 299-320*

mobile robot, environ. representation, multiple abstraction levels. *Dudek, G.L., PROC Nov 96 1684-1704*

obj. fn. recogn., reasoning, partial shape model. *Stark, L., +, PROC Nov 96 1640-1656*

signals and systems (special section). *PROC Nov 96 1579-1580, 1623-1704*

**Robustness**

book review; Robust Control: Systems with Uncertain Physical Parameters (Ackermann, J., et al.; 1993). *Mansour, M., PROC Oct 96 1572*

**Rotating machines; cf.** Generators; Motors

**Routing; cf.** Communication system routing

**S**

**Sampled-data filters; cf.** Digital filters

**Sampling methods**

CMOS op-amp imperfections reduction, autozeroing, correl. double sampling, chopper stabil. *Enz, C.C., +, PROC Nov 96 1584-1614*

**Satellite antennas**

ACTS, antenna config. and for Ka-band propag. meas. *Bauer, R., PROC Jun 97 853-862*

**Satellite communication**

ACTS propag. data at 20 and 27.5 GHz, fade slope anal. *Feil, J., +, PROC Jun 97 926-935*

ACTS propag. expt., atten. distrib. obs. and predict. model comparisons. *Crane, R.K., +, PROC Jun 97 879-892*

ACTS propag. expt. for Ka-band satellite commun. syst. design. *Crane, R.K., +, PROC Jun 97 863-878*

ACTS propag. expt., rain-rate distrib. obs. and prediction model comparisons. *Crane, R.K., +, PROC Jun 97 946-958*

communications in the twenty-first century (special issue). *PROC Oct 97 1519-1661*

cumulative fade distribns. and freq. scaling techs., 20 GHz from ACTS and 12 GHz from DSS. *Goldhirsh, J., +, PROC Jun 97 910-916*

develop. of satellite commun. *Wu, W.W., PROC Jun 97 998-1010*

Ka-band Earth-satellite propag. data, syst. requirements. *Rogers, D.V., +, PROC Jun 97 810-820*

Ka-band Earth-space propag. research in Japan. *Karasawa, Y., +, PROC Jun 97 821-842*

Ka-band propagation effects on earth-satellite links (special issue). *PROC Jun 97 807-1019*

Ka-band propagation effects on earth-satellite links, special issue intro. *Davarian, F., +, PROC Jun 97 807-809*

Ka-band propag. meas., ACTS. *Bauer, R., PROC Jun 97 853-862*

Ka-band propag., three-site comparison of fade-duration meas. *Helmken, H., +, PROC Jun 97 917-925*

Ka-band satellite links, open-loop uplink power control. *Dissanayake, A.W., PROC Jun 97 959-969*

Ka-band scintillations, meas. and model predictions. *Mayer, C.E., +, PROC Jun 97 936-945*

Ka-band slant path propag., European research. *Arbesser-Rastburg, B.R., +, PROC Jun 97 843-852*

S-band polarimetric radar meas. appl., Ka-band atten. predict. *Beaver, J.D., +, PROC Jun 97 893-909*

three-site space-diversity expt., 20 GHz, ACTS. *Goldhirsh, J., +, PROC Jun 97 970-980*

transoceanic commun. of pass. satellites. *Pierce, J.R., +, PROC Jun 97 1011-1019*

**Satellite communication earth terminals**

Ka-band VSATs, channel charactn. and modelling. *Alouini, M.-S., +, PROC Jun 97 981-997*

**Satellite mobile communication**

antenna arrays, channel requirement, appls. *Godara, L.C., PROC Jul 97 1031-1060*

CDMA transm. for mobile and pers. commun. *De Gaudenzi, R., +, PROC Jan 96 18-39*

laser satellite commun. network, vibr. effect and solns. *Arnon, S., +, PROC Oct 97 1646-1661*

**Satellite navigation systems; cf.** Global Positioning System

**Satellites**

ACTS, antenna config. and for Ka-band propag. meas. *Bauer, R., PROC Jun 97 853-862*

**Satellite tracking**

laser satellite commun. network, vibr. effect and solns. *Arnon, S., +, PROC Oct 97 1646-1661*

**Scattering; cf.** Acoustic scattering; Radar scattering

**Scheduling**

Heuristic Scheduling Systems with Applications to Production Systems and Project Management (Morton, T.E., and Pentico, D.W.; 1993). *Bard, J.F., PROC Feb 96 324-325*



**Scientific visualization**

lasers and optics in health care. *Deutsch, T.F.*, *PROC Nov 97* 1797-1816

**Secondary radar**

multitarget-multisensor air traffic surveillance, interact. multiple model estim. *Yeddanapudi, M.*, +, *PROC Jan 97* 80-96

**Security**; cf. Access control; Power system security

**Self-organizing feature maps**

fingerprint class./ident. by SOFM neural net. *Halici, U.*, +, *PROC Oct 96* 1497-1512

image compression, neural network approaches. *Dony, R.D.*, +, *PROC Feb 95* 288-303

multi-target pass. tracking, neural net optim. *Shams, S.*, *PROC Oct 96* 1442-1457

nanoelectronics, quantum-effect devices, fault tolerance, design. *Goser, K.F.*, +, *PROC Apr 97* 558-573

prop., engng. appls. *Kohonen, T.*, +, *PROC Oct 96* 1358-1384

**Semiconductor device doping**

GaN based devices and technol. *Mohammad, S.N.*, +, *PROC Oct 95* 1306-1355

metalorganic chemical vapor deposition for optoelectronic devices. *Coleman, J.J.*, *PROC Nov 97* 1715-1729

**Semiconductor device fabrication**

nanometer-scale science and technology (special issue). *PROC Apr 97* 483-680

nanometer-scale science and technology, special issue intro. *Marrian, C.R.K.*, *PROC Apr 97* 483-485

optoelectronics technology (special issue). *PROC Nov 97* 1671-1874

optoelectronics technology, special issue intro. *Lo, Y.-H.*, *PROC Nov 97* 1671-1672

vertical-cavity surface emitting lasers, moving from research to mfg. *Choquette, K.D.*, +, *PROC Nov 97* 1730-1739

**Semiconductor device fabrication**; cf. Integrated circuit fabrication; Photovoltaic cell fabrication; Semiconductor device doping

**Semiconductor device modeling**; cf. Integrated circuit modeling

**Semiconductor device noise**; cf. Integrated circuit noise

**Semiconductor device packaging**; cf. Integrated circuit packaging

**Semiconductor device reliability**

implantable pacemakers, size reduction/reliab. improvement. *Sanders, R.S.*, +, *PROC Mar 96* 480-486

**Semiconductor device reliability**; cf. Integrated circuit reliability

**Semiconductor devices**

optoelectronics technology (special issue). *PROC Nov 97* 1671-1874

optoelectronics technology, special issue intro. *Lo, Y.-H.*, *PROC Nov 97* 1671-1672

**Semiconductor devices**; cf. Piezoresistive devices; Power semiconductor devices; Quantum effect semiconductor devices; Semiconductor lasers; Transistors

**Semiconductor diodes**; cf. Light-emitting diodes

**Semiconductor electronics industry**; cf. Electronics industry

**Semiconductor growth**

gallium-nitride-based materials for blue to ultraviolet optoelectronics devices. *DenBaars, S.P.*, *PROC Nov 97* 1740-1749

metalorganic chemical vapor deposition for optoelectronic devices. *Coleman, J.J.*, *PROC Nov 97* 1715-1729

molecular beam epitaxy technol. of III-V compound semiconds. for optoelectronic appls. *Cheng, K.-Y.*, *PROC Nov 97* 1694-1714

**Semiconductor lasers**

future challenges and directions for nitride materials and light emitters. *Akasaki, I.*, +, *PROC Nov 97* 1750-1751

