

Nuclear & Plasma Sciences

Number 2 • June 2008

SOCIETY NEWS

CONFERENCES

NUCLEAR AND SPACE RADIATION EFFECTS CONFERENCE NSREC 2008 Tucson, Arizona July 14-18, 2008

The 45th annual IEEE International Nuclear and Space Radiation Effects Conference (NSREC) will be held July 14-18, 2008, at the fabulous new J.W. Marriott Starr Pass Resort and Spa in Tucson, Arizona. We will continue the tradition of previous NSRE Conferences by offering an outstanding Technical Program, a one-day Short Course, a Radiation Effects Data Workshop, and an Industrial Exhibit. Engineers, scientists, managers, and other interested people from around the world will attend. Paul Dodd, Sandia National Laboratories, is the chairman.

A complete technical and social program is being planned to maximize opportunities for information exchange and networking in the area of radiation effects on microelectronic and photonic devices, circuits, and systems. Supporters of the conference include the Defense Threat Reduction Agency, Sandia National Laboratories, Air Force Research Laboratory, the NASA Electronic Parts and Packaging Program, and the Jet Propulsion Laboratory. NSREC also has corporate supporters: BAE Systems, Boeing, Micro-RDC, Honeywell,

Northrop Grumman, and Aeroflex Colorado Springs. Additional information on the conference is available on the Web at <http://www.nsrec.com>.

TECHNICAL PROGRAM

The Technical Program Chairman, Nick Van Vonno, Intersil/Consultant, and his program committee, have assembled an excellent set of contributed papers that are arranged into nine sessions of oral and poster papers and a Radiation Effects Data Workshop. The Workshop consists of papers emphasizing radiation effects data on electronic devices and systems and descriptions of new simulation and radiation test facilities. In addition, there are three outstanding invited talks of general interest to both conference attendees and their companions.

Jeff Black has organized this year's Short Course with a theme of "Soft Errors: From the Ground Up," which will be held Monday, July 14. This Short Course is an excellent learning opportunity for those who are new to the radiation effects community and need a quick introduction to the field, as well as

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Paul Dodd
General Chairman



Nick Van Vonno
Technical Program
Chair



Jeff Black
Short Course
Organizer



Bill Heidergott
Local Arrangements
Organizer

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Publicity releases for forthcoming meetings, items of interest from local chapters, committee reports, announcements, awards, or other materials requiring society publicity or relevant to NPSS should be submitted to the Newsletter Editor by July 10, 2008 for publication in the September 2008 Newsletter.

CONTRIBUTED ARTICLES

News articles are actively solicited from contributing editors, particularly related to important R&D activities, significant industrial applications, early reports on technical breakthroughs, accomplishments at the big laboratories and similar subjects.

The various Transactions, of course, deal with formal treatment in depth of technical subjects. News articles should have an element of general interest or contribute to a general understanding of technical problems or fields of technical interest or could be assessments of important ongoing technical endeavors.

Advice on possible authors or offers of such articles are invited by the editor.

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those who want to stay abreast of current issues in single-event effects. The Short Course will start Monday morning with tutorials on "Fundamental Mechanisms for Single Particle-Induced Soft Errors" and "Ground-Based Testing and Evaluation of Soft Errors." Monday afternoon will include tutorials on "Soft Error Results Analysis and Error Rate Prediction," and "Soft Error Case Studies."

INDUSTRIAL EXHIBITS

This year's Industrial Exhibits, organized by John Jewell, will permit one-on-one discussions between conference attendees and exhibitors on the latest developments in radiation-hardened and radiation-tolerant electronics, engineering services, facilities, and equipment. On Tuesday evening, attendees and their companions are invited to a reception that showcases the Industrial Exhibit. With 45 booths, this is the largest exhibit in NSREC history! If you need more information on the exhibit, please visit www.nsrec.com.

3D Plus - USA

Actel Corporation
Aeroflex Colorado Springs
American Semiconductor
Atmel
BAE Systems
Boeing
Crane Aerospace & Electronics
Custom Test Systems
Cyclotron Institute, Texas A & M University
Defense Microelectronics Activity (DMEA)
Honeywell
International Rectifier
Intersil Corporation
JD Instruments
J. L. Shepherd & Associates
Lawrence Berkeley National Laboratory
Maxwell Technologies
Micropac Industries, Inc.
Micro-RDC
Modular Devices Inc.
NASA - NEPP
National Reconnaissance Office
National Semiconductor
New Mexico Tech /METTOP
Northrop Grumman Corporation
Nu-Trek
Peregrine Semiconductor Corp.
Radiation Assured Devices
Raytheon Missile Systems
Sandia National Laboratories

Silvaco International
Space Micro
Synopsys
Synplicity
Teledyne
Texas Instruments
Ultracomm
Vanderbilt University - Institute for Space and Defense Electronics
Viasic, Inc.
White Sands
Xilinx

SOCIAL EVENTS

Social events have been planned to give Conference attendees and their guests many opportunities to informally discuss business and to become better acquainted. Local Arrangements Chairman, Bill Heidergott has planned a fun and memorable social program. The main conference social on Wednesday night will be held at the Pima Air and Space Museum. Attendees and their guests will be fascinated by numerous displays of aircraft (including a newly-exhibited SR-71 Blackbird) and dine under the wings of a WWII B-29 Superfortress while enjoying dinner music.

TUSCON, ARIZONA

Our hotel will be the 4-star J.W. Marriott Starr Pass Resort and Spa. In the short time that this hotel has been open, it has garnered multiple awards. Its chef was chosen as Marriott's Chef of the Year, and it was selected as one of the top 40 meeting facilities world-wide *within their first year of opening*. Although you'll never want to leave the easy comfort of our gorgeous hotel, we have planned three companion events during the week to introduce (or reintroduce) you to the vibrant city of Tucson and its surroundings. Over the past three centuries, Tucson has grown from a Native American farming community, to Spanish outpost, to today's Southwestern metropolis of a million people. Due to its heritage, Tucson benefits from a rich cultural diversity and offers numerous attractions for any taste. Whether you're interested in artisan shopping, outdoor activities, or my favorite, southwestern cuisine, you'll find plenty for you and your family to enjoy in Tucson.

INVITED SPEAKERS

James E. Turner, Community Outreach Historian for the Arizona Historical Society will

Guess who

He achieves certainty by arresting thought.

Jack Beatty

In a rut

People make such a big thing of living and it really isn't that important... You go to bed at night and you fall asleep and it's all over. Then you wake up the next day and you have to start all over again.

Andy Warhol

Social distance

Stand not too near the rich man lest he destroy thee - and not too far away lest he forget thee.

Ecclesiasticus



2008 NSS-MIC Dresden



Uwe Bratzler
General Chair

present "The Francisco Vásquez de Coronado Expedition," Martin G. Tomasko of the University of Arizona and Principal Investigator for the Descent Imager/Spectral Radiometer (DISR) instrument on the Huygens entry probe will speak on "The Huygens Mission to Titan," and Ann Garrison Darrin, member of the Principal Professional Staff and Group Manager in the Research Center of the Johns Hopkins University Applied Physics Laboratory will be speaking on "Small Stuff in Space: From Micro and Nano Technologies to Space Debris."

ADDITIONAL INFORMATION

For the latest NSREC information (technical program, conference & social registration forms, hotel and travel information, etc.) please visit our web site at www.nsrec.com.

You may contact the General Chair, Paul Dodd, Sandia National Laboratories at (505) 844-1447 or Email: pedodd@sandia.gov.

Or you can contact the Publicity Chairwoman, Teresa Farris, Aeroflex, at (719) 594-8035; E-mail: teresa.farris@aeroflex.com.

2008 IEEE Nuclear Science Symposium, Medical Imaging Conference and 16th International Workshop on Room-Temperature Semiconductor X-ray and Gamma-ray

Dresden, Germany

October 19 - 25, 2008

Conference web site: www.nss-mic.org/2008

Conference email: nssmic2008@fzd.de

The 2008 IEEE Nuclear Science Symposium (NSS) and Medical Imaging Conference (MIC) and 16th international workshop on Room Temperature Semiconductor X-Ray and Gamma-Ray Detectors (RTSD) will be held in Dresden, Germany, 19-25 October 2008, at the International Congress Center Dresden (ICCD). The ICCD is located at the banks of the Elbe River and is within easy walking distance of Dresden's main attractions in the beautiful and historic city center, with numerous restaurants and tourist attractions. For accommodations, a number of close-by hotels (the Maritim Hotel being part of the ICCD complex) are under contract, offering a variety of accommodations in a wide price range. Dresden has an excellent public transportation system. However, many hotels are an easy walk to the ICCD. We encourage you to register early and to reserve your hotel.

This is the third time the NSS/MIC will be held in Europe, each time with increasing attendance. We expect 2000 scientists and engineers in Dresden.

TECHNICAL PROGRAM

This year's conference will have an extensive and rich scientific program consisting of the NSS

opening, plenary, parallel, poster and closing session, the MIC opening plenary, and poster sessions, the RTSD plenary and poster session, and joint sessions to provide good opportunities for interdisciplinary communication.

The scientific chairs are:

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DESY

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MIC Deputy Program Chair

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RTSD Program Co-Chair

Ralph James

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RTSD Program Co-Chair

Michael Fiederle
Freiburger Materialforschungszentrum
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This year, we will also reintroduce a session on Nuclear Power with topics similar to the past Symposia on Nuclear Power Systems (SNPS).

Grants are available to help support about 200 students and young researchers so that they can more easily participate in the conference and present their work to our world-wide community.

Please visit our website and feel free to contact the corresponding program chairs directly for additional information.

