

## IEEE DIELECTRICS and ELECTRICAL INSULATION SOCIETY

The IEEE DIELECTRICS AND ELECTRICAL INSULATION SOCIETY is an organization, within the framework of the IEEE, of members with principal professional interest in dielectrics and in electrical insulation. Members of the IEEE and others are eligible for membership in the Society and will receive this TRANSACTIONS upon payment of the annual Society membership fee and \$20.00. For information on joining, write to the IEEE or to the Membership Chairman, as given below. The DEIS WWW home page, at <http://tdei.sju.edu/deis/deishp.html> has all available data on the DEIS.

### EXECUTIVE COMMITTEE

#### Officers

<i>President</i> W. McDermid Manitoba Hydro 1840 Chevriev Blvd. Winnipeg Manitoba R3T 1Y6 Canada	<i>VP Administrator</i> H. Kirkici Dept. Electr. Engng. Auburn University 200 Broun Hall Auburn AL 36849-5201	<i>VP Technical</i> Dr. R. Gerhard Dept. Physics University of Potsdam D-14469 Potsdam Germany	<i>Secretary</i> P. B. McGrath ECE Department Clarksons University PO Box 5720, 133 CAMP Potsdam NY 13699-5720	<i>Treasurer</i> G. C. Stone Iris Power LP 1 Westside Drive, Unit 2 Toronto Ontario M9C 1B2 Canada	<i>Past President</i> R. E. Hebner University of Texas at Austin Center for Electromechanics 1 University Station #R7000 Austin TX 78712
--	---	---	--	--	--

#### Ad Com Members

2008 L. A. Dissado H. Orton T. Fouracre	J. K. Nelson P. H. Morshuis R. Wicks	R. Fleming S. Rowland T. Okamoto	2009 H. Okubo H. Hiziroglu G. C. Montanari	M. Farzaneh C. Laurent J. Li	2010 F. Hegeler P. Lewin D. Schweickart	<i>Corresponding</i> D. Koenig (Germany) N. Nakamura (Japan) A. Calva (Mexico) U. Gäfvert (Sweden)
--	--	--	---	------------------------------------	--	--

### Administrative Committee Chairs

<i>Awards</i> C. W. Reed 116 Woodhaven Dr. Scotia NY 12302-4808	<i>Chapters</i> N. Shimizu Meijo University Electrical & E. Eng. Tempaku Nagoya 468-8502 Japan	<i>Constitution</i> D. L. Schweickart Air Force Research Lab. 2645 Fifth St., Rm D101 MS: AFRL/PRPG Wright Patterson AFB OH 45433	<i>Education</i> V. K. Lakdawala Dept. of E.C. Engng. Old Dominion Univ. 231 Kaufman Hall Norfolk VA 23529	<i>Fellows</i> R. Bartnikas Hydro Quebec Inst. Res. 1800, boul. Lionel-Boulet Varennes Quebec J3X 1S1 Canada	<i>Finance</i> G. C. Stone Iris Power LP 1 Westside Drive, Unit 2 Toronto Ontario M9C 1B2 Canada	<i>Historian</i> R. Hackam 725 N. Talbot Rd. Windsor Ont. N9G 1M8 Canada
<i>Magazine</i> J. Densley 4008 Rolling Valley Dr. Mississauga Ont. L5L 2K8 Canada	<i>Meetings</i> H. E. Orton OCEI P.O. Box 38715 Metropolitan Post Office North Vancouver British Columbia V7M 3N1 Canada	<i>Membership</i> J. K. Nelson El., Com., & Sys. Eng. Dept. Rensselaer Polytech Inst. 110 8th St., Rm JEC 5012 Troy NY 12180-3590	<i>Nominations</i> S. M. Gubanski Dept. of Mat. & Manu. Tech. Chalmers U. of Technology Gothenburg 412 96 Sweden	<i>Publications</i> H. R. Hiziroglu Dept. E&C Eng. Kettering Univ. 1700 W 3rd Ave. Flint MI 48504-4898	<i>Transactions</i> R. Hackam 725 N. Talbot Rd. Windsor Ont. N9G 1M8 Canada	