GaN based devices and technol. *Mohammad, S.N.*, +, *PROC Oct 95* 1306-1355

molecular beam epitaxy technol. of III-V compound semiconds. for optoelectronic appls. *Cheng, K.-Y.*, *PROC Nov 97* 1694-1714

optoelectronics technology (special issue). *PROC Nov 97* 1671-1874

optoelectronics technology, special issue intro. *Lo, Y.-H.*, *PROC Nov 97* 1671-1672

semicond. laser, thirty-five year prospective. *Holonyak, N., Jr.*, *PROC Nov 97* 1678-1693

vertical-cavity surface emitting lasers, moving from research to mfg. *Choquette, K.D.*, +, *PROC Nov 97* 1730-1739

**Semiconductor lasers**; cf. Quantum well lasers

**Semiconductor materials**

future challenges and directions for nitride materials and light emitters. *Akasaki, I.*, +, *PROC Nov 97* 1750-1751

**Semiconductor materials**; cf. Photovoltaic cell materials

**Semiconductor memories**

flash memory cells, review. *Pavan, P.*, +, *PROC Aug 97* 1248-1271

**Sensitivity**; cf. Robustness

**Sensors**; cf. Multisensor systems

**Sequences**

digital lightwave transm., scrambling techs. *Byeong Gi Lee*, +, *PROC Oct 95* 1399-1428

FSM testing, principles and methods, survey. *Lee, D.*, +, *PROC Aug 96* 1090-1123

**Sequential logic circuits**

Boolean logic, nanoelectronic archit., double-barrier reson. tunneling diode. *Roychowdhury, V.P.*, +, *PROC Apr 97* 574-588

**Sequential logic circuit testing**

FSM testing, principles and methods, survey. *Lee, D.*, +, *PROC Aug 96* 1090-1123

**Set theory**

book review; Qualitative Theory of Dynamical Systems: The Role of Stability Preserving Mappings (Michel, A.N., and Wang, K.; 1995). *Sandberg, I.W.*, *PROC Jan 97* 198-199

**Shape measurement**; cf. Image shape analysis

**Signal analysis**

internal combustion engine, knock detect., mech. signature anal., time-freq. methods. *Samimy, B.*, +, *PROC Sep 96* 1330-1343

time-frequency analysis (special issue). *PROC Sep 96* 1195-1343

wavelets and time-freq. anal. *Hess-Nielsen, N.*, +, *PROC Apr 96* 523-540

**Signal analysis**; cf. Acoustic signal analysis; Biomedical signal analysis; Radar signal analysis; Spectral analysis

**Signal design**

musical sigs., time-freq. anal. *Pielemeier, W.J.*, +, *PROC Sep 96* 1216-1230

**Signal detection**

internal combustion engine, knock detect., mech. signature anal., time-freq. methods. *Samimy, B.*, +, *PROC Sep 96* 1330-1343

**Signal detection**; cf. Adaptive signal detection; Biomedical signal detection; Distributed detection; Radar detection

**Signal estimation**; cf. Estimation

**Signal flow graphs**

asynchronous design methodologies, overview. *Hauck, S.*, *PROC Jan 95* 69-93

**Signal generators**; cf. Oscillators; Pulse generation

**Signal processing**

blind syst. ident. techs., review. *Abed-Meraim, K.*, +, *PROC Aug 97* 1310-1322

book review; Handbook for Digital Signal Processing (Mittra, S.K., and Kaiser, J.F., Eds.; 1993). *Shenoi, B.A.*, *PROC Aug 95* 1199-1200

book review; Neural Networks for Optimization and Signal Processing (Cichocki, A., and Unbehauen, R.; 1993). *Swinarski, R.W.*, *PROC Jul 95* 1106

book review; Neural Networks for Signal Processing (Kosko, B., Ed.; 1992). *Williams, R.J.*, *PROC Oct 95* 1432-1433

corrections to "Emerging applications of multirate signal processing and wavelets in digital communications" (Apr 96 586-603). *Wornell, G.W.*, *PROC Aug 96* 1187-1188

dataflow proc. networks. *Lee, E.A.*, +, *PROC May 95* 773-801

digital commun., multirate sig. proc. and wavelets appls. *Wornell, G.W.*, *PROC Apr 96* 586-603

embedded software design tools, real-time sig. proc. systs. *Goossens, G.*, +, *PROC Mar 97* 436-454

embedded software in real-time sig. proc., telecom appl. *Paulin, P.G.*, +, *PROC Mar 97* 419-435

HDTV digital systs., stds., proc. and coding. *Ninomiya, Y.*, *PROC Jul 95* 1086-1093

multirate analog-digital systems for signal processing and conversion, prolog. *Self, K.*, *PROC Feb 97* 240-241

optical information processing, part 2: applications - nonimage signal processing (special issue). *PROC Jun 96* 811-905

wavelet research, future directions. *Sweldens, W.*, *PROC Apr 96* 680-685

wavelets, subband coding, and best bases. *Ramchandran, K.*, +, *PROC Apr 96* 541-560

**Signal processing**; cf. Adaptive signal processing; Array signal processing; Biomedical signal processing; Estimation; Filtering; Image processing; Optical signal processing; Signal sampling; Speech processing; Video signal processing

**Signal reconstruction**

brain functional activity localization, EEG time-freq. anal. *Mingui Sun*, +, *PROC Sep 96* 1302-1311

**Signal reconstruction**; cf. Image reconstruction

**Signal representations**

acoustic sigs. charact., continuous lin. time-freq. representation. *Guillemain, P.*, +, *PROC Apr 96* 561-585

time-freq. distrib., sonar and radar echoes appl. *Gaunard, G.C.*, +, *PROC Sep 96* 1231-1248

wavelets, math. background. *Cohen, A.*, +, *PROC Apr 96* 514-522

wavelets (special issue). *PROC Apr 96* 507-685

**Signal representations**; cf. Image representations

**Signal resolution**

reduced interf. distrib., biological appls./interps. *Williams, W.J.*, *PROC Sep 96* 1264-1280