SPECIAL FOCUS WORKSHOPS

An extensive workshop program offering twelve workshops has been developed by our Workshop Program Co-Chairs:

Norbert Wermes
Universität Bonn
E-mail: wermes@uni-bonn.de

Wim de Boer
Universität Karlsruhe
deboer@ekp.uni-karlsruhe.de

While ten of the workshop topics will be offered in Dresden during the conference week, workshops #11 and #12 are being offered outside Dresden in two of Germany's most renowned research centers:

1. Micro-Pattern Gas and Silicon Detectors for Tracking
2. Micro and Nano Dosimetry
3. Detector Developments for the sLHC
4. ATCA/ μ TCA for Physics
5. Nuclear Radiology of Breast Cancer
6. X-ray Micro Imaging of Devices, Materials and Organics
7. GATE Software for Emission Tomography
8. Compton Cameras for Medical and Industrial Applications
9. Innovative Techniques for Hadron Therapy
10. Stand-off Detection Techniques for Radiological and Nuclear Sources

Satellite Workshops outside Dresden:

11. Joint Workshop on Detector Development for Future Particle Physics and Photon Science Experiments (DESY, Hamburg – Thursday and Friday before Conference Week)
12. Hybrid Imaging with MR-PET (Forschungszentrum Jülich, Jülich – Monday and Tuesday after the Conference Week)

Our website will provide detailed information on the program schedule and contents of these workshops.

SHORT COURSES

An excellent short course program has been developed covering a wide range of nuclear and medical technology topics:

- Basics of Particle and Radiation Detection (2 days); Glenn Knoll and Fabio Sauli
- Silicon Detector Applications in Medicine, Biology, Safety and Astrophysics (1/2 day); Lothar Strueder and Peter Lechner
- GEANT4 (1 day); Maria Grazia Pia
- Front-End Electronics for Particle Detectors in Astroparticle, Particle Physics and Medicine (1 day); Helmuth Spieler
- How to use the Grid for Physics and Medical Applications (1 day); Patricia M'endez Lorenzo and Jakub T. Moscicki
- Image Quality in Adaptive and Multimodality Imaging (1 day); Harrison Barrett, Matthew A. Kupinski, Kyle J. Myers
- Image Reconstruction (1 day); Paul Kinahan
- CT Diagnosis and Hadron Therapy (1/2 day); Ugo Amaldi
- The Monte Carlo Method and its Applications in Medical Imaging (1 day); Michael Ljungberg
- PET Pharmacokinetic Course (2.5 days, special course at Forschungszentrum Dresden-Rossendorf); Jörg van den Hoff

All courses include refreshments, lecture notes, and a certificate of completion as part of the registration fee. Full day courses also include lunch. For additional information, please visit our website and feel free to contact the Short-Course Co-Chairs:

Claus Grupen
Siegen University
gruppen@hep.physik.uni-siegen.de

We're getting there quickly

Technological progress has merely provided us with more efficient means for going backwards.

Aldous Huxley

So I see

That which is not observable does not exist.

Paul Dirac

Poor us!!

Every country has the government it deserves.

Joseph de Maistre (circa 1800)

Irène Buvat

Imaging and Modeling in Neurobiology and Cancerology Lab
UMR 8165 CNRS Orsay
buvat@imnc.in2p3.fr

INDUSTRIAL EXHIBIT

The Industrial Program will be an important part of the conference. It comprises an exhibition and an integrated program of technical seminars. An exhibition area central to conference activities will display the latest in products and innovations. Interested vendors should contact the Industrial Program Chair:

Friedrich Wulf

Hahn-Meitner-Institut Berlin
wte-office@hmi.de

COMPANION PROGRAM

Dresden and its surroundings offer a broad variety of cultural, historical and natural attractions. An exciting Companion Tour Program has been worked out and can be downloaded from our website in English, Chinese, or Japanese. For further information please visit

our website or feel free to contact our Companion Program Co-Chairs:

Merry Keyser

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The organizing committee, our local hosts at the Forschungszentrum Dresden-Rossendorf, the Deputy-General Chair and I all encourage you warmly to participate in this major event of our Society. We look forward to welcoming you to Germany and to Dresden in October.

Uwe Bratzler

General Chair

Uwe.Bratzler@cern.ch

Roger Gearhart

Deputy General Chair

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NPSS GENERAL BUSINESS

PRESIDENT'S REPORT



Jane Lehr
NPSS President

Fostering technological innovation and excellence for the benefit of humanity. This is your IEEE's mission statement. I have to admit I love seeing it - and being reminded that what we do for a living really does affect our world.

For the past few years, IEEE has been working on strategic planning and establishing corporate goals. These efforts are essentially a recognition that the engineering profession is fluid. The ways that professional societies serve their members is fundamentally different than when the IEEE was formed by the merger of the Institute of Radio Engineers and the American Institute of Electrical Engineers in 1963. For instance, in the past, IEEE members were largely residents of North America. Now, IEEE members live in 160 countries around the world and non-North Americans constitute the fastest growing segment of membership.

At the first TAB meeting of this year, the Envisioned Future of the IEEE was presented. An envisioned future is a concrete, but yet unrealized, vision for the future of an organization. The IEEE's Big Audacious Goal is to "be essential to the global technical community and to technical professionals everywhere and be universally recognized for the contributions of technology and of technical professionals in improving global conditions." There is action already behind these Big Audacious Goals-IEEE is partnering with the United Nations to bring technology to solve simple problems with, and regarding, technology. This is called the Humanitarian Technology Challenge. A central theme is to avoid pet solutions looking for a problem and instead to partner with organizations and citizens within developing countries to provide appropriate solutions. The NPSS was the first society to nominate a representative, Ray Larsen of SLAC.

A critical part of strategic planning is to name one's core values - the essential and enduring principles that guide us. In addition to the core values that we, as society members expect, such as high quality and unbiased peer review processes, professionalism and intellectual activity, the IEEE Core Values include service to community, collaboration and community building, and a global focus. Common within many of these core value statements is the focus on ethics - which has long been an integral part of the IEEE.

A key item running throughout the Envisioned Future is the IEEE commitment to educating the next generation of engineers. A five-year goal is to improve the professional competencies of students and professionals through education. The IEEE has a long-standing Educational Activities Board which focuses on this topic as well as providing an accreditation process. Our universities are undergoing large changes in curricula and I expect these goals to yield recognizable results in the next few years.

The objective of your Big Audacious Goal,

and vocalizing your Core Values, is to set goals. A key goal is to ensure that industry professionals and their employers will value IEEE as a major resource to achieve their success. Moreover, the public will increasingly value the role of technical professionals in enhancing the quality of life and the environment. IEEE will operate as a model global association with aligned purpose, energy and infrastructure that facilitates the development and execution of coordinated strategy.

I am proud to be part of an IEEE that has such a strong sense of purpose. I can assure you that the numerous volunteers representing us all at the various levels of IEEE work hard at providing the infrastructure needed to achieve these goals. Of course, an organization is only as strong as its base and our IEEE base is mortared with highly principled engineers and scientists.

Jane Lehr, IEEE NPSS President, can be reached at Sandia National Laboratories, MS1152, PO Box 5800, Albuquerque, NM 87185-1193; Phone +1 505 844 8554; E-mail: jmlehr@sandia.gov.

Academic distinction

A university is a place where men of principle outnumber men of honour.

Ernest May

SECRETARY'S REPORT

The IEEE NPSS AdCom met in Santa Fe, NM with a retreat on Friday, February 29 and a meeting on Saturday, March 1. As this was our first meeting of 2008 we were able to welcome in person our new AdCom Class of 2008 and new committee chairs, introduced to you in the March Newsletter.

Retreat topics included excellent discussion of IEEE Conference Services and of the package developed by Bo Yu of BNL for our NSS/MIC conferences to track registration, abstract submittal, paper receipt and other details useful to the conference organizers. This software has also been used with great success by a few of our other conferences.

Ed Lampo, our treasurer, reported that we are in good financial shape. Our Finance Committee, chaired by Hal Flescher, the new IEEE TAB Vice President-elect, will review maintaining membership dues at \$30 for 2009, and that will include electronic access to both TNS and TPS, and to our conference records posted in Xplore. Paper copies may continue at 2008 rates for 2009, but this is significantly below printing and mailing cost, so members who wish paper are getting a major benefit.

Conferences are closing a bit more reliably,

but there is at least one 2005 conference still open (as of March) and the message remains the same: Books need to be closed as quickly as possible after a conference is over, and it is possible to close without the last bills being paid. IEEE can take care of that. Talk with Tony Lavietes (lavietes1@lnl.gov) or Ed Lampo (e.lampo@ieee.org) to find out how! It's pretty straightforward.

Jane Lehr, our president, had attended two TAB meetings since the last AdCom meeting in Honolulu. TAB has now approved including access to conference records in membership dues for ALL societies. Once again, NPSS is a trend-setter! A Biometrics Council, of which NPSS is a charter member, was approved at the November TAB meeting. Randy Brill of Vanderbilt and Ron Jaszczak of Duke Medical School are our two Council representatives. EMBS, who opposed this Council's format, is starting another New Directions group.

The IEEE Conferences Committee is interested in what drives conference 'no shows.' For us the principal issues appear to be ability to get visas in a timely way, especially for eastern European, Indian and Chinese scientists, and the big cuts in funding. Making the deadlines



Albe Dawson
Larsen
NPSS Secretary and
Newsletter Editor

Cave Americanism

There are few
forces more
ruthless than
Americans doing
good.

John. W. Holmes

Paradox

I'm convinced
that the vast
majority of
wrong-thinking
people are right.

Monty Python

for abstract submittal and acceptance earlier helps in allowing time to clear the visa hurdles. A well-written invitation letter is also helpful. Great care is needed here, so ask help from someone who has done this before or someone at IEEE Conference Services. DOE has also made registration more difficult through changes in travel requirements.

Time to publication for journal articles continues to be a TAB concern. The Institute average is 65 weeks from submittal to publication. The intermediate goal is 52 weeks and the ultimate goal is 45 weeks. Both TPS and TNS are within the 45-week goal now, due in large part to a huge effort by the editors for each journal that started several years ago.