### Technical Committee Chairs

<i>Electronics &amp; Radiation</i> vacant	<i>Liquids</i> Isabel Lopes Phys. Dept. Univ. of Coimbra Coimbra 3004-516 Portugal	<i>Outdoor Insulation</i> M. Farzaneh Elec. Eng. Dept. Univ. du Quebec a Chicoutimi Chicoutimi Quebec G7H 2B1 Canada	<i>Thermal Life</i> A. M. Bruning Lectromec Design Co. 45000 Underwood Lane Suite L Sterling VA 20166	<i>Voltage Endurance</i> S. Cherukupalli BC Hydro POD B03 6911 Southpoint Dr. Burnaby BC V3N 4X8 Canada	<i>Multifactor Stress</i> L. A. Dissado Dept. of Engineering University of Leicester University Road Leicester LE1 7RH UK
<i>Standards</i> S. Cherukupalli BC Hydro POD B03 6911 Southpoint Dr. Burnaby BC V3N 4X8 Canada	<i>Statistics</i> G. C. Montanari Dept. of Elec. Engng. University of Bologna and TechImp Viale Risorgimento 2 Bologna 40136 Italy	<i>Gaseous Dielectrics</i> M. F. Frechette IREQ-Chimie et matériaux Hydro-Québec 1800 boul. Lionel-Boulet Varennes Quebec J3X 1S1 Canada	<i>Electrohydrodynamics</i> J. S. Chang McMaster University Dept. of Eng. Phys. 1200 Main St. W Hamilton Ont L8S 4M1 Canada	<i>Bioelectrics</i> Kaori Fukunaga 4-2-1 Nukui-kita NICT Koganei, Tokyo 184-8795 Japan	

### Representatives

<i>Energy Policy</i> R. C. Wicks DuPont Company 5401 Jefferson Davis Highway Richmond VA 23234	<i>Superconductivity</i> T. Tanaka Grad. Schl. of Info, Prod. & Sys LSI Waseda University 2-7 Hibikino, Wakamatsu-ku Kitakyushu, Fukuoka 808-0135 Japan	<i>EAB</i> L. L. Hatfield Phys. Dept. MS 1051 Texas Tech University Campus Box 41051 Lubbock TX 79409-1051	<i>Sensors</i> vacant	<i>New Technology</i> J. K. Nelson El., Com., & Sys. Eng. Dept. Rensselaer Polytech Inst. 110 8th St., Rm JEC 5012 Troy NY 12180-3590
---	---	--	--------------------------	---

## The INSTITUTE of ELECTRICAL and ELECTRONIC ENGINEERS, Inc.

#### Officers

L. M. Terman (President and CEO) J. R. Vig (President-Elect) E. Micheli-Tzanakou (Vice President, Educational Activities) J. Baillieul (Vice President, Publication Services & Products)	G. W. Arnold (President, IEEE Standards Association) J. R. B. De Marca (Vice President, Technical Activities) R. J. Lefevre (President IEEE-USA)
---	--

The IEEE TRANSACTIONS ON DIELECTRICS AND ELECTRICAL INSULATION is published bimonthly by The Institute of Electrical and Electronic Engineers, Inc. Responsibility for the contents rests upon the authors and not upon the IEEE, the Society, or its members. **IEEE Headquarters:** 345 East 47 St., New York, NY 10017; telephone: 212-705+extension; Information 7900; General Manager 7910; Public Information 7867; Spectrum 7556; Standards 7960; Technical Activities 7890. **NY Telex:** 236-411 (International messages only). **IEEE Service Center** (for orders, subscriptions, address changes, educational activities, region/section/student services): 445 Hoes Lane, Piscataway, NJ 08854; telephone: 732-562-3900. **IEEE Washington Office** (for US professional activities): 1111 19th St. NW, Suite 608, Washington, DC 20036; telephone: 202-785-0017. **Price/Publication information:** Individual copies: IEEE members \$20.00 (first copy only), nonmembers \$72.00 per copy (Note: add \$20.00 postage and handling charge to any order, including pre-paid orders). Member and nonmember subscription prices on request. Available in microfiche and microfilm. **Copyright and reprint permissions:** Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limits of US Copyright law for private use of patrons: (1) those post-1977 articles that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through the Copyright Clearance Center, 29 Congress St., Salem, MA 01970; (2) pre-1978 articles without fee. For all other copying, reprint, or republication permission, write to: Copyright and Permissions Dept., IEEE Publishing Services at the Service Center, Copyright 2008 by the Institute of Electrical and Electronic Engineers, Inc. All rights reserved. Printed in USA. Periodicals class postage paid at New York, NY and at additional mailing offices. **Postmaster:** Send address changes to Transactions DEI, IEEE, 445 Hoes Lane, Piscataway, NJ 08854. GST registration No. 125634188.