ICOPS-Beams 2014: The 41st IEEE International Conference on Plasma Science (ICOPS) and the 20th IEEE International Conference on High Power Particle Beams (Beams14)

May 25th – 29th, 2014
Marriott-Wardman Park Hotel, Washington, DC USA

The 41st IEEE International Conference on Plasma Science (ICOPS) and the 20th IEEE International Conference on High Power Particle Beams (Beams14) will be combining for the first time in 2014 as the IEEE ICOPS-Beams meeting. This meeting will be held May 25th – 29th, 2014, in Washington, DC at the historic Marriott-Wardman Park Hotel in Northwest DC. This conference follows the format of previous ICOPS meetings with topics from traditional plasma physics and engineering, but also includes enhanced technical sessions comprising pulsed-power technology, simulations, and diagnostics for intense charged-particle beams and their applications. The conference also features exhibits and two 1.5-day minicourses entitled Low Temperature Atmospheric Pressure Plasmas and Atomic and Radiation Physics. Invited and plenary papers will be published in a Special Issue of the IEEE Transactions on Plasma Science and select contributed papers will be published in “Beams” proceedings, open to all attendees of the combined conference.

ICOPS-Beams 2014 is available via Social Networking such as Facebook and LinkedIn.

We encourage you to join these groups, create topics, make friends and assist others who can profit from your experience. Conference registration for ICOPS-Beams 2014 is currently ongoing; attendees can register through the conference website at: https://www.ece.unm.edu/icops-beams2014/.

The General Conference Chair is Dr. Joseph Schumer of the Naval Research Laboratory. Dr. Schumer is a nationally and internationally recognized member of the Pulsed Power and Plasma Physics community. As a long-time resident of the Washington, DC area, Dr. Schumer is proud to welcome you to the region. As the political center of the United States, DC is a great place. Situated on 16 breathtaking acres, the conference hotel in NW Washington, DC has hosted a long list of U.S. Presidents, dignitaries and VIPs. The conference is located between Georgetown, the Adams Morgan district, and Dupont Circle, finding a home between ethnic restaurants, interesting and cosmopolitan neighborhoods, cultural diversity, quirky shops, and offbeat bars and clubs. Washington, DC is a perfect place for an international gathering of the world’s experts in the technology and science of plasmas and pulsed power.

TECHNICAL PROGRAM

There are two Technical Program Chairs for the ICOPS-Beams 2014 conference, Dr. John Luginsland (Air Force Office of Scientific Research) will handle the traditional ICOPS topics, while Dr. Bruce Weber (Naval Research Laboratory) will handle the traditional Beams topics. These Technical Co-Chairs are committed to maintaining the high quality of papers presented at the conference.

ICOPS-BEAMS Continued on PAGE 2
ICOPS-Beams 2014

MICROWAVE GENERATION AND PLASMA INTERACTIONS
- Intense Beam Microwave Generation
- Fast-Wave Devices
- Slow-Wave Devices
- Vacuum Microelectronics and THz Devices
- Codes and Modeling
- NonFusion Microwave Systems
- Microwave Plasma Interaction

CHARGED PARTICLE BEAMS AND SOURCES
- Plasma, ion, and Electron Sources
- Intense Electron and Ion Beams

HIGH ENERGY DENSITY PLASMAS AND APPLICATIONS
- Fusion (inertial, Magnetic and Alternate Concepts)
- Particle Acceleration with Laser and Beams
- Radiation Physics, X-ray lasers
- High Energy Density Matter
- Laser Produced Plasmas
- Fast Z-pinchs
- Plasma Material Interactions

INDUSTRIAL, COMMERCIAL, AND MEDICAL APPLICATIONS
- Nonequilibrium Plasma Applications
- High Pressure and Thermal Plasma Processing
- Plasma Thrusters
- Plasma for Lighting, Displays, & Microdischarges
- Environmental and Industrial Applications
- Plasma Medicine and Biological Effects

DIAGNOSTICS
- Optical and X-ray diagnostics
- Microwave and FIR diagnostics
- Particle Diagnostics
- Pulsed Power Diagnostics

PULSED POWER AND OTHER PLASMA APPLICATIONS
- Insulation and Dielectric Breakdown
- Opening and Closing Switches
- Generators and Networks
- Compact and Rf-Pulsed Pulsed Power

ABSTRACT SUBMISSION IS CURRENTLY OPEN!

Abstracts will be accepted until Monday, February 10th, 2014. Please submit abstracts online at: www.ece.unm.edu/icops-beams2014/. Accepted abstracts are published in IEEE Explore and must meet the IEEE standards of originality and quality. Please see the website for an abstract template and guidelines for abstract submission.

Manuscripts for the Conference Proceedings can be submitted after an abstract has been officially accepted for presentation at ICOPS-Beams 2014. The website will contain links to the manuscript template, as well as detailed instructions for manuscript preparation.

For our foreign colleagues who require a visa for entry into the United States, a request for an invitation letter can be made on the abstract submission website when an abstract is submitted. If the abstract is accepted for presentation, a notification and letter of invitation will be sent to the authors.

MINICOURSES
Two excellent short courses have been designed to complement the technical programs of this combined conference will be held on May 29th and 30th, 2014. The first Minicourse for ICOPS-Beams 2014 is entitled Low Temperature Atmospheric Pressure Plasmas with lectures by Prof. John Foster (University of Michigan) and his colleagues, and will be held in the Marriott-Wardman Park Hotel. The second, parallel Minicourse for ICOPS-Beams 2014 is entitled Atomic and Radiation Physics with lectures by Dr. Arati Dasgupta (Naval Research Laboratory) and her colleagues, and will held in the Wilson B Room of the Marriott-Wardman Park Hotel. These minicourses are designed for graduate students and active scientists working in the field.