The costs for downloading articles from Xplore have decreased for both members and nonmembers of IEEE. The IEEE Publications and Products Board is also making changes, principally to let editors see article reviews more readily. Also on the publications front, a new terahertz journal is under consideration. Sandra Biedron of Argonne and Derek Abbott of University of Adelaide are being considered for the editorial staff.

The Regional Activities Board has changed its name to Members and Geographic Activities (MGA) TAB and MGA will meet together, and there is an effort to get conferences to invite local people to participate in the meetings. An article in the April issue of *The Institute*, available on line, discusses what the new organization will look like.

The issue of a GOLD member on AdCom is something that came up at TAB that we may consider in the future, as part of an Early Career Support effort by TAB. Identifying early career scientists to lecture for student groups and chapters has also been suggested.

TECHNICAL COMMITTEES

Reports from several of the Technical Committees appear below. The Fusion TC has replaced long-time member Richard Callis with Bill Cary who will be involved in the 2009 Symposium on Fusion Engineering. The budget for 2009 has been approved. The conference, to be held jointly with ICOPS in San Diego, also has its web site launched. They are looking to raise grant money for several uses. They are also working with Tony Laviertes and Bo Yu of BNL for networking, AV and registration support. There will be program chairs from Europe and Asia to help expand the

paper base. Charles Neumeyer will chair the 2011 conference at the Hyatt Regency, McCormick Place in Chicago, June 25-30, 2011, again in conjunction with the 2011 ICOPS.

The Particle Accelerator Science and Technology TC has a new set of bylaws and has formalized the TC membership. They have worked with the PACOC and the international PAC Organizing Committee (EPAC, APAC and IPAC) in establishing a new meeting cycle. The next PAC will be in 2009 in Vancouver with Paul Schmor of TRIUMF as Chair. The first North American IPAC under the new international two-year cycle will be in New York City in 2011 with Bill Weng of BNL as chair, and the first PAC under this cycle will be in New Orleans in 2012. IEEE was introduced as a possible umbrella for the IPACs. The Europeans will work under the Europhysics Conference. PAC has been active in recruiting support from Women in Engineering and will have a grant for its 2009 reception. An equivalent grant was raised from ANL by Sandra Biedron.

The Plasma Science and Applications steering committee met in November. They formed a subcommittee to look at the terahertz journal's possibilities, which was presented to AdCom. The 2008 meeting in Karlsruhe will have 4-5 parallel sessions to accommodate the very large number of abstracts (>600) received. Almost 300 authors requested oral presentations. The 2010 ICOPS will be held in Hampton Roads, VA with Mounir Laroussi as general chair. The 2012 conference will be in the UK with the final site yet to be decided. In 2007, at the PPPS conference, four Plasma Sciences student paper awards were given. Their proposal for an Outstanding Student award was approved by AdCom. See AdCom actions below.

Pulsed Power Science and Technology has both a new chair, Edl Schamiloglu, and a new elected AdCom member, Dillon McDaniel, who joins Bob Reinovsky. The TC also has three new members, and three Distinguished Lecturers, Peter Turchi, Charles Stallings and Brian Oliver.

The Megagauss 2006 conference that we sponsored is closed. The 2008 Megagauss conference will be held in Novosibirsk, Russia. A good contingent of US scientists is expected to attend. The 2007 PPST is also close to closing. The 2009 Pulsed Power conference will be chaired by Frank Peterkin at the Mayflower

Hotel, Washington, DC. Its dates allow for spending the Fourth of July in Washington and experiencing all the celebrations on the mall! The 2011 conference will be in Chicago, contingent to the ICOPS and SFE meetings.

The Radiation Effects committee has also appointed three Distinguished Lecturers: Ron Schrimpf, Allan Johnston, and Paul Dressendorfer. A request has been made to change the Radiation Effects TC chair's term so that it is in alignment with the other TC chairs whose terms start on January 1. At present the Radiation Effects chair starts his or her two-year term following the NSREC. This will require a Radiation Effects Bylaws change, which will be discussed at the next committee meeting. The 2009 NSREC will be held at the Quebec Hilton, Quebec, Canada; the 2010 meeting will be at the Sheraton Denver, and the 2011 meeting will be in St. Paul.

The Radiation Instrumentation TC has elected five new members. The Honolulu conference was a huge success with about 1800 registrants and the desired increase in Asian participants. The concern that European attendance would drop was not realized. Plans for 2009 and 2010 are well in hand. The site for 2011 is being finalized. Preliminary proposals have been received from several Asian sites for a future Asian conference. The 2008 conference is discussed in detail above.

The SCINT conference, sponsored by NPSS, has been closed.

FUNCTIONAL COMMITTEES

The Awards committee reviewed 2008 applications for Society awards and the results of their work is seen in the Awards section below. These will be presented at the conference of the recipient's choice or, for the students, at their institution if they wish. All our awards have been updated in the IEEE Awards and Recognition Manual, available on line at http://www.ieee.org/portal/cms_docs_iportals/iportals/volunteers/tab/TAB_Awards_and_Recognition_Manual.pdf. Take a look and see which of your colleagues might be worthy of recognition. The next deadline is early in 2009. The Particle Accelerator Graduate Student award has gone to TABARC for approval in the summer meetings. The Phelps Grant description has been rewritten.

See the report by Steve Gold for informa-

tion on the Distinguished Lecturers program. There are now 10 active chapters, six of which are in the USA and 4 in Europe. A chapter in Russia is beginning the process to add affiliation with us. Uwe Bratzler represents Division IV in coordinating Region 8 chapters.

Fellow applications are in the hands of the Fellows Evaluation Committee. The recommendations will go to IEEE in mid-June. In 2007 we had 6 of 14 applicants elevated to Fellow. Well-written, focused applications help. Technical Committees should be working now to think about nominees for 2009!

See Bill Moses' article requesting nominees for the AdCom seats to be filled for the Class of 2012 that will be seated in January 2009.

This June our publications – *the Transactions on Nuclear Science, the Transactions on Plasma Science* and this Newsletter – will be reviewed by the IEEE TAB Periodicals Review board. This happens every five years. Your thoughts on improving the newsletter and making it more useful to you would be appreciated by the editor. What don't we include? What sorts of stories would be interesting? Let me know! (amlarsen@slac.stanford.edu). Our journals have made huge strides in revamping their editorial staffs and we now have a publications assistant at HQ who has been an enormous asset.

Open Access to publications continues to be an item of discussion. TNS will be among the first journals to participate in an experiment with the Sponsoring Consortium for Open Access Publishing (SCOAP) that represents about 60 organizations internationally. TNS has also reapplied to be included in the MedLine Index, which would then include the medical imaging papers published in TNS. Authors in this area should be encouraged to use key words recognized by MedLine.

The *Transactions on Plasma Sciences* will, beginning in 2009, be able to publish 12 issues a year. Both TPS and TNS are now appearing in their cover date month. This has taken considerable effort and several years to achieve consistently.

The Standards Committee notes that work continues on the new germanium standard's graphics. Several other NPSS standards will be up for review in the next few years. Obsolete software posed a problem in updating the germanium standard and may well have to be addressed for these other standards.

The International Conferences liaison,

Blunted feelings

Tolerance is a very dull virtue. It is boring. Unlike love, it has always had a bad press. It is negative. It merely means putting up with people, being able to stand things.

E. M. Forster

Of course

Extremists think "communication" means agreeing with them.

Leo Rosten

And justice of both?

Truth is independent of fact, always.

Oscar Wilde

More often wrong

In war you don't have to be nice - you have only to be right.

Winston Churchill

Patrick LeDû, has been working with the 2008 NSS/MIC/RTSD and ICOPS meetings as an advisor. The 2009 and 2011 Real Time conferences will also have supervision. The 2011 Real Time conference will be chaired by a member of the ITER fusion community, which is a first. There is other activity in which NPSS might play a role including the EUROMED-IM2 conference in Nice in 2009 which will have large Middle Eastern representation and new developments in the fields of nuclear power generation and in photo detectors. The latter will be a rebirth of the Beaune conference. The next challenge will be Asia. In 2008 there were 12 IEEE meetings in China. There are plans for a SCINT conference on Jeju Island, Korea as well.

The Transnational Committee is working with the Membership and Chapters chairs to identify potential chapter locations. There was a successful *IEEE at CERN* meeting.

LIAISONS

Sandra Biedron, the R&D Policy liaison, reports that the group meets five times a year and that attendance by teleconference works. She has attended one meeting in person to date. This is principally an information and lobbying group that tracks new technologies and introduces them to Congress through policy statements and white papers. Bill Williams, an IEEE-USA staff member supports these activities. IEEE does not seem to have the same liaison visiting strategy as APS where many scientists visit Congressmen and staffers each year to talk about important work. APS also supports large letter-writing campaigns to Congress related to the science budget and related issues. Should we?

Peter Winokur is our corresponding liaison to TABARC, and is also on the IEEE-USA Congressional Fellows board.

Allan Johnston continues to represent us actively with the Women In Engineering group. The IEEE Executive Committee supports 7 of the group's 11 voting members. There are now 136 affinity groups and the number is growing. The number of societies and councils with liaisons has grown from 8 in 2007 to 17 in 2008. Most months, they hold hour-long teleconferences that are very cumbersome. It is hard to get initiatives before the group. We need to support WIE through our own activities such as encouraging eligible women to seek higher grade memberships and to make women more visible at conferences

and chapter meetings. Of the 12,000 members of WIE, about 2/3 are students. NPSS is encouraged to seek WIE funding for conference events. It is possible to supplement this with NPSS funds (see Actions below). An NPSS network, perhaps initiated through our conferences, would be valuable, and something to keep networking alive between conferences. This needs more thought and development.