wavelets for computer vision research. *Mallat, S.*, *PROC Apr 96* 604-614

- wavelets, math. background. *Cohen, A.*, +, *PROC Apr 96* 514-522
- Signal resolution**; cf. Image resolution
- Signal restoration**; cf. Image restoration
- Signal sampling**  
multirate analog-digital systs. for sig. proc./conversion. *Franca, J.*, +, *PROC Feb 97* 242-262  
wavelets, math. background. *Cohen, A.*, +, *PROC Apr 96* 514-522
- Signal sampling**; cf. Image sampling
- Silicon**  
cryst. solar cells, low-cost indust. technols. *Szlufcik, J.*, +, *PROC May 97* 711-730  
scaled submicron ultra-low power CMOS technol. *Stork, J.M.C.*, *PROC Apr 95* 607-618
- Silicon on insulator technology**  
CMOS scaling for high perform. and low power, next decade. *Davari, B.*, +, *PROC Apr 95* 595-606  
CMOS scaling into nanometer regime, fund. phys. effects, practicality. *Yuan Taur*, +, *PROC Apr 97* 486-504  
CMOS technol. challenges for integrat. near and below 0.1  $\mu\text{m}$  design rule. *Asai, S.*, +, *PROC Apr 97* 505-520  
Si scaled submicron ultra-low power CMOS technol. *Stork, J.M.C.*, *PROC Apr 95* 607-618
- Simulation**  
correction to "Wavelets in computer graphics" (Apr 96 615-625). *Schroder, P.*, *PROC Aug 96* 1188  
distributed interactive simulation (special issue). *PROC Aug 95* 1111-1195  
distributed interactive simul., future technol. challenges. *Reddy, R.*, +, *PROC Aug 95* 1188-1195  
distributed interactive simul., networking technol. *Pullen, J.M.*, +, *PROC Aug 95* 1156-1167  
distributed interactive simul., nondefense training/education appls. *Fitzsimmons, E.A.*, +, *PROC Aug 95* 1179-1187  
warfare modeling and simul., distributed interactive simul. *Davis, P.K.*, *PROC Aug 95* 1138-1155  
wavelets in computer graphics. *Schroder, P.*, *PROC Apr 96* 615-625
- Simulation**; cf. Power system simulation
- Simulation software**  
Defense Department, distributed interactive simul. technol. appl. *Shiflett, J.E.*, +, *PROC Aug 95* 1168-1178  
distributed interactive simul. environ. *Hofer, R.C.*, +, *PROC Aug 95* 1124-1137  
SIMNET, simulator networking, mil. training. *Miller, D.C.*, +, *PROC Aug 95* 1114-1123
- Sleep**  
brain functional activity localization, EEG time-freq. anal. *Mingui Sun*, +, *PROC Sep 96* 1302-1311
- Social factors**  
book review; The World in 2020 (McRae, H.; 1994). *Dorf, R.C.*, *PROC Jan 96* 88-89  
book review; World Class (Kanter, R.M.; 1995). *Dorf, R.C.*, *PROC Jul 96* 1050-1051  
present and future service demand, dyn. modeling. *Lyons, M.H.*, +, *PROC Oct 97* 1544-1555
- Social factors**; cf. Technology social factors
- Software**; cf. Communication system software; Database management systems; Simulation software
- Software development management**  
book review; Software Quality Management - A Pro-active Approach (Brinkworth, J.W.O.; 1992). *Freuhauf, K.*, *PROC Mar 95* 488-489
- Software engineering**  
Defense Department, distributed interactive simul. technol. appl. *Shiflett, J.E.*, +, *PROC Aug 95* 1168-1178  
hardware/software co-design. *De Michell, G.*, +, *PROC Mar 97* 349-365  
modular massively parallel computing approach, image-related proc. *Krikelis, A.*, +, *PROC Jul 96* 988-1004  
SIMNET, simulator networking, mil. training. *Miller, D.C.*, +, *PROC Aug 95* 1114-1123
- Software engineering**; cf. Computer aided software engineering; Software requirements and specifications
- Software management**; cf. Software development management
- Software performance**  
embedded software in real-time sig. proc., telecom appl. *Paulin, P.G.*, +, *PROC Mar 97* 419-435
- Software quality**  
book review; Software Quality Management - A Pro-active Approach (Brinkworth, J.W.O.; 1992). *Freuhauf, K.*, *PROC Mar 95* 488-489
- Software requirements and specifications**  
CoWare hardware-software codesign tool for digital telecom systs. *Bolsens, I.*, +, *PROC Mar 97* 391-418  
reactive real-time embedded syst. design, formal models. *Edwards, S.*, +, *PROC Mar 97* 366-390
- Software standards**  
distributed interactive simul. environ. *Hofer, R.C.*, +, *PROC Aug 95* 1124-1137
- Software tools**  
embedded software design tools, real-time sig. proc. systs. *Goossens, G.*, +, *PROC Mar 97* 436-454  
embedded software in real-time sig. proc., telecom appl. *Paulin, P.G.*, +, *PROC Mar 97* 419-435
- Solar radiation**  
Greenleaf W. Pickard, careers/contribs. *Brittain, J.E.*, *PROC Oct 95* 1434
- Solid lasers**; cf. Semiconductor lasers
- Sonar scattering**  
sig. anal., time-freq. distribs., sonar and radar echoes appl. *Gaunaurd, G.C.*, +, *PROC Sep 96* 1231-1248
- Sonar signal analysis**  
sig. anal., time-freq. distribs., sonar and radar echoes appl. *Gaunaurd, G.C.*, +, *PROC Sep 96* 1231-1248
- SONET**  
scrambling techs. for dig. lightwave transm. *Byeong Gi Lee*, +, *PROC Oct 95* 1399-1428  
self-organizing broadband transport networks. *Grover, W.D.*, *PROC Oct 97* 1582-1611
- Source coding**  
advanced TV systs. for terrestrial broadcasting, problems and solns. *Schreiber, W.F.*, *PROC Jun 95* 958-981  
book review; Universal Compression and Retrieval (Krichevsky, R.; 1994). *Csiszar, I.*, *PROC Jun 95* 1000-1002  
digital audio coding for visual commun. *Noll, P.*, *PROC Jun 95* 925-943  
semiotic paradigm for hypermedia data and coding models. *Gonzalez, R.*, *PROC Jul 97* 1111-1140
- Source coding**; cf. Cryptography; Image coding; Transform coding
- Space vehicle communication**  
corrections to "Precision DSN radiometer systems: impact on microwave calibrations" (May 94 776-787). *Stelzried, C.T.*, +, *PROC Aug 96* 1187
- Spatial data structures**  
sens. fusion automation, database support. *Antony, R.T.*, *PROC Jan 97* 39-53
- Spatial filters**  
modified sign digit no. representation, opt. computing/interconnects. *Yatagai, T.*, +, *PROC Jun 96* 828-852  
opt. inform. proc. and beyond, review. *Ichioka, Y.*, +, *PROC May 96* 694-719  
opt. pattern recogn. archits./techs. *Yu, F.T.S.*, +, *PROC May 96* 733-752  
wavelet proc. and optics. *Yao Li*, +, *PROC May 96* 720-732
- Spatial light modulators**  
electrooptic displays for opt. inform. proc. *Karim, M.A.*, +, *PROC Jun 96* 814-827  
opt. inform. proc. and beyond, review. *Ichioka, Y.*, +, *PROC May 96* 694-719  
pattern recogn. archits./techs. *Yu, F.T.S.*, +, *PROC May 96* 733-752
- Speaker recognition**  
automated biometrics (special issue). *PROC Sep 97* 1343-1492  
automated biometrics, special issue intro. *Shen, W.*, +, *PROC Sep 97* 1343-1347  
automatic speaker-recogn. systs. *Campbell, J.P., Jr.*, *PROC Sep 97* 1437-1462
- Special issues and sections**  
advances in image and video compression (special issue). *PROC Feb 95* 135-335  
automated biometrics (special issue). *PROC Sep 97* 1343-1492  
automated biometrics, special issue intro. *Shen, W.*, +, *PROC Sep 97* 1343-1347  
communications in the twenty-first century (special issue). *PROC Oct 97* 1519-1661  
communications in the twenty-first century, special issue intro. *Cochrane, P.*, *PROC Oct 97* 1519-1522  
data fusion (special issue). *PROC Jan 97* 3-183  
data fusion, special issue intro. *Varshney, P.K.*, *PROC Jan 97* 3-5  
digital television, part 2: hardware and applications (special issue). *PROC Jul 95* 1007-1105  
digital television, part I: enabling technologies (special issue). *PROC Jun 95* 831-996  
distributed interactive simulation (special issue). *PROC Aug 95* 1111-1195  
electrical therapy of cardiac arrhythmias (special issue). *PROC Mar 96* 331-499  
engineering applications of artificial neural networks (special issue). *PROC Oct 96* 1355-1569  
engng. appls. of fuzzy logic (special issue). *PROC Mar 95* 343-483  
global information infrastructure (special issue). *PROC Dec 97* 1883-2051  
global information infrastructure, special issue intro. *Goode, B.*, *PROC Dec 97* 1883-1886  
hardware/software codesign (special issue). *PROC Mar 97* 347-466

