

# Editorial

**E**ACH YEAR at this time, it is my unpleasant duty to bid farewell to those Associate Editors of the JOURNAL whose terms have concluded. This year, the task is a bit more difficult than usual because of the somewhat larger group of individuals. Those whose terms were completed as of the end of 2001, comprising the “graduating class” of 2001, are: Thomas Boggess (University of Iowa), Demetri Christodoulides (Lehigh University), Leon Esterowitz (National Science Foundation), Robert Lang (JDS Uniphase), and Zong-Long Liao (MIT Lincoln Laboratory). Working with each of these colleagues has been a great pleasure and we owe them our gratitude for their selfless efforts to the IEEE JOURNAL OF QUANTUM ELECTRONICS (JQE) and the quantum electronics community. Please join me in thanking them, via a note or in person, for a job well done.

At the same time, I am pleased to announce the appointments of four new Associate Editors. I continue to be gratified by the caliber of the individuals who are willing to serve in this capacity. Each new Associate Editor was approved unanimously by the LEOS Board of Governors to three-year terms, which began on January 1st of this year. They are: David Citrin (Georgia Institute of Technology), Joseph Donnelly (MIT Lincoln Laboratory), Djan Khoe (Eindhoven University), and Selim Ünlü (Boston University). Professor Citrin’s expertise lies in the theory of semiconductor materials and devices, as well as ultrafast phenomena. Dr. Donnelly is well known for his work on compound semiconductor photonic devices, including diode lasers and photodiodes, while Professor Khoe’s interests are in fiber devices and optical communications systems. Professor Ünlü is also accomplished in several areas, including near-field optical scanning microscopy and its application to analyzing photonic devices. All of these individuals are highly respected in the quantum electronics community and it is my pleasure to welcome each to JQE. Please congratulate them on their new responsibilities.

Another individual deserves special recognition. Professor Peter Blood of Cardiff University is recognized internationally for his research on semiconductor devices and has, to date, served more than one year as an Associate Editor of JQE. His three-year term began early last year, and his work over the intervening months has been exemplary. Unfortunately, his biography and photo were inadvertently not published in 2001, and the error was discovered only recently. I regret this oversight and wish to express my thanks to Peter for his conscientious efforts on behalf of the JOURNAL.

J. GARY EDEN, *Editor-In-Chief*  
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**Peter Blood** is Professor of Physics at Cardiff University, Cardiff, Wales, U.K., where he also leads a research group in optoelectronics. He is also Director of the Cardiff Centre for Multidisciplinary Microtechnology, a Centre of Excellence supported by the Welsh Development Agency. He was previously with Philips Research Laboratories, Redhill, U.K. His current research interests include quantum wells and quantum dots, wide-gap nitrides, and experimental studies of optical gain and spontaneous emission. He has co-authored two books on electrical characterization of semiconductors and gives short courses at major international conferences.



**David S. Citrin** (M'94) received the B.A. degree from Williams College, Williamstown, MA, in 1985, and the M.S. and Ph.D. degrees from the University of Illinois at Urbana-Champaign in 1987 and 1991, respectively, all in physics. His dissertation was on the theory of the optical properties of quantum wires.

He was a post-doctoral Fellow at the Max-Planck Institute for Solid-State Research, Stuttgart, Germany, during 1992–1993, where he worked on the ultrafast dynamics of light emission from semiconductor devices. His work on exciton radiative lifetimes in low-dimensional semiconductor structures helped establish the exciton-polariton picture as the accepted framework for understanding these effects. In 1993, he became Center Fellow at the Center for Ultrafast Optical Science, University of Michigan at Ann Arbor, where he continued work on ultrafast dynamics. In 1995, he was appointed Assistant Professor of Physics and Materials Science at Washington State University. He is currently an Associate Professor with the School of Electrical and Computer Engineering, Georgia Institute of Technology, Atlanta, where his group works on theoretical

and modeling issues ranging from the fundamental electronic and optical properties of novel semiconductor structures and materials to device applications in nonlinear and ultrafast optics and terahertz technology.

Dr. Citrin received the Presidential Early Career Award for Scientists and Engineers in 1997.



**Joseph P. Donnelly** (S'60–M'63–SM'88–F'90) received the Bachelor's degree in electrical engineering from Manhattan College, Bronx, NY, and the M.S. and Ph.D. degrees in electrical engineering from Carnegie Mellon University, Pittsburgh, PA.

He is a member of the staff at the Lincoln Laboratory, Massachusetts Institute of Technology (MIT), Cambridge, MA, in addition to being an Adjunct Professor in the Physics Department, University of Massachusetts at Lowell, teaching courses on solid-state electronics, integrated optics, and semiconductor lasers and amplifiers. He also supervises both MIT and UMass–Lowell graduate students doing their Master's or Ph.D. research at Lincoln Laboratory. Prior to this, he was a NATO post-doctoral Fellow at Imperial College, London, U.K. Over his career, he has worked on compound semiconductor device technology and on a wide variety of compound-semiconductor electronic and electrooptical devices. His current interests include integrated guided-wave optical devices, integrated non-linear devices, high-power diode lasers and amplifiers, and avalanche photodiodes. He is the author or co-author of three book chapters and over 150 journal articles.