ADCOM ACTIONS

- The Computer Applications in Nuclear and Plasma Sciences TC moves to provide technical co-sponsorship of the 6th American Nuclear Society International Topical Meeting on Nuclear Plant Instrumentation, Control, and Human-Machine Interface Technologies (2009 NPIC&HMIT), to be held April 5-9, 2009, in Knoxville, Tennessee. This motion was passed by e-mail vote subsequent to the meeting
- The Nuclear and Plasma Sciences Society approves the establishment of a new Outstanding Student in Plasma Science Award. The prize will consist of US \$1,000 and a certificate, to be funded by the IEEE NPSS International Conference on Plasma Science (ICOPS). Any full time undergraduate or graduate university student in plasma science will be eligible for the award, which will be presented annually at the ICOPS. The judging will be carried out by the PSAC ExCom based on research contributions, educational accomplishments, publications and patents. This motion was passed and forwarded to TABARC for review and TAB consent.
- AdCom hereby rescinds all previous motions for the direct funding of NPSS Chapters and substitutes the following motion:
"AdCom authorizes the awarding of grants to NPSS Chapters as follows:
 1. New NPSS Chapters may apply to the NPSS President, through the NPSS Chapter Coordinator, for authorization of a grant of up to \$1,000 from NPSS funds. Chapters applying for these funds must submit a detailed budget with their request.
 2. All NPSS Chapters may apply to the NPSS President, through the NPSS Chapter Coordinator, for authorization of a grant of up to \$500 per annum from NPSS funds. Chapters applying for these funds must have current Chapter reports

and must submit a budget with their request.”

- Field Award: NPSS AdCom approves the establishment of a fully endowed IEEE Technical Field Award to recognize outstanding contributions to the fields of Nuclear and Plasma Sciences.
- NPSS AdCom approves the formation of an NPSS Field-Award Committee to establish an IEEE Technical Field Award, whose membership will be determined by the NPSS Awards Chair in consultation with the NPSS President and Vice President.
- To increase the monetary value of NPSS Society-level awards as follows:
Merit: \$2000 to \$5000
Shea Distinguished Member: \$2000 to \$5000
Early Achievement: \$1800 to \$3000
Graduate Scholarship (4): \$2000 to \$3000
- AdCom suggests that the monetary value of NPSS Technical Committee awards be increased from \$2000 to \$3000, with the

following exceptions:

Young Investigator Medical Imaging Award increases from \$1000 to \$2000.

Radiation Instrumentation Early Achievement Award increases from \$1000 to \$2000.

Particle Accelerator Science and Technology Doctoral Student Award remains at \$2000.

NPSS Student Paper Awards remain at \$500.

Paul Phelps Continuing Education Grants remain at \$8000 total.

- Funding up to a maximum of \$1,000 can be approved by the NPSS President for WIE-related functions at each NPSS technical conference.
- AdCom authorizes a one time payment of up to \$20K, to be paid through the NPSS Network Shop, for updating and packaging of the NSS/MIC conference management software for use and portability to other NPSS conferences.

Why we have rules

To rule is easy; to govern difficult.

Goethe

TECHNICAL COMMITTEES

COMPUTER APPLICATIONS IN NUCLEAR AND PLASMA SCIENCES

Computer Applications in Nuclear and Plasma Science Technical Committee

The preparation for the 16th Real Time Conference (RT-2009) is now well under way. The decision was taken a year ago by the CANPS committee to hold the conference in Asia. The committee had the difficult task to select from three very attractive proposals, two coming from China, and one from Japan. The Beijing proposal was selected by the committee.

The conference will be hosted by the Institute of High Energy Physics (IHEP) in Beijing. Keeping the tradition of RT-2005 (Alba Nova University, Sweden) and of RT-2007 (FERMILAB), the RT-2009 conference will be institute based. This option is well adapted to a small conference, such as Real Time. The conference will begin on May 10, 2009.

The Institute of High Energy Physics is located in the west side of Beijing, about 12 km from the city center. There is a Holiday-Inn

hotel within walking distance of the institute, and the institute also operates a guest house on its site. Even if not centrally located, the site offers very convenient access to the city center. There is a subway station within a 10 minute walk from the hotel. The subway line goes directly to the city center, with stations at the Forbidden City and Tiananmen Place.

The general chair of the conference is Professor Yifang Wang, associate director of the institute. He is assisted by Professor Yantai Shu, from the Tianjin University, co-chair of the conference, and by professor Zhen'An Liu, chair of the local organizing committee. More information will become available soon.

Jean-Pierre Martin, chair of the Computer Applications in Nuclear and Plasma Science Technical Committee can be reached at the University of Montreal, RJA Lévesque Laboratory, Montreal (QC), Canada H3C 3J7; Phone +1 514 343 7340; E-mail: jpmartin@lps.umontreal.ca



Jean-Pierre Martin
Chair, CANPS

NUCLEAR MEDICAL AND IMAGING SCIENCES NEWS



Charles C. Watson
Chair, Nuclear Medical
and Imaging Technical
Committee

Let me start by summarizing the status of plans for future Medical Imaging Conferences:

Dresden, October 19-25, 2008: Uwe Bratzler is the General Chair. Wolfgang Enghardt and Sibylle Ziegler are the Program and Deputy Program Chairs of the MIC, respectively. Look for details elsewhere in this newsletter, or consult the web site <http://www.nss-mic.org/2008/>. About 2000 participants are expected for the combined NSS, MIC and RTSD, so it would be prudent to make your reservations as soon as possible. Also, don't forget the two-day satellite workshop on Hybrid Imaging with MR-PET that is being organized by Hans Herzog and Karl Ziemons at the Forschungszentrum Jülich (located near Cologne) for October 27-28. Information about this workshop is available at <http://www.mr-pet-juelich.de> or via email at MR-PET@fz-juelich.de.

Orlando, 2009: The 2009 NSS/MIC will be in Orlando, Florida, in the Hilton Hotel near Downtown Disney. Richard Lanza is the General Chair and Ramsey Badawi is the MIC Program Chair.

Knoxville, 2010: Knoxville, Tennessee, will host the 2009 NSS/MIC. Ron Keyser is the General Chair and David Townsend will serve as the MIC Program Chair. The meeting itself will be held in the spacious Knoxville Convention Center, but housing will be distributed among several downtown hotels, following the European model.

2011 and 2012: The leading candidates for 2011 are Madrid or Valencia, Spain. Space and cost issues are being evaluated. The 2012 meeting will likely be back in North America, although it is still possible that the order may be switched with Spain. Candidate cities for 2012 are Albuquerque, Seattle, Vancouver, Spokane, and possibly Anaheim, Reno or even

San Diego again. There have also been some expressions of interest to hold the meeting in China or Korea, although this is still rather tentative.

In other business, nominations are due by July 15 for the Edward J Hoffman Medical Imaging Scientist Award, and the IEEE Young Investigator Medical Imaging Science Award. Please see the Awards solicitation elsewhere in this newsletter for more information. At the March meeting of the NPSS AdCom we were authorized to increase the value of these awards by up to 50%, to bring them more into line with similar awards given by other IEEE Societies. The NMISC has voted to request such a 50% increase. Final approval for this change by the IEEE Technical Activities Board is expected later this year.

Every year 5 new members-at-large are elected to the NMISC. I'd like to urge you to consider standing for election to the Council. One of its primary functions is to provide oversight of the process that leads to the MIC each year, but we engage in other efforts to promote the NMIS community as well. If you'd like to influence the organization of the MIC or other aspects of our technical communications, this is a good place to start. You are eligible if you are a member of the IEEE NPSS with an interest in the MIC, i.e., a member of the NMISTC. If you're interested, please send Steve Meikle an e-mail at smeikle@fhs.usyd.edu.au before July 1. You can find more information on the NMIS Technical Committee and Council, including current Council membership and a copy of our constitution and bylaws, at our web site: <http://ewh.ieee.org/soc/nps/nmisc/>.

Charles Watson can be reached at Siemens Molecular Imaging, 810 Innovation Drive, Knoxville, TN, 37932-2562 USA; Phone: +1 865-218-2419; Fax: +1 865-218-3000; E-mail: charles.c.watson@siemens.com.

Never mind...

It's not enough
to have a good
mind: one must
use it well.

Descartes

PARTICLE ACCELERATOR SCIENCE AND TECHNOLOGY NEWS

NPSS PAST AdCom Technical Committee Chair, Elected Member, and Former Elected Member selected for National Academies Committee

Ilan Ben-Zvi (PAST Technical Committee Chair), Sandra Biedron (PAST Elected AdCom Member) and Patrick O'Shea (former PAST Elected AdCom Member) were recently selected by the National Academies of the United States to participate in the Committee on the Scientific Assessment of Free Electron Laser (FEL) Technology for Naval Applications.

The National Research Council (NRC) was asked by the United States Navy to prepare a study on FELs for use in naval applications. Nominations were made and then the chair of the National Research Council selected the final appointments regarding the membership of the Committee on the Scientific Assessment of Free-Electron Laser Technology for Naval Applications (FEL Study Committee). The chair of the FEL Study Committee is Thomas Katsouleas, Professor of Electrical Engineering, University of Southern California and a Fellow of the IEEE, and another mem-

ber is IEEE Life Fellow Kumar Patel. The study will assess the various states of the science and technology used in building FEL devices. The committee will produce a report for the Navy. There will also be a summary report that will be available for the public. The target date for delivery is summer 2008.

Ilan Ben-Zvi is Associate Chair of the Collider-Accelerator Department at Brookhaven National Laboratory. Sandra Biedron is the Director of the Argonne Department of Defense Project Office. Patrick O'Shea is Chair of the Department of Electrical and Computer Engineering at the University of Maryland. They have worked with the Office of Naval Research (ONR) and other DOE national laboratories, and universities to develop free electron lasers for eventual use by the Navy.

Ilan Ben-Zvi can be reached at benzvi@bnl.gov, Sandra Biedron can be reached at biedron@anl.gov, and Patrick O'Shea can be reached at poshea@eng.umd.edu.