- hardware/software codesign, special issue intro. *De Micheli, G.*, *PROC Mar 97* 347-348
- Ka-band propagation effects on earth-satellite links (special issue). *PROC Jun 97* 807-1019
- Ka-band propagation effects on earth-satellite links, special issue intro. *Davarian, F.*, +, *PROC Jun 97* 807-809
- laser radar (special issue). *PROC Feb 96* 99-320
- low-power electronics (special issue). *PROC Apr 95* 495-693
- microprocessors (special issue). *PROC Dec 95* 1439-1512
- nanometer-scale science and technology (special issue). *PROC Apr 97* 483-680
- nanometer-scale science and technology, special issue intro. *Marrian, C.R.K.*, *PROC Apr 97* 483-485
- nonlinear phenomena in power systems: theory and practical implications (special issue). *PROC Nov 95* 1439-1587
- optical information processing, part 1: image processing and vision (special issue). *PROC May 96* 691-798
- optical information processing, part 2: applications - nonimage signal processing (special issue). *PROC Jun 96* 811-905
- optoelectronics technology (special issue). *PROC Nov 97* 1671-1874
- optoelectronics technology, special issue intro. *Lo, Y.-H.*, *PROC Nov 97* 1671-1672
- parallel architectures for image processing (special issue). *PROC Jul 96* 915-1049
- signals and systems (special section). *PROC Nov 96* 1579-1580, 1623-1704
- smart structures (special section). *PROC Jan 96* 57-86
- time-frequency analysis (special issue). *PROC Sep 96* 1195-1343
- wavelets (special issue). *PROC Apr 96* 507-685
- Speckle**  
coherent inform. proc., speckle reduction. *Iwai, T.*, +, *PROC May 96* 765-781
- Spectral analysis**  
acoustic sigs. charact., continuous lin. time-freq. representation. *Guillemain, P.*, +, *PROC Apr 96* 561-585  
book review; Engineering Applications of Correlation and Spectral Analysis (Bendat, J.S., and Piersol, A.G.; 1993). *Chen, T.-H.*, *PROC Jan 95* 124  
postural sway, human bal. control, time-freq. spectral anal. *El-Jaroudi, A.*, +, *PROC Sep 96* 1312-1318
- Spectral analysis; cf.** Maximum entropy methods
- Spectrum management; cf.** Radio spectrum management
- Speech analysis**  
automatic speech recogn., time-freq. anal. and auditory modeling. *Pitton, J.W.*, +, *PROC Sep 96* 1199-1215  
reduced interf. distrib., biological appls./interps. *Williams, W.J.*, *PROC Sep 96* 1264-1280
- Speech coding**  
automatic speech recogn., time-freq. anal. and auditory modeling. *Pitton, J.W.*, +, *PROC Sep 96* 1199-1215  
digital audio coding for visual commun. *Noll, P.*, *PROC Jun 95* 925-943
- Speech communication**  
automatic speech recogn., time-freq. anal. and auditory modeling. *Pitton, J.W.*, +, *PROC Sep 96* 1199-1215
- Speech communication; cf.** ISDN; Integrated voice-data communication
- Speech processing**  
blind syst. ident. techs., review. *Abed-Meraim, K.*, +, *PROC Aug 97* 1310-1322
- Speech recognition**  
ANN for stat. recogn. of continuous speech. *Morgan, N.*, +, *PROC May 95* 742-772  
automatic speech recogn., time-freq. anal. and auditory modeling. *Pitton, J.W.*, +, *PROC Sep 96* 1199-1215
- Spheres**  
air-filled elastic shells, acoustical scatt., structural excitations anal. *Dragonette, L.R.*, +, *PROC Sep 96* 1249-1263
- Spread spectrum communication**  
advanced TV systs. for terrestrial broadcasting, problems and solns. *Schreiber, W.F.*, *PROC Jun 95* 958-981  
corrections to "Emerging applications of multirate signal processing and wavelets in digital communications" (Apr 96 586-603). *Wornell, G.W.*, *PROC Aug 96* 1187-1188  
CoWare hardware-software codesign tool for digital telecom systs. *Bolsens, I.*, +, *PROC Mar 97* 391-418  
digital commun., multirate sig. proc. and wavelets appls. *Wornell, G.W.*, *PROC Apr 96* 586-603  
GPS wide area augmentation for aircraft navig. *Enge, P.*, +, *PROC Aug 96* 1063-1088  
low-power RF ICs for portable commun., all-CMOS radio. *Abidi, A.A.*, *PROC Apr 95* 544-569  
satellite CDMA transm. for mobile and pers. commun. *De Gaudenzi, R.*, +, *PROC Jan 96* 18-39
- SRAM chips**  
low-power RAM cct. technol. trends. *Itoh, K.*, +, *PROC Apr 95* 524-543
- Stability**  
book review; Stability Theory (Parks, P.C., and Hahn, V.; 1993). *Elliott, D.L.*, *PROC May 96* 799-800
- Stability; cf.** Circuit stability; Frequency stability; Laser stability; Lyapunov methods; Power system stability; Robustness
- Standardization**  
digital video coding stds., video commun. role. *Schafer, R.*, +, *PROC Jun 95* 907-924  
wireless commun. in twenty-first century. *Shafi, M.*, +, *PROC Oct 97* 1622-1638
- Standards**  
distributed interactive simul., nondefense training/education appls. *Fitzsimmons, E.A.*, +, *PROC Aug 95* 1179-1187
- Standards; cf.** CCITT; Communication standards; IEEE standards; ISO; Software standards
- State estimation**  
mobile robot navig., sens. fusion, self-location techs. *Kam, M.*, +, *PROC Jan 97* 110-119  
multitarget-multisensor air traffic surveillance, interact. multiple model estim. *Yeddapanudi, M.*, +, *PROC Jan 97* 80-96
- State estimation; cf.** Kalman filtering
- State feedback**  
book review; Loop Transfer Recovery: Analysis and Design (Saberti, A., et al.; 1993). *Stoustrup, J.*, *PROC Feb 97* 337-338
- State space methods**  
nonlin. large power syst. stabil. anal., taxonomy theory-based. *Venkatasubramanian, V.*, +, *PROC Nov 95* 1530-1561
- Statistics**  
ACTS propag. data at 20 and 27.5 GHz, fade slope anal. *Feil, J.*, +, *PROC Jun 97* 926-935  
ACTS propag. expt., atten. distrib. obs. and predict. model comparisons. *Crane, R.K.*, +, *PROC Jun 97* 879-892  
ACTS propag. expt. for Ka-band satellite commun. syst. design. *Crane, R.K.*, +, *PROC Jun 97* 863-878  
ACTS propag. expt., rain-rate distrib. obs. and prediction model comparisons. *Crane, R.K.*, +, *PROC Jun 97* 946-958  
automatic speech recogn., time-freq. anal. and auditory modeling. *Pitton, J.W.*, +, *PROC Sep 96* 1199-1215  
biometric authentication, fingerprint features, syst. perform. estim. *Roddy, A.R.*, +, *PROC Sep 97* 1390-1421  
cumulative fade distrib. and freq. scaling techs., 20 GHz from ACTS and 12 GHz from DSS. *Goldhirsh, J.*, +, *PROC Jun 97* 910-916  
eval. of automated biometrics-based ident. systs. *Weicheng Shen*, +, *PROC Sep 97* 1464-1478  
Ka-band propag., three-site comparison of fade-duration meas. *Helmken, H.*, +, *PROC Jun 97* 917-925  
Ka-band scintillations, meas. and model predictions. *Mayer, C.E.*, +, *PROC Jun 97* 936-945  
S-band polarimetric radar meas. appl., Ka-band atten. predict. *Beaver, J.D.*, +, *PROC Jun 97* 893-909  
teletraffic engng. in broadband era. *Michiel, H.*, +, *PROC Dec 97* 2007-2033
- Stereo vision**  
3D TV research, present status. *Motoki, T.*, +, *PROC Jul 95* 1009-1021  
virtual reality, vision/motion research activities. *Ohzu, H.*, +, *PROC May 96* 782-798
- Stochastic processes**  
colored noise and stochastic procs. and  $1/f^\alpha$  power law noise generation, discrete simul. *Kasdin, N.J.*, *PROC May 95* 802-827  
distributed detect. with multiple sens., review. *Blum, R.S.*, +, *PROC Jan 97* 64-79
- Stochastic processes; cf.** Markov processes; Queuing analysis; Time series
- Stochastic systems**  
book review; Stochastic Systems for Engineers: Modelling, Estimation and Control (Borrie, J.A.; 1992). *Toumodge, S.*, *PROC Apr 95* 695
- Storage; cf.** Memories
- Storage batteries; cf.** Batteries
- Strain measurement**  
civ. engng. smart structs., distrib. fiber optic technols. *Culshaw, B.*, +, *PROC Jan 96* 78-86
- Stranded conductors**  
vert. wire antennas, develop. *Pickard, G.W.*, *PROC Nov 96* 1617-1622
- Strategic planning**  
testbed for twenty-first century. *Henning, I.*, +, *PROC Oct 97* 1572-1581
- Structural engineering**  
smart struct., distributed fiber optic technols. *Culshaw, B.*, +, *PROC Jan 96* 78-86
- Subcarrier multiplexing**  
IR wireless high-speed short-range digital commun. *Kahn, J.M.*, +, *PROC Feb 97* 265-298