Dr. Donnelly serves as a Reviewer for several journals, including IEEE PHOTONICS TECHNOLOGY LETTERS, the IEEE JOURNAL OF QUANTUM ELECTRONICS, the JOURNAL OF LIGHTWAVE TECHNOLOGY, *Applied Physics Letters*, and *Applied Optics*. Recently, he was a Guest Associate Editor for a special issue on semiconductor lasers of the IEEE JOURNAL OF SELECTED TOPICS IN QUANTUM ELECTRONICS. He was a National Lecturer for the IEEE Electron Devices Society in 1979, and has served on the program committees of a number of technical conferences on semiconductor devices and integrated optics, including the IEEE Laser and Electro-Optics Society (LEOS) Annual Meeting, the Integrated Guided Wave Optics Topical Meeting, and the Integrated Photonics Research Conference, for which he was Program Co-Chair in 2000 and General Chair in 2001. He is also a member of the Bohmesche Physical Society, Eta Kappa Nu, and Sigma Xi.



**Djan Khoe** (S'71–M'71–SM'85–F'91) was born in Magelang, Indonesia, in 1946. He received the Elekt. Ing. degree (*cum laude*) from Eindhoven University of Technology, Eindhoven, The Netherlands, in 1971.

He was with the FOM Institute of Plasma Physics, Rijnhuizen, The Netherlands, working on laser diagnostics of plasmas from 1971 to 1972. In 1973, he joined Philips Research Laboratories, Redhill, U.K. In 1983, he became part-time Professor at Eindhoven University of Technology, and in 1994, Full Professor. He is currently Chairman of the Department of Telecommunication Technology and Electromagnetics. His areas of research include high-capacity optical systems, all-optical signal processing, systems using optical polymer fibers, packaging, and pigtailling of photonic chips, optical networking, and networks that combine radio communication and optical communication. His work has mainly been devoted to single-mode fiber systems and components. He has more than 40 U.S. patents, and has authored or co-authored more than 100 papers, invited papers, and books. He is closely involved in Community Research Programs in Europe

and Dutch National Research Programs, and is one of the founders of the Dutch COBRA University Research Institute.

Dr. Khoe served on the IEEE/LEOS Board of Governors as European Representative, Vice President, and Elected Member. He has been a member of the Executive Committee of the IEEE Benelux Section, was the founder of the IEEE/LEOS Benelux Chapter, and was recently appointed IEEE/LEOS President Elect for 2002. He has served in technical committees, management committees, and advisory committees as a member or Chairman for several international conferences, and has been involved in various journal activities as Associate Editor or Advisory Board member. He was the recipient of the MOC/GRIN Award in 1997 and was one of three recipients of the prestigious Top Research School Photonics Grant awarded to COBRA by the Netherlands Ministry of Education, Culture, and Science, in 1998.



**M. Selim Ünlü** was born in Sinop, Turkey, in 1964. He received the B.S. degree from Middle East Technical University, Ankara, Turkey, in 1986, and the M.S.E.E. and Ph.D. degrees from the University of Illinois at Urbana-Champaign in 1988 and 1992, respectively, all in electrical engineering. His dissertation dealt with resonant cavity enhanced (RCE) photodetectors and optoelectronic switches.

In 1992, he joined the Department of Electrical and Computer Engineering, Boston University, Boston, MA, as an Assistant Professor, and he has been an Associate Professor since 1998. He is also a member of the Photonics Center at Boston University. During his sabbatical in 2000, he was a Visiting Professor in the Department of Optoelectronics, University of Ulm, Germany. His career interest is in research and development of photonic materials, devices, and systems focusing on the design, processing, characterization, imaging, and modeling of semiconductor optoelectronic devices, especially photodetectors. His current interests and expertise include RCE optoelectronic devices, high-speed photodetectors, time and spatially resolved optical character-

ization of semiconductors, near-field and solid immersion lens microscopy, evanescent-wave and spectroscopy-based biosensors and imaging, and hyperpolarized noble gas MRI. He has authored or co-authored more than 150 technical articles, several book chapters and magazine articles, edited one book, holds one U.S. patent, and has several patents pending.

Dr. Ünlü served as the Chair of the Boston Chapter IEEE Laser and Electro-Optics Society (LEOS) during 1994–1995, winning the LEOS Chapter-of-the-Year Award, and during 1998–1999, served as the Vice President of the SPIE New England Chapter. He also served as the Chair of the IEEE/LEOS Technical Subcommittee on Photodetectors and Imaging during 1998–2001. He has presented many invited lectures and has participated in international conference organizations. He was awarded the National Science Foundation Research Initiation Award in 1993, the United Nations TOKTEN Award in 1995 and 1996, and both the National Science Foundation CAREER and Office of Naval Research Young Investigator Awards in 1996.