Ilan Ben-Zvi



Sandra Biedron



Patrick O'Shea

PULSED POWER SCIENCE AND TECHNOLOGY

I am pleased to assume my duties as the new PPS&T Committee Chair. I thank Gerry Cooperstein, the outgoing Chair, for his service and for his continued assistance with the transition. I look forward to Gerry's continuing contributions as a PPS&T committee member.

I am also pleased to introduce the newest appointed PPST committee members (a complete list of the committee members can be found on the committee's website: <http://www.ece.unm.edu/ppst/ppst/index.htm>): Dr. Larry Altgilbers, U.S. Army Space and Missile Defense Command; Dr. Thomas Hussey, Air Force Office of Scientific Research; Prof. Andreas Neuber, Texas Tech University; and Dr. Rick Spielman, Ktech Corporation. In addition, our newest elected AdCom representative is Dr. Dillon McDaniel, Sandia National

Laboratories, who will be serving together with Dr. Robert Reinovsky of Los Alamos National Laboratory. Of course Dr. Jane Lehr of Sandia National Laboratories and one of our PPS&T committee members is continuing in her role as President of the Nuclear and Plasma Sciences Society.

We are happy to report that the PPPS-2007 Conference, the 16th IEEE International Pulsed Power Conference combined with the 34th IEEE International Conference on Plasma Science was a huge success. The conference is nearly closed out. All registrants to PPPS-2007 should have received their conference DVD by now. If you were registered for the conference but did not receive your DVD please send an e-mail to ppps2007@ece.unm.edu with your current postal mailing address. Two Special Issues of the IEEE Trans. Plasma Sci. will appear in



Edl Schamiloglu
Chair, Pulsed Power
Technical Committee

Never the twain shall meet

The first half of life consists of the capacity to enjoy without the chance, the last half consists of the chance without the capacity.

Mark Twain

2008 derived from the PPPS-2007 Conference: Special Issue on Plenary & Invited Talks (Drs. Mounir Laroussi, Frank Hegeler, and Xinpei Lu, Guest Editors) to appear April 2008; and a Special Issue on Pulsed Power Science & Technology (Drs. Frank Peterkin, Bryan Oliver, Randy Curry, and Ray Allen, Guest Editors) to appear October 2008.

The 17th IEEE International Pulsed Power Conference will be held June 29 to July 2, 2009 at the Renaissance Mayflower Hotel in Washington, DC. Dr. Frank Peterkin of the Naval Surface Warfare Center, Dahlgren VA, is the Chair of the conference and Dr. Randy Curry of the University of Missouri is the Technical Program Chair. The Mayflower Hotel is offering the conference attendees a room block with 100% of the rooms available at the prevailing government rate. The conference website is: <http://www.ece.missouri.edu/ppc2009> and check back frequently for updates.

Planning for the 18th IEEE International Pulsed Power Conference, to be hosted by the University of Missouri at Columbia, is underway. Dr. Randy Curry will be the Chair of the conference, which will be held at the McCormick Place Hyatt Regency in Chicago, IL from June 19-23, 2011. This conference will be followed by the 38th IEEE International Conference on Plasma Science,

which will be held June 26-30 in the same venue, combined with the IEEE NPSS Symposium on Fusion Engineering.

Finally, last year the Society inaugurated a Distinguished Lecturer Program, whereby lecturers will be sponsored by NPSS to present their talks at local IEEE Chapters. The three Distinguished Lecturers from Pulsed Power Science and Technology are:

- Dr. Bryan V. Oliver, Advanced Radiographic Technologies Department, Sandia National Laboratories, "**Intense electron beam diodes for X-ray generation.**"
- Dr. Charles H. Stallings, Stallings & Associates, "**Pulsed Power - What Is It and Why Should You Care?**"
- Dr. Peter J. Turchi, Los Alamos National Laboratory, "**Plasma and Megagauss Fields.**"

Complete information on the NPSS Distinguished Lecturer Program can be found at: http://ewh.ieee.org/soc/nps/NPSS_DLP.html.

Edl Schamiloglu, Chair of the Pulsed Power Science and Technology Technical Committee, can be reached at the Department of Electrical and Computer Engineering, University of New Mexico, MSc01 1100, Albuquerque, NM 87131-0001; Phone: +1 505 277 4423; Fax: +1 505 277 1439; E-mail: edl@ece.unm.edu.

FUNCTIONAL COMMITTEES

NPSS SOCIETY & TECHNICAL COMMITTEE AWARDS



Peter Winokur
Awards Committee
Chair

Last year, the Awards Committee moved the deadline for submission of nominations for Society Awards to January 31, 2008. Consequently, the Awards Committee was able to make its selections by the end of March, which enables awardees to be recognized at the conference of their choosing this calendar year. The committee reviewed many outstanding nominations for each of the Society Awards. Dr. Ilan Ben-Zvi won the Merit Award "for outstanding contributions to the fields of high energy physics accelerators and free electron lasers." Dr. Steven H. Gold won the Richard F. Shea Distinguished Member Award "for outstanding contributions to the IEEE Nuclear and Plasma Sciences Society and its Plasma Science and Applications Technical Committee." Professor

Farhat N. Beg won the Early Achievement award "for contributions to the understanding of electron transport in short pulse high intensity laser matter interactions and the physics of pulsed power driven z-pinches." In addition, four students received Graduate Scholarship Awards: David M. French (University of Michigan), Brad W. Hoff (University of Michigan), Thomas D. Loveless (Vanderbilt University), and Jonathan A. Pellish (Vanderbilt University). Congratulations to all!

The NPSS is revamping its Awards web page at <http://ewh.ieee.org/soc/nps/awards.htm>. The Awards page includes a summary of all awards, a detailed description of Society Awards that includes nomination forms, and a link to Technical Committee

and/or Conference web sites. The process for choosing winners of Technical Committee Awards is the responsibility of the respective Technical Committee. A listing of all Technical Committee Awards follows.

1. Computer Applications in Nuclear and Plasma Sciences Award;
2. Radiation Effects Award;
3. Radiation Instrumentation Early Career Award;
4. Radiation Instrumentation Outstanding Achievement Award;
5. Fusion Technology Award;
6. Particle Accelerator Science and Technology Award;
7. Plasma Science and Applications Award;
8. Edward J. Hoffman Medical Imaging Scientist Award;
9. Young Investigator Medical Imaging Science Award;
10. Erwin Marx Award;
11. Peter Haas Pulsed Power Award;
12. Arthur H. Guenther Pulsed Power Student Award; and
13. NPSS Student Paper Awards.

In addition to the Technical Committee Awards listed above, NPSS has approved the establishment of two additional student awards. These awards are: (1) Particle Accelerator Science and Technology Doctoral Student Award to recognize significant and innovative technical contributions to the field of particle accelerator science and technology as demonstrated in a student's doctoral thesis; and (2) Outstanding Student in Plasma Science Award to recognize outstanding contributions to the field of plasma science and technology. These awards must be approved by the IEEE Technical Activities Board later this year.

I would like to thank the members of the Awards Committee for their hard work and dedication. They are Igor Alexeff, Hal Flescher, Steve Gitomer, and Bill Moses.

Peter S. Winokur, Chair, NPSS Awards Committee, can be reached at the Defense Nuclear Facilities Safety Board, Washington, DC; Phone: +1 202 694-7090; E-mail: p.winokur@ieee.org.

The reverse
would be better!

... there are no
bad guys in
Washington,
there are only
good guys doing
bad things.

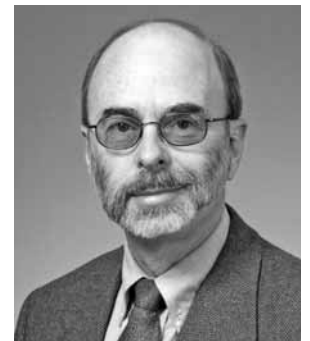
Art Buchwald

DISTINGUISHED LECTURERS PROGRAM

The IEEE/NPSS Distinguished Lecturers Program provides support to NPSS chapters by providing high quality scientific and technical lectures by distinguished experts from the NPSS technical communities. These lectures are provided at no cost to our chapters. Additionally, these excellent speakers are available to other IEEE groups, as well as to outside organizations such as universities, at their own expense, as a means of technical outreach from the NPSS. Being appointed as a Distinguished Lecturer provides an opportunity for NPSS members to be recognized as leaders in their technical communities, while providing a valuable service to the broader educational, scientific and technical community. This program was reestablished by Charles

Neumeyer in 2006, and is now fully up and running. For 2008, the NPSS has appointed 16 Distinguished Lecturers, each nominated by the Chair of one of the NPSS Technical Committee or by the Transnational Committee, and these Lecturers are currently offering 28 different lectures. The lecture titles and abstracts, as well as biographical information on each lecturer, can be found on the NPSS Distinguished Lecturers website, http://ewh.ieee.org/soc/nps/NPSS_DLP.html. Also posted there is a procedural document with an explanation of how the program works.

Steven Gold, NPSS Chapters and Local Activities Chair and Distinguished Lecturers Coordinator, can be reached by e-mail at steven.gold@nrl.navy.mil.



Steven Gold
NPSS Chapters and
Local Activities Chair;
Distinguished Lecturers
Coordinator

NOMINATIONS COMMITTEE

CANDIDATES SOUGHT FOR ELECTED ADCOM MEMBERS



Bill Moses
Nominations
Committee Chair

Are you interested in helping to run the NPSS? The NPSS AdCom (Administrative Committee) is the body that “runs” the NPSS, which includes setting the policies for all of the conferences and publications that the NPSS sponsors. Each year we hold elections for approximately one quarter of the sixteen elected AdCom positions. This summer we will be holding elections for AdCom members elected from three NPSS communities: Plasma Science (the community that puts on ICOPS), Nuclear Medical and Imaging Sciences (the community that puts on MIC), and Transnational (a geographically-based rather than technically-based community). These are four-year terms that begin on January 1, 2009. In general, the require-

ments are that you are a member of both the IEEE and the NPSS (which basically includes everybody who receives this Newsletter) and that you have an interest in one of those five technical areas. If you are interested in running for one of these positions, you must let me know (wwmoses@lbl.gov) by July 1 of this year. You will be asked to submit a 200-word biography plus a 200-word position statement. Please feel free to contact me if you have any questions or need more information.