**Submillimeter wave lasers**

imaging laser radar transmitters in near/far IR. *Osche, G.R., +, PROC Feb 96 103-125*

**Subscriber loops**

interactive TV, residential consumer video service. *Blahut, D.E., +, PROC Jul 95 1071-1085*

overview of broadband access technols. *Gagnaire, M., PROC Dec 97 1958-1972*

telephone loop plant, technol./appls. *Lin, D.W., +, PROC Feb 95 175-193*

**Surface acoustic wave devices**

Bragg cell Integrated acoustooptic/magneto optic modulator devices for opt. inform. proc. *Tsai, C.S., PROC Jun 96 853-869*

**Surface acoustic wave signal processing**

Bragg cell Integrated acoustooptic/magneto optic modulator devices for opt. inform. proc. *Tsai, C.S., PROC Jun 96 853-869*

**Surface acoustic wave waveguides**

Bragg cell Integrated acoustooptic/magneto optic modulator devices for opt. inform. proc. *Tsai, C.S., PROC Jun 96 853-869*

**Surface emitting lasers**

molecular beam epitaxy technol. of III-V compound semiconds. for optoelectronic appls. *Cheng, K.-Y., PROC Nov 97 1694-1714*

semicond. laser, thirty-five year prospective. *Holonyak, N., Jr., PROC Nov 97 1678-1693*

vertical-cavity surface emitting lasers, moving from research to mfg. *Choquette, K.D., +, PROC Nov 97 1730-1739*

**Surface treatment; cf. Etching****Surgery**

lasers and optics in health care. *Deutsch, T.F., PROC Nov 97 1797-1816*

**Surveillance**

distributed fusion archits. and algms. for target tracking. *Liggins, M.E., II, +, PROC Jan 97 97-109*

multi-target pass. tracking, neural net optim. *Shams, S., PROC Oct 96 1442-1457*

**Switches; cf. Light triggered switches; Magnetic switches; Optical switches**

**Synchronization; cf. Frame synchronization**

**Synchronous digital hierarchy**

scrambling techs. for dig. lightwave transm. *Byeong Gi Lee, +, PROC Oct 95 1399-1428*

self-organizing broadband transport networks. *Grover, W.D., PROC Oct 97 1582-1611*

**Synthetic aperture imaging**

multisensor imagery positioning for target recogn. and exploitation. *Chellappa, R., +, PROC Jan 97 120-138*

SAR images, spatial resoln., fusion, data sets. *Costantini, M., +, PROC Jan 97 139-146*

**Synthetic aperture radar**

images, spatial resoln., fusion, data sets. *Costantini, M., +, PROC Jan 97 139-146*

multisensor imagery positioning for target recogn. and exploitation. *Chellappa, R., +, PROC Jan 97 120-138*

**System analysis and design**

Defence Department, distributed interactive simul. technol. appl. *Shiflett, J.E., +, PROC Aug 95 1168-1178*

embedded software design tools, real-time sig. proc. systs. *Goossens, G., +, PROC Mar 97 436-454*

hardware/software co-design. *De Michell, G., +, PROC Mar 97 349-365*

hardware/software codesign (special issue). *PROC Mar 97 347-466*

hardware/software codesign, special issue intro. *De Micheli, G., PROC Mar 97 347-348*

reactive real-time embedded syst. design, formal models. *Edwards, S., +, PROC Mar 97 366-390*

warfare modeling and simul., distributed interactive simul. *Davis, P.K., PROC Aug 95 1138-1155*

**Systems engineering**

book review; Manufacturing Systems Engineering (Gershwin, S.B.; 1994). *Meerkov, S.M., PROC Jul 96 1051-1052*

**System software**

heterog. computing. *Ekmecic, I., +, PROC Aug 96 1127-1144*

**Target detection; cf. Radar detection**

**Target recognition; cf. Radar target recognition**

**Technological innovation**

book review; Managing Innovation and Entrepreneurship in Technology Based Firms (Martin, M.J.C.; 1994). *Pinto, J.K., PROC Nov 96 1706-1707*

book review; Mastering the Dynamics of Innovation: How Companies Can Seize Opportunities in the Face of Technological Change (Utterback, J.M.; 1994). *O'Neill, R.R., PROC Jun 95 999*

+ Check author entry for coauthors

book review; Strategic Technology Management (Betz, F.; 1993). *Gaynor, G.H., PROC Mar 96 500-501*

**Technology; cf. Microwave technology; Vacuum technology**

**Technology assessment**

mol. electronics, hist., forty yrs. of develop. *Chapin Cutler, C., PROC Jul 97 1141-1143*

Si, cryst. solar cells, low-cost indust. technols. *Szluftik, J., +, PROC May 97 711-730*

telecomms. and computing technols., convergence. *Messerschmitt, D.G., PROC Aug 96 1167-1186*

**Technology forecasting**

CMOS scaling for high perform. and low power, next decade. *Davari, B., +, PROC Apr 95 595-606*

digital TV perspectives. *Netravali, A., +, PROC Jun 95 834-842*

distributed interactive simul., future technol. challenges. *Reddy, R., +, PROC Aug 95 1188-1195*

$\mu$ P, technol. and business. *Tredennick, N., PROC Dec 95 1641-1652*

testbed for twenty-first century. *Henning, I., +, PROC Oct 97 1572-1581*

**Technology social factors**

automated biometrics (special issue). *PROC Sep 97 1343-1492*

automated biometrics, special issue intro. *Shen, W., +, PROC Sep 97 1343-1347*

book review; High Performance; The Culture and Technology of Drag Racing: 1950-1990 (Post, R.C.; 1994). *Mindell, D.A., PROC Aug 95 1200-1201*

privacy aspects of biometrics. *Woodward, J.D., PROC Sep 97 1480-1492*

**Technology transfer**

digital video recording. *Umemoto, M., +, PROC Jul 95 1044-1054*

fuzzy logic control, indust. appls. *Bonissone, P.P., +, PROC Mar 95 450-465*

**Teleconferencing**

distributed multimedia systs., tech. survey. *Li, V.O.K., +, PROC Jul 97 1063-1108*

virtual reality, vision/motion research activities. *Ohzu, H., +, PROC May 96 782-798*

**Telegraphy**

introduction to "Radio Telegraphy" (classic paper reprint, pp. 1526-1535). *Jabbari, B., PROC Oct 97 1523-1525*

intro. to classic paper by L. de Forest on develops. in telegraphy (classic paper reprint (pp. 327-336). *Delogne, P., PROC Feb 97 323-326*

Lee de Forest, career/contribs. *Brittain, J.E., PROC Mar 97 476-477*

radio telegraphy (reprinted from Proc. IRE, vol. 10, pp. 215-238, Aug. 1922). *Marconi, S.G., PROC Oct 97 1526-1535*

**Telephone equipment**

trans-Atlantic radio telephony, SSB prod. *Heising, R.A., PROC May 97 752-761*

**Telephony**

network traffic neural net mgt. *Ambrose, B.E., +, PROC Oct 96 1421-1429*

traffic mgt. by neural nets. *Ambrose, B.E., +, PROC Oct 96 1421-1429*

**Terminology**

birth of term "microwaves". *Pelosi, G., PROC Feb 96 326*

**Thermal factors**

metalorganic chemical vapor deposition for optoelectronic devices. *Coleman, J.J., PROC Nov 97 1715-1729*

**Thermal factors; cf. Biological thermal factors**

**Thermionic emission**

comments on "The pure electron discharge and its applications in radio telegraphy and telephony" (classic paper reprint, pp. 1496-1508). *Birdsall, C.K., PROC Sep 97 1493-1495*

pure electron discharge and its appls. in radio (reprinted from Proc. of the IRE, vol. 3, no. 3, pp. 261-293, Sept. 1915). *Langmuir, I., PROC Sep 97 1496-1508*

**Thermomagnetic recording; cf. Magneto optic recording**

**Three-dimensional displays**

display of 3D video images. *Travis, A.R.L., PROC Nov 97 1817-1832*

**Three-dimensional vision; cf. Stereo vision**

**Time-division multiplexing; cf. Asynchronous transfer mode; Burst switching; Synchronous digital hierarchy**

**Time domain analysis**

acoustic sigs. charact., continuous lin. time-freq. representation. *Guillemain, P., +, PROC Apr 96 561-585*

automatic speech recogn., time-freq. anal. and auditory modeling. *Pitton, J.W., +, PROC Sep 96 1199-1215*

brain functional activity localization, EEG time-freq. anal. *Mingui Sun, +, PROC Sep 96 1302-1311*

cortical region neuronal oscills., EEG activity time-freq. anal. *Haykin, S., +, PROC Sep 96 1295-1301*

implantable cardioverter defibrillators, detect. algms. *Jenkins, J.M., +, PROC Mar 96 428-445*

internal combustion engine, knock detect., mech. signature anal., time-freq. methods. *Samimy, B., +, PROC Sep 96 1330-1343*

† Check author entry for subsequent corrections/comments

- musical sigs., time-freq. anal. *Pielemeier, W.J.*, + , *PROC Sep 96* 1216-1230
- postural sway, human bal. control, time-freq. spectral anal. *El-Jaroudi, A.*, + , *PROC Sep 96* 1312-1318
- proc. machine monitoring sens., vibr. anal., time-freq. anal. *Atlas, L.E.*, + , *PROC Sep 96* 1319-1329
- reduced interf. distribs., biological appls./interps. *Williams, W.J.*, *PROC Sep 96* 1264-1280
- sig. anal., time-freq. distribs., sonar and radar echoes appl. *Gaunaurd, G.C.*, + , *PROC Sep 96* 1231-1248
- skeletal muscle/cardiac vibrs., time-freq. anal. *Wood, J.C.*, + , *PROC Sep 96* 1281-1294
- time-frequency analysis (special issue). *PROC Sep 96* 1195-1343
- wavelets and time-freq. anal. *Hess-Nielsen, N.*, + , *PROC Apr 96* 523-540
- Time domain measurements**
- civ. engng. smart structs., distrib. fiber optic technols. *Culshaw, B.*, + , *PROC Jan 96* 78-86
- Time series**
- radar detect. of sigs. in chaos, small target in sea clutter. *Haykin, S.*, + , *PROC Jan 95* 95-122
- sig. anal., time-freq. distribs., sonar and radar echoes appl. *Gaunaurd, G.C.*, + , *PROC Sep 96* 1231-1248
- Time-varying channels**
- corrections to "Emerging applications of multirate signal processing and wavelets in digital communications" (Apr 96 586-603). *Wornell, G.W.*, *PROC Aug 96* 1187-1188
- digital commun., multirate sig. proc. and wavelets appls. *Wornell, G.W.*, *PROC Apr 96* 586-603
- Tissues; cf.** Biological tissues
- Topology; cf.** Circuit topology
- Tracking**
- data fusion (special issue). *PROC Jan 97* 3-183
- model-based video coding, develop. *Pearson, D.E.*, *PROC Jun 95* 892-906
- Tracking; cf.** Optical tracking; Radar tracking; Satellite tracking
- Traffic control (communication)**
- ATM network traffic mgt. by neural net. *Habib, I.W.*, *PROC Oct 96* 1430-1441
- packet-switching networks, service disciplines for guaranteed perform. *Hui Zhang, PROC Oct 95* 1374-1396
- telephone network traffic neural net mgt. *Ambrose, B.E.*, + , *PROC Oct 96* 1421-1429
- Traffic control (transportation); cf.** Air traffic control
- Training**
- Defence Department, distributed interactive simul. technol. appl. *Shiflett, J.E.*, + , *PROC Aug 95* 1168-1178
- distributed interactive simul., nondefense training/education appls. *Fitzsimmons, E.A.*, + , *PROC Aug 95* 1179-1187
- interactive TV, digital actors. *Magenat Thalmann, N.*, + , *PROC Jul 95* 1022-1031
- SIMNET, simulator networking, mil. training. *Miller, D.C.*, + , *PROC Aug 95* 1114-1123
- Transceivers**
- cellular pers. commun., handset antenna/human EM interact. *Jensen, M.A.*, + , *PROC Jan 95* 7-17
- low-power RF ICs for portable commun., all-CMOS radio. *Abidi, A.A.*, *PROC Apr 95* 544-569
- Transducers; cf.** Biomedical transducers; Chemical transducers; Magnetic transducers; Microsensors; Multisensor systems; Optical transducers; Robot sensing systems
- Transform coding**
- digital audio coding for visual commun. *Noll, P.*, *PROC Jun 95* 925-943
- Transforms; cf.** Discrete transforms; Fourier transforms; Haar transforms; Karhunen-Loeve transforms; Wavelet transforms
- Transient analysis**
- internal combustion engine, knock detect., mech. signature anal., time-freq. methods. *Samimy, B.*, + , *PROC Sep 96* 1330-1343
- Transient response**
- blind syst. ident. techs., review. *Abed-Meraim, K.*, + , *PROC Aug 97* 1310-1322
- Transistors**
- intro. to Shockley's 1952 Proceedings of the IRE paper (classic paper reprint, pp. 2055-2080). *Ning, T.H.*, *PROC Dec 97* 2052-2054
- transistor electronics, imperfections, unipolar and analog transistors (reprinted from Proc. IRE, vol. 40, no. 11, pp. 1289-1313, Nov. 1952). *Shockley, W.*, *PROC Dec 97* 2055-2080
- Transistors; cf.** MESFETs; MISFETs; MODFETs; MOSFETs
- Transmitters; cf.** Optical transmitters; Radio transmitters
- Transmitting antennas**
- Federal Telegraph Company, commun. equipt. develop. *de Forest, L.*, *PROC Feb 97* 327-336
- Transportation; cf.** Land transportation
- Traveling wave tubes**
- Rudolf Kompfner, career/contribs. *Brittain, J.E.*, *PROC Feb 97* 340-341
- Trees (graphs); cf.** Fault trees
- Tubes; cf.** Electron tubes
- Tungsten**
- William D. Coolidge, contribs. *Brittain, J.E.*, *PROC May 95* 828
- Tunnel diodes; cf.** Resonant tunneling diodes
- Turbines**
- fuzzy logic control, indust. appls. *Bonissone, P.P.*, + , *PROC Mar 95* 450-465
- TV**
- Allen B. Dumont, career/contribs. *Brittain, J.A.*, *PROC Dec 97* 2081-2082
- Harold A. Wheeler, career/contribs. *Brittain, J.A.*, *PROC Jan 97* 200-201
- TV; cf.** Cable TV; Educational TV; HDTV; Interactive TV; Video signal processing
- TV broadcasting**
- advanced TV systs. for terrestrial broadcasting, problems and solns. *Schreiber, W.F.*, *PROC Jun 95* 958-981
- coded orthogonal FDM, TV broadcasting appl. *Le Floch, B.*, + , *PROC Jun 95* 982-996
- digital TV broadcasting, cryptology. *Macq, B.M.*, + , *PROC Jun 95* 944-957
- digital TV perspectives. *Netravali, A.*, + , *PROC Jun 95* 834-842
- Grand Alliance syst. for US HDTV. *Challapali, K.*, + , *PROC Feb 95* 158-174
- TV cameras**
- 3D TV research, present status. *Motoki, T.*, + , *PROC Jul 95* 1009-1021
- digital TV systs., cameras and display systs. *Hashimoto, Y.*, + , *PROC Jul 95* 1032-1043
- iconoscope; modern version of elec. eye (reprinted from Proc. of IRE, vol. 22, no. 1, pp. 16-32, Jan. 1934). *Zworykin, V.K.*, *PROC Aug 97* 1327-1333
- intro. to paper by V.K. Zworykin on iconoscope (classic paper reprint, pp. 1327-1333). *Simaan, M.A.*, *PROC Aug 97* 1323-1326
- TV displays**
- 3D TV research, present status. *Motoki, T.*, + , *PROC Jul 95* 1009-1021
- cameras and display systs., rel., digital TV. *Hashimoto, Y.*, + , *PROC Jul 95* 1032-1043
- display of 3D video images. *Travis, A.R.L.*, *PROC Nov 97* 1817-1832
- Edward H. Herold, career/contribs. *Brittain, J.E.*, *PROC Nov 97* 1876-1877
- TV distortion; cf.** TV interference
- TV equipment; cf.** TV cameras; TV displays
- TV imaging**
- 3D TV research, present status. *Motoki, T.*, + , *PROC Jul 95* 1009-1021
- opt. scanning holography, tutorial. *Ting-Chung Poon*, + , *PROC May 96* 753-764
- TV interference**
- advanced TV systs. for terrestrial broadcasting, problems and solns. *Schreiber, W.F.*, *PROC Jun 95* 958-981
- TV receivers**
- advanced TV systs. for terrestrial broadcasting, problems and solns. *Schreiber, W.F.*, *PROC Jun 95* 958-981
- Twisted pair cables**
- telephone loop plant, technol./appls. *Lin, D.W.*, + , *PROC Feb 95* 175-193