Bill Moses, Chair of the NPSS Nominations Committee, can be reached at Lawrence Berkeley National Laboratory, MS55-12, One Cyclotron Road, Berkeley, CA 94720; Phone: +1 510 486-4432; Fax: +1 510 486-4768; E-mail: wwmoses@lbl.gov.

AWARDS

Ed. Note: You may recall that the deadline for Awards nominations was moved back to make it possible for award recipients to receive their rewards at the conference of their choice in the year in which the award is received. We are proud to announce the recipients of this year's Society awards

MERIT AWARD ILAN BEN-ZVI



Ilan Ben-Zvi

Ilan Ben-Zvi is a Senior Scientist with tenure and Associate Chair for Superconducting Accelerator R&D at BNL's Collider-Accelerator Department (at Brookhaven since 1988) and Adjunct Professor of Physics at Stony Brook University (since 1991).

Ben-Zvi's current research interests are RF superconductivity, electron cooling, high-brightness beams, Energy Recovery Linacs (ERL) and high-power Free Electron Lasers. He has extensive experience over 38 years in the development of superconducting linear accelerators, free-electron lasers and high-brightness RF electron guns. At BNL he initiated the ERL-based electron ion collider eRHIC and the ERL-based electron cooler for RHIC - two applications that require

ampere-class superconducting RF ERL with a high-brightness. He led the development of superconducting accelerator elements for ampere-class ERL such as a 703.75 MHz 5-cell cavity and an injector based on SRF technology. His research team is constructing the highest current ERL, aiming at 0.5 ampere.

Ben-Zvi earned B.Sc. degrees in Mathematics and Physics, 1965, from the Hebrew University of Jerusalem, a Ph.D. in Nuclear Physics, 1970, from the Weizmann Institute of Science; Research Associate, Stanford University 1970-1975; Senior Scientist Weizmann Institute 1975-1980; Visiting Associate Professor Stony Brook University 1980-1982; Senior Research Fellow, Weizmann Institute 1983-1988; Visiting Professor, Stony Brook University 1988-1990.

Ben-Zvi has been honored repeatedly by his peers: Elected in 1994 as a Fellow of the American Physical Society "For contributions to the development of superconducting quarter wave resonator structures and superconducting radio frequency quadrupoles for the acceleration of heavy ion beams and for contributions to the development of the Accelerator Test Facility at BNL." Elected in 2007 as Fellow of the American Association for the Advancement of Science "for distinguished scientific and technical contributions to the field of accelerator physics and service to the physics community." Senior Member of IEEE since 2003. Received the 1999 IEEE/NPSS Particle Accelerator Science and Technology Award "For contributions to high-brightness electron beam technology and superconducting RF technology and for his leadership of Brookhaven National Laboratory's Accelerator Test Facility." Received the 2001 BNL Science and Technology Award. Received the 2007 Free-Electron Laser Prize "in recognition of his outstanding contributions to Free Electron Laser Science and Technology."

Ben-Zvi served as the Director of the Brookhaven Accelerator Test Facility for 15 years, where he worked on advanced accelerator concepts, free-electron lasers and high-brightness laser-photocathode RF guns. He is

past chair the BNL Council. He served leading roles in various meetings and panels, including the HEPAP Subpanel on Advanced Accelerator R&D (AKA the Marx Panel) and was selected to serve on the National Academies Committee for the Scientific Assessment of Free-Electron Laser Technology for Naval Applications. He served as co-chair of the international Free-Electron Laser Conference FEL'95, Program chair of PAC'99 and FEL'01, Chair 1993 of Towards Short Wavelength FEL Workshop, 2004 Advanced Accelerator Concepts Workshop and many other scientific meetings. His public service roles include past Secretary-Treasurer of APS/DPB and Chair of the IEEE/NPSS Particle Accelerator Science and Technology Committee and service on the editorial board of PRST-AB, initiated the joint accelerator conferences web site JACoW. He is the author or co-author of over three hundred and sixty publications.

Citation: *For outstanding contributions to the fields of high energy physics accelerators and free electron lasers.*

Ilan Ben-Zvi can be reached at Brookhaven National Lab, PO Box 5000, Upton, NY 11973-5000; Phone: +1 631 344 5143; Fax: +1 631 344 5954; E-mail: benzvi@bnl.gov.

Makes us even

Forgive, O Lord,
my little jokes on
Thee
And I'll forgive
They great big
one on me.

Robert Frost

RICHARD F. SHEA AWARD STEVEN H. GOLD

Steven H. Gold of the U.S. Naval Research Laboratory (NRL) in Washington, DC is the winner of the 2008 IEEE/NPSS Richard F. Shea Distinguished Member Award, which recognizes outstanding contributions through leadership and service to the NPSS and to the fields of Nuclear and Plasma Sciences.

Dr. Gold is the Senior Scientist for Radiation Generation Physics in the Beam Physics Branch at NRL, where he has worked for the last 28 years. He is the head of the NRL Magnicon Facility, where he directs a program to study advanced accelerator technologies, including dielectric-loaded accelerators and active microwave pulse compressors, using a 25 MW, 11.4 GHz magnicon amplifier tube that was developed there. Dr. Gold has published more than 50 papers in refereed

journals, holds 5 Patents and two Statutory Invention Registrations, and has been author or coauthor of more than 250 invited and contributed papers at scientific conferences and workshops, including more than 100 proceedings papers.

Dr. Gold has been involved with the Executive Committee (ExCom) of the NPSS Plasma Science and Applications Committee (PSAC) for the past 18 years, including three 3-year terms as an elected member, two years as Vice-Chair, and ten years as PSAC Secretary. He also served a recent term on the NPSS AdCom (2004-2007), where his assignments included chairing an ad hoc committee that created a restructuring plan for the editorial board of the IEEE Trans. Nucl. Sci., and service on a similar committee for the IEEE Trans. Plasma Sci. He served for 20 years as an



Steven H. Gold

Those were the days

I can remember when the air was clean and sex was dirty.

George Burns

Associate Editor of the IEEE Trans. Plasma Sci. (1988-2007), where he was responsible for a very successful continuing series of biennial special issues on High Power Microwave Generation, and has served on the program committee of the IEEE International Conference on Plasma Science (ICOPS) on a number of occasions, and as session organizer and session chair. He is currently chair of the NPSS Chapters and Local Activities Committee and Distinguished Lecturers

Coordinator, and serves as a member of the 2008 IEEE Fellow Committee. He is a Fellow of the IEEE and of the American Physical Society.

Citation: "For outstanding contributions to the IEEE Nuclear and Plasma Sciences Society and its Plasma Science and Applications Technical Committee."

Steven Gold can be reached at steven.gold@nrl.navy.mil.

EARLY ACHIEVEMENT AWARD FARHAT BEG



Farhat Beg
2008 Early
Achievement Award

Farhat Beg is currently an Associate Professor of Engineering Science at the Department of Mechanical and Aerospace Engineering, University of California, San Diego and a visiting Professor at Imperial College, London. He received his Ph. D. from Imperial College, London in 1995 and was a post-doctoral fellow there before joining UCSD in 2003. He has been working on various issues of high energy density physics including short pulse laser matter interactions, fast ignition and pulsed power driven Z-pinch (X-pinch, wire arrays and pulsed neutron sources). He was the first to present an empirical scaling (known as "Beg's scaling") of hot electron temperature with the laser intensity in short pulse laser matter interactions. He has been instrumental in proposing innovative ideas; his idea of producing a Z-pinch with a high-intensity-short-pulse laser has generated considerable interest in the community. He showed that a superfast Z-pinch can be created by a return current produced in response to escaping fast electrons in short pulse laser interaction with wire targets. He also demonstrated that a single capacitor based plasma focus could

be used as a neutron source to calibrate dark matter detectors. His work on single wire Z-pinch contributed significantly to the understanding of single wire pinch dynamics. In recent experiments, Dr. Beg demonstrated the use of compact X-pinch (with floor space $< 1\text{m}^2$) as a point x-ray source for characterization of inertial confinement fusion capsules. He has published over 80 articles in refereed journals on various topics of high energy density physics including fast ignition, relativistic laser matter interactions, wire array Z-pinch, x-pinch and x-ray and neutron sources. He is the general chair of the IEEE NPSS International Conference on Plasma Science (ICOPS) to be held in June 2009 in San Diego.

Citation: *For contributions to the understanding of electron transport in short pulse high intensity laser matter interactions and the physics of pulsed power driven z-pinch.*

Farhat Beg can be reached at Dept of Mechanical and Aerospace Engineering, UCSD, 9500 Gilman Dr, La Jolla, CA 92093-5004; Phone: +1 858 822 1266; Fax: +1 858 534 4543; E-mail: fbeg@ucsd.edu.

GRADUATE SCHOLARSHIP AWARDS

We are, as always, proud of the young people entering our field. These four individuals are especially noted by their faculty advisors for their "contributions to the fields of Nuclear and Plasma Sciences," and were judged on "Evidence of scholarship such as academic record, reports, presentations, publications, research plans, related projects and related work experience. Participation in IEEE activities through presentations, publications, student Chapter involvement, etc., will also be considered." (From the TAB Awards and Recognition Manual). We congratulate them all.

DAVID M. FRENCH

David M. French received his B.S. in physics from Colorado State University in 2006. He is currently pursuing a Ph.D. degree in nuclear science with emphasis on plasmas at the University of Michigan, Ann Arbor.

David works in the Plasma, Pulsed Power,

and Microwave Laboratory at the University of Michigan. His research is both experimental and simulation and his interests include laser based diagnostics on z-pinch experiments, high-current cathode development for the UM relativistic magnetron facility, and breakdown phenomena in high power microwave systems.



David M. French

BRAD W. HOFF

Brad W. Hoff (S'04) was born in St. Louis, MO, in 1976. He received a B.S. Degree in Physics from the U.S. Naval Academy, Annapolis, MD, in 1999. He received M.S.E degrees in nuclear engineering and electrical engineering from the University of Michigan in 2006 and 2007, respectively, and is currently pursuing a Ph.D. degree in nuclear engineering at the

University of Michigan.

Upon graduation from the U.S. Naval Academy, he served five years in the U.S. Navy. During his service in the Navy, he successfully completed the Navy's Nuclear Power Program and served as a nuclear trained officer aboard the aircraft carrier USS Enterprise (CVN 65).

His interests include high-power microwave sources and directed energy technology.



Brad W. Hoff

T. DANIEL LOVELESS

Daniel Loveless (Graduate Student Member, IEEE) received the B.S. degree in electrical engineering from Georgia Institute of Technology, Atlanta, GA in 2004 and the M.S. degree in electrical engineering from Vanderbilt University, Nashville, TN in 2007.

He is currently a Graduate Research Assistant in the radiation effects and reliability group in the Department of Electrical Engineering and Computer Science at Vanderbilt University, Nashville, TN. While at Vanderbilt University his work has included the design of single-event hardened mixed-signal circuit topologies such

as phase-locked loops, as well as the development of various techniques for the analysis of high-speed analog circuit topologies in radiation environments. His research interests include CMOS devices and technology, mixed-signal and analog circuit design, and radiation effects in CMOS microelectronics.

Mr. Loveless was awarded the Georgia Tech Alumni Association Scholarship from 2000 to 2004. In addition to being a member of IEEE, he is a member of the IEEE Nuclear Plasma and Sciences society, the IEEE Circuits and Systems Society, and Eta Kappa Nu Electrical Engineering Honor Society.



T. Daniel Loveless

JONATHAN A. PELLISH



Jonathan A. Pellish

Jonathan A. Pellish (Graduate Student Member, IEEE) received the B.S. degree in physics from Vanderbilt University, Nashville, TN in 2004 and the M.S. degree in electrical engineering from Vanderbilt University, Nashville, TN in 2006.

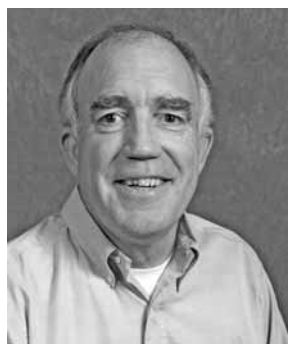
From 2002 to 2004, he was an Undergraduate Research Assistant in the Department of Physics and Astronomy at Vanderbilt University, Nashville, TN, working on heavy-ion- and photon-based materials analysis as well as several projects in experimental high-energy physics related to the BTeV experiment at Fermi National Laboratory, Batavia, IL. He is currently a Graduate Research Assistant in the radiation effects and reliability group in the Department of Electrical Engineering and Computer Science at Vanderbilt University, Nashville,

TN. During the summer and fall of 2007, he held a Graduate-Level Co-Op position at the IBM Austin Research Laboratory as part of an IBM Ph.D. Fellowship. While at IBM, he worked on device- and circuit-level characterization of radiation effects in IBM's 45 nm SOI process. His research interests include SiGe devices and technology, radiation effects in CMOS, SOI, and SiGe microelectronics, device-level simulation, and massively-parallel simulation of radiation transport.

Mr. Pellish was awarded an IBM Ph.D. Fellowship for 2007-2008 academic year. He is a member of the physics honorary society Sigma Pi Sigma. In addition to being a member of the IEEE, he is also a member of the American Physical Society and the American Association for the Advancement of Science.

2007 Nuclear Medical and Imaging Sciences Awards

The Edward J Hoffman Medical Imaging Scientist Award Ronald H. Huesman



Ronald H. Huesman

Ronald H. Huesman is presently Emeritus Senior Scientist at the E.O. Lawrence Berkeley National Laboratory in Berkeley, California. He was born and raised in San Francisco and received a B.S. in Electrical Engineering in 1963 at the University of California at Berkeley. He spent four years in and attained the rank of captain in the United States Marine Corps, and then completed a Ph.D. in Physics in 1974 at the University of California at Berkeley. His work in the field of medical imaging began with development of reconstruction algorithms for tomography. His areas of specialization have been data acquisition and data analysis for PET with emphasis on quantitation and the propagation of statistical uncertainty. Accurate modeling of the physical and statistical aspects of data acquisition and the incorporation of these details into parameter estimation have been a central theme of his research. More recently he has studied the problems of gantry motion in dynamic SPECT, respiratory motion in cardiac PET, and motion when imaging awake animals.

Principal contributions are the published catalogue of reconstruction tomography algorithms in use for 30 years; innovations in kinetic data acquisition; team experiments in cosmic particle interaction with human beings; and as one of the

principals in the development of the 280 crystal dynamic PET in 1976, the 2.6mm resolution 600 crystal PET in 1986, and the design of several advanced PET scanners now under development. He has been active in the exchange of scientific ideas through uninterrupted participation in the IEEE Nuclear Science and Medical Imaging Conferences since 1975 and is a D.O.E. awardee for Excellence in Technology Transfer. Dr. Huesman has been on conference organizing committees, completed a four year term serving as a regular member of the NIH study section in Diagnostic Radiology, served on the IEEE NMISC, serves as an Associate Editor of IEEE Transactions on Medical Imaging, is on the International Advisory Board of Physics in Medicine & Biology, chaired 3D-2001 - The Sixth International Meeting on Fully Three-Dimensional Image Reconstruction in Radiology and Nuclear Medicine, and was elected Fellow of the IEEE in 2002. The Nominator was Thomas Budinger, MD.

***Citation:** For important contributions to quantitative reconstruction tomography and statistically sound kinetic modeling in three-dimensional medical emission imaging.*

Ronald Huesman can be reached at trhuesman@lbl.gov

IEEE Young Investigator Medical Imaging Science Award

W. Paul Segars

Paul Segars received his B.S. degree in Computer Engineering from the University of South Carolina in 1996 and his Ph.D. in Biomedical Engineering from the University of North Carolina at Chapel Hill in 2001. In 2002, Paul joined the Division of Medical Imaging Physics in the Department of Radiology at Johns Hopkins University as an Assistant Professor with adjunct appointments in Biomedical Engineering and Environmental Health Sciences. In 2006, Paul moved back to the state of North Carolina accepting a position at Duke University as an Assistant Professor in the Departments of Radiology and Biomedical Engineering. There he is a member of the Duke Advanced Imaging Laboratories and is a faculty member in the Medical Physics graduate program.

Paul is among the leaders in the development of simulation tools for medical imaging research. In his research, he has applied state-of-the-art computer graphics techniques, as used in current computer games and movies, to develop realistic anatomical and physiological models. Foremost among these are the 4D NURBS-based Cardiac-Torso (NCAT) phantom, a computational model for the human body and car-

diac and respiratory motions, and the 4D Mouse Whole-Body (MOBY) phantom, a similar model for the laboratory mouse. Used in combination with accurate models of the imaging process, these phantoms can generate imaging data close to that of actual subjects. The anatomy and physiology of the phantoms are known, thus providing a gold standard from which to quantitatively evaluate and improve imaging devices and techniques. With such ability, both phantoms have gained a wide use in imaging research, having been distributed to over 300 academic users in the US and around the world as well as to several commercial medical imaging companies. Through the application of these phantoms in his own research as well as in the work of hundreds of others, Paul has made a significant contribution to the field of medical imaging. The nominator was Benjamin Tsui, PhD.

Citation: For contributions to the field of medical imaging through the development of innovative computerized simulation tools widely utilized by the research community.

Paul Segars can be reached at paul.segars@duke.edu .



W. Paul Segars

2008 Plasma Science and Applications Award

Phillip Sprangle

Phillip Sprangle, Chief Scientist and Head of the Beam Physics Branch in the Plasma Physics Division of the Naval Research Laboratory (NRL), has been selected as the recipient of the 2008 Institute of Electrical and Electronics Engineers (IEEE) Nuclear and Plasma Sciences Society Plasma Science and Applications Award. The award will be presented at the 2008 IEEE ICOPS meeting in June 2008 in Karlsruhe, Germany.

The award recognizes outstanding contributions to the field of plasma science in research or new applications.

Dr. Sprangle received his Ph.D. in Applied Physics at Cornell University in 1973. Presently his primary research areas include: atmospheric propagation of high-energy laser beams, free electron lasers, high-power fiber lasers for directed energy applications, ultra-short pulse laser matter interaction, and stand-

off detection of chemicals and special nuclear materials using ultra-short pulse lasers.

Dr. Sprangle joined the NRL Plasma Physics Division in 1974, and in 1979 became Head of the Plasma Theory Branch. In 1988 he was appointed to one of the first Scientific and Technical (ST) positions at NRL. Shortly after receiving the ST position he was appointed to the Senior Executive Service in 1990 and in 2006 to an NP-V Research Physicist position.

Dr. Sprangle is a Fellow of the American Physical Society, the IEEE, and the Directed Energy Professional Society. Dr. Sprangle is winner of the following awards i) International Free Electron Laser Prize (1991), ii) the E.O. Hulburt Science and Engineering Award (1986), iii) Sigma Xi Pure Science Award (1994), iv) two Technology Transfer Awards, and v) seven Alan Berman Research Publication Awards. Dr. Sprangle has published over 200 refereed scientific



Phillip Sprangle

And leases broken

Some politicians can be bought, but most can only be rented.

Richard Needham

To go where no man has gone before (or woman!)

Between two evils, I always pick the one I haven't tried before.