## U

- UHF antennas**
- cellular pers. commun., handset antenna/human EM interact. *Jensen, M.A.*, + , *PROC Jan 95* 7-17
- UHF radio communication**
- cellular pers. commun., handset antenna/human EM interact. *Jensen, M.A.*, + , *PROC Jan 95* 7-17
- Ultra-large-scale integration**
- low power microelectronics, develop. and prospects. *Meindl, J.D.*, *PROC Apr 95* 619-635
- Ultraviolet generation**
- gallium-nitride-based materials for blue to ultraviolet optoelectronics devices. *DenBaars, S.P.*, *PROC Nov 97* 1740-1749
- Uncertain systems**
- book review; Robust Control: Systems with Uncertain Physical Parameters (Ackermann, J., et al.; 1993). *Mansour, M.*, *PROC Oct 96* 1572
- Uncertainty**
- fingerprint class./ident. by SOFM neural net. *Halicic, U.*, + , *PROC Oct 96* 1497-1512
- fuzzy logic, reliab. engng. appl. *Bowles, J.B.*, + , *PROC Mar 95* 435-449
- Underwater communication cables**
- long-dist. lightwave telecomm. opt. fiber amps. *Giles, R.*, + , *PROC Jun 96* 870-883

**Underwater optical communication**

long-dist. lightwave telecomms., opt. fiber amps. *Giles, R.*, + , *PROC Jun 96* 870-883

**Underwater vehicles**

autonomous vehicles. *Meyrowitz, A.L.*, + , *PROC Aug 96* 1147-1164

**User interfaces**

book review; Developing Online Help for Windows (Boggan, S., et al.; *Barker, T.T.*, *PROC Jun 95* 997-998

## V

**Vacuum technology**

molecular beam epitaxy technol. of III-V compound semiconds. for optoelectronic appls. *Cheng, K.-Y.*, *PROC Nov 97* 1694-1714

**Van Valkenburg, Mac Elwyn**

obituary. *Trick, T.N.*, *PROC Nov 97* 1675-1677

**Vapor deposition**

nanostructure fab., electron beam techs. *Matsui, S.*, *PROC Apr 97* 629-643

**Vapor deposition; cf. CVD****Variable rate codes**

model-based video coding, develop. *Pearson, D.E.*, *PROC Jun 95* 892-906

**Vector quantization**

image compression, neural network approaches. *Dony, R.D.*, + , *PROC Feb 95* 288-303

image/video compression. *Weiping Li*, + , *PROC Feb 95* 317-335

nonlin. vector predictor, neural net approach. *Rizvi, S.A.*, + , *PROC Oct 96* 1513-1528

portable video-on-demand syst. in wireless commun. *Meng, T.H.*, + , *PROC Apr 95* 659-680

**Vehicles; cf. Land vehicles****Velocity control**

dyn. neural net for vehicle idle speed control. *Puskorius, G.V.*, + , *PROC Oct 96* 1407-1420

**Very-large-scale integration**

analog archit., motion proc. *Sarpeshkar, R.*, + , *PROC Jul 96* 969-987

book review; Analog VLSI Implementation of Neural Systems (Mead, C., and Ismail, M., Eds.; 1989). *Andreou, A.G.*, *PROC Oct 95* 1430-1431

book review; Hot-Carrier Reliability of MOS VLSI Circuits (Leblebici, Y., and Kang, S.-M.; 1993). *Kwark, Y.H.*, *PROC Mar 95* 486-487

CMOS scaling into nanometer regime, fund. phys. effects, practicality. *Yuan Taur*, + , *PROC Apr 97* 486-504

CMOS VLSI archits. for video compression, survey. *Pirsch, P.*, + , *PROC Feb 95* 220-246

HDTV, digital, VLSI appl. *Mlynek, D.J.*, + , *PROC Jul 95* 1055-1070

JAGUAR, pipelined VLSI archit. for JPEG image compression. *Kovac, M.*, + , *PROC Feb 95* 247-258

modular massively parallel computing approach, image-related proc. *Krikelis, A.*, + , *PROC Jul 96* 988-1004

**Vibrations**

laser satellite commun. network, vibr. effect and solns. *Aron, S.*, + , *PROC Oct 97* 1646-1661

**Video coding**

compression algms., mean field annealing recovery techs. *Ozcelik, T.*, + , *PROC Feb 95* 304-316

model-based video coding techs. for low bit-rate appl. *Aizawa, K.*, + , *PROC Feb 95* 259-271

**Videophone systems**

embedded software in real-time sig. proc., telecom appl. *Paulin, P.G.*, + , *PROC Mar 97* 419-435

telephone loop plant, technol./appls. *Lin, D.W.*, + , *PROC Feb 95* 175-193

**Video recording**

digital video recording. *Umemoto, M.*, + , *PROC Jul 95* 1044-1054

**Video signal processing**

advances in image and video compression (special issue). *PROC Feb 95* 135-335

digital TV perspectives. *Netravali, A.*, + , *PROC Jun 95* 834-842

digital video coding stds., video commun. role. *Schafer, R.*, + , *PROC Jun 95* 907-924

digital video recording. *Umemoto, M.*, + , *PROC Jul 95* 1044-1054

HDTV digital systs., stds., proc. and coding. *Ninomiya, Y.*, *PROC Jul 95* 1086-1093

HDTV Grand Alliance syst. *Petajan, E.*, *PROC Jul 95* 1094-1105

low bit rate video compression by neural net. *Cramer, C.*, + , *PROC Oct 96* 1529-1543

model-based video coding, develop. *Pearson, D.E.*, *PROC Jun 95* 892-906

motion estim. techs. for digital TV, review. *Dufaux, F.*, + , *PROC Jun 95* 858-876

portable video-on-demand syst. in wireless commun. *Meng, T.H.*, + , *PROC Apr 95* 659-680

real-time proc., P<sup>3</sup>I parallel archit. *Colaitis, M.-J.*, + , *PROC Jul 96* 1019-1037

region-based video coding, math. morph. *Salembier, P.*, + , *PROC Jun 95* 843-857

very low bit rate video coding, trends. *Ebrahimi, T.*, + , *PROC Jun 95* 877-891

**Virtual computers**

CoWare hardware-software codesign tool for digital telecom systs. *Bolsens, I.*, + , *PROC Mar 97* 391-418

Stanford FLASH multiprocessor, hardware/software co-design. *Heinrich, M.*, + , *PROC Mar 97* 455-466

**Virtual reality**

book review; Virtual Reality Technology (Burdea, G., and Coiffet, P.; 1994). *Akay, M.*, *PROC Sep 95* 1294

vision/motion research activities. *Ohzu, H.*, + , *PROC May 96* 782-798

**Vision systems (nonbiological); cf. Machine vision****Visualization**

self-organizing map, props., engng. appls. *Kohonen, T.*, + , *PROC Oct 96* 1358-1384

**Visualization; cf. Scientific visualization****Visual languages**

dataflow proc. networks. *Lee, E.A.*, + , *PROC May 95* 773-801

**Visual system**

iris recogn. *Wildes, R.P.*, *PROC Sep 97* 1348-1363

postural sway, human bal. control, time-freq. spectral anal. *El-Jaroudi, A.*, + , *PROC Sep 96* 1312-1318

virtual reality, vision/motion research activities. *Ohzu, H.*, + , *PROC May 96* 782-798

wavelets in biomedical appls. review. *Unser, M.*, + , *PROC Apr 96* 626-638

**VLSI; cf. Very-large-scale integration****Voltage control**

power syst. voltage instabil., mechanisms and control strategies. *Vu, K.T.*, + , *PROC Nov 95* 1442-1455

## W

**Waveform analysis; cf. Spectral analysis****Waveguide antennas**

corrections to "Precision DSN radiometer systems: impact on microwave calibrations" (May 94 776-787). *Stelzried, C.T.*, + , *PROC Aug 96* 1187

corrections to "The fractional frequency stability of a 34-m-diameter beam waveguide antenna" (May 94 788-795). *Otoshi, T.Y.*, *P PROC Aug 96* 1187

**Waveguides; cf. Beam waveguides****Wavelength division multiplexing**

fiber-optic networks, opt. components, review. *Borella, M.S.*, + , *PROC Aug 97* 1274-1307

long-dist. lightwave telecomms., opt. fiber amps. *Giles, R.*, + , *PROC Jun 96* 870-883

opt. fibers and amps. for WDM systs. *Yadlowsky, M.J.*, + , *PROC Nov 97* 1765-1779

**Wavelet transforms**

biomedical appls., review. *Unser, M.*, + , *PROC Apr 96* 626-638

computer graphics appls. *Schroder, P.*, *PROC Apr 96* 615-625

computer vision research. *Mallat, S.*, *PROC Apr 96* 604-614

corrections to "Emerging applications of multirate signal processing and wavelets in digital communications" (Apr 96 586-603). *Wornell, G.W.*, *PROC Aug 96* 1187-1188

correction to "Wavelets in computer graphics" (Apr 96 615-625). *Schroder, P.*, *PROC Aug 96* 1188

digital commun., multirate sig. proc. and wavelets appls. *Wornell, G.W.*, *PROC Apr 96* 586-603

galaxy clustering, image proc. *Bijaoui, A.*, + , *PROC Apr 96* 670-679

historical roots. *Daubechies, I.*, *PROC Apr 96* 510-513

math. background of wavelet transforms. *Cohen, A.*, + , *PROC Apr 96* 514-522

musical sigs., time-freq. anal. *Pielemeier, W.J.*, + , *PROC Sep 96* 1216-1230

nuc. med. image restoration by neural net. *Wei Qian*, + , *PROC Oct 96* 1458-1473

optics research, wavelet proc. *Yao Li*, + , *PROC May 96* 720-732

opt. pattern recogn. archits./techs. *Yu, F.T.S.*, + , *PROC May 96* 733-752

research directions. *Sweldens, W.*, *PROC Apr 96* 680-685

sig. decomp., wavelets and time-freq. anal. *Hess-Nielsen, N.*, + , *PROC Apr 96* 523-540

sig. proc., wavelets, subband coding, and best bases. *Ramchandran, K.*, + , *PROC Apr 96* 541-560

turbulent flows anal. *Farge, M.*, + , *PROC Apr 96* 639-669

wavelets (special issue). *PROC Apr 96* 507-685

**Wigner distributions**

musical sigs., time-freq. anal. *Pielemeier, W.J.*, + , *PROC Sep 96* 1216-1230

reduced interf. distrib., biological appl./interps. *Williams, W.J.*, *PROC Sep 96* 1264-1280

sig. anal., time-freq. distrib., sonar and radar echoes appl. *Gaunaud, G.C.*, + , *PROC Sep 96* 1231-1248

#### Wind

coherent laser radar in Europe, ground-based and airborne systs. *Vaughan, J.M.*, + , *PROC Feb 96* 205-226

rem. sens. of vel., coherent lidar systs. *Huffaker, R.M.*, + , *PROC Feb 96* 181-204

#### Wire antennas

intro. to classic paper by M.I. Pupin on antenna radiation resistance meas. (classic paper reprint, pp. 306-310). *Collin, R.E.*, *PROC Feb 97* 301-305

vert. wire antennas, develop. *Pickard, G.W.*, *PROC Nov 96* 1617-1622

#### Wire communication; cf. Optical fiber communication

#### Wire communication cables; cf. Underwater communication cables

#### Wireless LAN

embedded software in real-time sig. proc., telecom appl. *Paulin, P.G.*, + , *PROC Mar 97* 419-435

IR wireless high-speed short-range digital commun. *Kahn, J.M.*, + , *PROC Feb 97* 265-298

#### Wiring; cf. Integrated circuit interconnections

## X

#### X-ray lithography

nanolithography. *Cerrina, F.*, *PROC Apr 97* 644-651

#### X-ray tomography

radiologic image compression, review. *Wong, S.*, + , *PROC Feb 95* 194-219

wavelets in biomedical appls. review. *Unser, M.*, + , *PROC Apr 96* 626-638

## Y

#### Yagi-Uda arrays

beam transmission of ultra short waves (reprinted from Proc. IRE, vol. 16, pp. 715-741, June 1928). *Yagi, H.*, *PROC Nov 97* 1864-1874

develop. of Yagi-Uda arrays. *Brittain, J.E.*, *PROC May 97* 800-801

intro. to paper on beam transmission of ultra short waves, by H. Yagi (classic paper reprint, pp. 1864-1874). *Pozar, D.M.*, *PROC Nov 97* 1857-1863