Mae West

articles and holds 12 U.S. invention patents. In 1979, Dr. Sprangle was chosen to represent the U.S. in one of the first US-USSR scientific exchange programs. He routinely briefs and serves as scientific expert on government committees.

Citation: *For pioneering research in plasma science, advanced accelerators, and advanced radiation sources.*

Phillip Sprangle can be reached at phillip.sprangle@nrl.navy.mil.

AWARD SOLICITATIONS

Nuclear Medical and Imaging Sciences NMISTC YOUNG INVESTIGATOR AND HOFFMAN MEDICAL IMAGING SCIENTIST AWARDS

These awards are sponsored by the IEEE-NPSS Nuclear and Medical Imaging Sciences Technical Committee (NMSITC), and are presented at the annual Medical Imaging Conference(*).

Deadline for application: July 15, 2008

The *Young Investigator Medical Imaging Science Award* is given annually to a young individual in recognition of significant and innovative technical contributions to the field of medical imaging science. The award consists of \$1,000, a certificate, and a plaque presented at the IEEE NPSS Medical Imaging Conference. Nominees will be judged according to their contributions to medical imaging science as demonstrated by the technical merit and creativity of their research. Priority will be given to nominees whose research has been published in peer-reviewed journals, especially if the nominee is the first author. Graduate students or other individuals, whose highest degree was awarded no more than six years prior to the date of nomination are eligible.

The *Edward J. Hoffman Medical Imaging Scientist Award* is given annually to an individual in recognition of outstanding contributions to the field of medical imaging science. The award, consisting of \$2,000, a certificate, and a plaque, is presented at the IEEE Medical Imaging Conference. In selecting the

recipient of this award, primary consideration will be given to the impact and innovativeness of a nominee's research in the field of medical imaging science. Other factors include a nominee's research contributions over a career and his/her influence on medical imaging science through education.

Please note there are several other IEEE NPSS awards that NSS/MIC attendees may qualify for:

- the Merit Award,
- the Richard F. Shea Distinguished Member Award,
- the Early Achievement Award,
- the Graduate Scholarship Award,
- the Paul Phelps Continuing Education Grant,
- NPSS Student Paper Awards

Please consider nominating your well-deserving colleagues for the IEEE Nuclear and Plasma Sciences Society and Committee awards. More details and application forms are available on the NPSS awards website: <http://www.ewh.ieee.org/soc/nps/awards.htm>

(*) Held in conjunction with the Nuclear Science Symposium in Dresden, Germany, October 19 - 25, 2008 <http://www.nss-mic.org/2008>

Paul Kinahan, the Chair of the NMISTC Awards Committee can be reached at: kinahan@u.washington.edu

ARTICLE

ARE YOU A SENIOR MEMBER?

Magazines and newspapers these days are full of articles lauding the advantages of growing older - movie theater discounts, reverse mortgages, a ready excuse for for-

getting names - an endless stream of goodies. One of the topics that never seems to be mentioned, however, is that the IEEE is a very special part of the universe. In our little corner, you can become

a Senior Member after only ten years of "professional practice" with five of those years being of "significant performance" (and you get to count some of the years of your education toward those ten). You do not have to, as I foolishly did, wait until your hair is gray. In order to remedy the lack of information on IEEE Senior Membership in the popular press, I wanted to share with you my experiences in acquiring the coveted "Senior" on my membership card, show how easy the process is, and urge all of you who are no longer complete whippersnappers to go for it. Note that you do not get movie discounts (at least not at any of my local theaters) but you can, at any time, pull out your IEEE card and use the "Senior Moment" excuse with full official documentation.

The requirements for Senior grade and the mechanics of applying are already nicely covered in an IEEE web page that you can get to from a link on the NPSS membership page (<http://ewh.ieee.org/soc/nps/joinnps.htm>) and so there is no need to cover them here except to summarize that you need to fill out a short on-line form, attach a recent CV, and then getting three colleagues to fill out an even shorter reference form. The only tricky part of this process is that the recommenders not only have to be IEEE members (isn't everyone?) but they have to be of Senior or Fellow grade. Thus your challenge is to find someone of Senior or Fellow grade who knows you and your work well enough to act as a reference for you to the Senior Member review panel.

Fellows are listed by name, region, and society on the main IEEE web site (<http://www.ieee.org/web/membership/fellows/index.html>) so you can browse through the lists to find some people you know and who know you. Senior members, however, while more numerous, are a bit more difficult to identify since there is no openly available on-line IEEE directory. Simply asking one's co-workers and colleagues certainly works - they should be flattered that you would assume that they are merited such recognition and maybe volunteer to join the search if they themselves are not yet elevated. A somewhat old membership directory is available to AdCom. Thus, any member of AdCom can search for you to try to find Senior members in your company or institute. It is possible that a list of Senior Members' names may

be posted on the NPSS site. (In the spirit of full disclosure, I used my access to this list to discover that about half my eligible friends and colleagues were not Senior Members and so they can expect to be contacted individually.)

Once you have completed your application and asked your three references to submit their recommendations (note that you will need their IEEE member numbers and they will need yours as part of this process) you will be sent an e-mail acknowledging the application and pointing you to a web-based list of applications. This is a useful site to check after a while as it will list you and the status of your references (by initials). You will be able to discover the difference between your friend who says "of course" and fills out the form in the next hour and your other friend who says "certainly" and then forgets all about it - I discovered that a reminder in three or four weeks produced a reasonable amount of guilt and that a second reminder was all it took to get my application in shape to be reviewed. The application web site also lists when the next meeting of the grade elevation committee is scheduled to take place and hints that you will get e-mail confirmation soon after that meeting.

There will be a couple of real physical mailings from IEEE within a few weeks - a congratulatory letter with a \$25 discount certificate toward joining another society, another benefit, and then a brand new membership card with "Senior" emblazoned on it. In addition, some weeks later, a rather nice engraved plaque arrives. The whole process, for me, took about five months.

In summary, the requirements for Senior Member grade are straightforward, the effort involved in applying for senior grade is not great, the cost is zero (0), and the benefits are significant. In addition to your own personal sense of accomplishment, the Society (NPSS) gets some recognition from the Institute.

I urge all of you who are past their first decade of professional service to explore upgrading to Senior Member status and I would be glad to try to help anyone who may encounter any problems along the way.

Rick Van Berg can be reached at rick@hep.upenn.edu. He is eager to help you elevate your membership status.



Rick Van Berg
Membership
Committee, Senior
Member Officer

Mum's the word

The more you
are talked about
the less powerful
you are.

*Benjamin
Disraeli*

But you have to know when

A fool must now
and then be
right, by chance.

William Cowper

2008 Nuclear and Plasma Sciences Society

Administrative Committee

| | |
|----------------------------|--------------------------|
| President | Jane M. Lehr |
| Vice President | Craig Woody |
| Secretary | Alberta M. Dawson Larsen |
| Treasurer | Edward J. Lampo |
| Most Recent Past President | William W. Moses |
| Division IV Director | Edward Della Torre |

Elected Administrative Committee Members

Terms ending 2008: Uwe Bratzler (Transnational), Christopher Deeney (PSA), Ronald J. Jaszczak (NMIS)

Terms ending 2009: Daniel M. Fleetwood (RE), Anthony Peratt (PSA), Robert E. Reinovsky (PPST), Stefan Ritt (CANPS), Craig L. Woody (RI).

Terms ending 2010: Sandra Biedron (PAST), Eric Frey (NMIS), James Schwank (RE), Rick Van Berg (RI)

Terms ending 2011: David Abe (PSA), Janet L. Barth (RE), Dillon McDaniel (PPST), Hutch Neilson (FE)

Technical Committee Chairs

Computer Applications in Nuclear and Plasma Science (CANPS): Jean-Pierre Martin; Radiation Instrumentation (RI): Richard Lanza; Fusion Technology (FT): Mark Tillack; Nuclear Medical and Imaging Sciences (NMIS): Charles C. Watson; Particle Accelerator Science and Technology (PAST): Ilan Ben-Zvi; Plasma Science and Applications (PSA): Ronald M. Gilgenbach; Pulsed Power Science and Technology (PPST): Edl Schamiloglu; Radiation Effects (RE): Timothy R. Oldham.

Functional Committee Chairs

Awards: Peter S. Winokur; Chapters and Local Activities Chair; Distinguished Lecturers Coordinator: Steven H. Gold; Communications: Peter N. Clout; Fellow Candidate Evaluation: Peter S. Winokur; Finance: Harold Flescher; Conference Policy: Raymond S. Larsen; Membership: Christoph Ilgner; Nominations: William W. Moses; Publications: Paul V. Dressendorfer; Standards: Ronald M. Keyser; Transnational: Uwe Bratzler.

Publications

Publications Committee Chair: Paul V. Dressendorfer; Editor, IEEE Transactions on Nuclear Science: Paul V. Dressendorfer; Editor, IEEE Transactions on Plasma Science: Steven J. Gitomer; Editor, IEEE Transaction on Medical Imaging: Max A. Viergever; Conference Editors, Transactions on Nuclear Science: Zane Bell; John Cressler; Joel Karp; Jean-Pierre Dufey; Editor, Newsletter: Albe Dawson Larsen; Editor Emeritus: W. Kenneth Dawson.

Liaison Representatives on other IEEE Committees

Coalition for Plasma Science: Gerald L. Rogoff; Distinguished Lecturer Program Coordinator; Energy Policy: Charles Neumeyer; R&D Policy: Sandra G. Biedron; RADECS Liaisons: Harold Flescher and Ronald Schrimpf; Sensors Council: Anthony D. Lavietes; Social Implications of Technology: Raymond S. Larsen; Standards: Michael Unterweger; TMI: A. Bertrand Brill and Ronald J. Jaszczak. Medical: A. Bertrand Brill, International Conferences: Patrick Le Dü; IEEE Women In Science: Allan H. Johnston.

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