SOCIAL EVENTS
A welcome reception is scheduled for Sunday, May 25th, 2014 during opening registration. A general all-conference poster session reception is planned for Tuesday, May 27th. And finally, the ICOPS-Beams Awards Banquet is tentatively scheduled for Wednesday, May 28th, 2014. Please check the website for additional information.

A Companion Program has been organized to help you and your companions have a wonderful visit to Washington, DC. Washington
President’s Report

Please join me in welcoming our new members to the NPSS. Many joined us at one of our sponsored or co-sponsored conferences in the past year.

It is important to NPSS that we have the support of the community it serves through membership, and I believe that membership in your community’s professional society is not just important to you but essential. Your membership tells everyone that you are serious about your professional work, and it means that you are more connected through this newsletter and member events. For help, answers to questions, or if you have comments, you can find the members of the NPSS AdCom on the NPSS web site (www.ieee.org/npss) and contact the responsible member directly or you can contact Peter Clout, Chairman of the NPSS Communications Committee.

Our Society is run by volunteers. Volunteers organize and oversee the conferences, volunteers manage the flow of papers presented for conferences and publications, including appropriate reviews to ensure quality and clarity. In addition, volunteers manage each of the eight technical areas through the Technical Committees, and volunteers manage the overall activities of the Society and the relationship with the IEEE. Finally, volunteers manage the general administration of our Society. All this is done to support you in your professional work and help you better succeed. Every volunteer that I talk with confirms that they are amply repaid for all the time they freely give in the broadening of their professional and managerial experiences and the new friends and contacts that they make.

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So, this year I am asking you to rejoin IEEE and NPSS for 2014 and consider:

> Volunteering to help, either as a reviewer for one of our journals or in the organization of a future conference in the series that you attend.

> Telling your friends and colleagues about our activities. We are happy to ship copies of our materials on request if these would be helpful (contact Peter Clout, dusit@vista-control.com).

IEEE is the world’s largest professional association dedicated to advancing technological innovation and excellence for the benefit of humanity. The voting membership of IEEE elects a new president each year, who serves for three years—first as President-elect, then as President and CEO, and finally as Past President. IEEE presidents also serve on the two top-tier IEEE governing bodies: the IEEE Board of Directors and the IEEE Assembly. Six subordinate boards, each of which has an elected volunteer leader, govern major areas of IEEE interest. These are:

- Educational Activities Board
- IEEE-USA Board
- Member and Geographic Activities Board (MGA Board)
- Publication Services and Products Board
- Standards Association Board
- Technical Activities Board

IEEE Technical Activities (IEEE-TA) is a major component of IEEE that includes all programs of the 45 IEEE Societies, such as the NPSS, and Technical Councils and programs of the Technical Activities Board (TAB) and the Technical Activities Department (TAD). As delegated by the IEEE Board of Directors, TAB establishes operational procedures and activities in the broadening of the IEEE Societies and Technical Councils, while supporting these technical communities in developing and delivering timely intellectual property products and conferences on current or emerging technologies. Through these activities, TAB directs the advancement of the theory and practice of electrical, electronics, communications, computer engineering, computer science, the allied branches of engineering, and the related arts and sciences and technologies and their application for the benefit of IEEE members worldwide as well as for the general public. Eighteen volunteer subcommittees make this ambitious undertaking possible. As the name of TAB implies, technical innovation and excellence are a major focus of the board, especially fostering advancement in IEEE emerging fields. The charter of the TAB: IEEE Future Directions Committee is to anticipate and direct the development of existing, new, and emerging technologies and spearhead their investigation and development by IEEE. The primary working objective of the IEEE Future Directions Committee is to:

- Incubate emerging technologies and new applications of current technologies.

- Identify opportunities to engage the engineering community and the general public.

- Work with IEEE members and staff to focus on emerging technologies through technical, professional, and educational activities.

- Serve as a catalyst for new conference, publications, standards, educational products, forums, white papers, grants and projects to support new technologies.

The Future Directions Committee’s current working groups and chairs/co-chairs are:

- Smart Grid unpaid

- Cloud Computing
  Steve Diamond

- Transportation Electrification
  Lee Stogner

- Life Sciences
  Bin He, M. Widyasagar

- Software Defined Networks
  Antonio Morabito

- Green ICT
  Jodie Elmirghami

- Robotics Computing
  Elie Elmirghami

- Internet of Things
  Roberta Minervi (Conference GC)

If you would like to scratch your new technology itch, I invite you to browse the Future Directions Committee’s WEB page (http://www.ieee.org/about/technologies/index.html) and read about exciting new developments in these areas of technology research and discover opportunities to interact with members of the research communities.

Finally, I would like to remind NPSS members that our Society acknowledges outstanding work and papers with IEEE awards that recognize and promote each awardee’s career. I am thankful for the extensive awards program of the IEEE, NPSS, and our Technical Committees which permits us to acknowledge the professional achievements of peers. This is a special tribute which needs to be done more often. Therefore, I urge each of our NPSS members to review our IEEE and NPSS Awards portfolio and submit at least one nomination. We all know some remarkable individuals who don’t have the accolades they deserve and, as seen in the summary of the Awards programs below, a broad range of options is available to us.

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IEEE Awards are high level awards that are administered by IEEE and open to all IEEE members. While there are many IEEE awards (http://www.ieee.org/about/awards/index.html), there are a few that are particularly relevant to the technical fields of most NPSS members. Their nomination deadlines, forms, and submission instructions depend on the Award. These Awards are the IEEE Marie Skłodowska-Curie Technical Field Award and IEEE Medal for Healthcare Innovations and Technology. There are also four NPSS Awards that can be given to applicants who are in any of the technical fields of the NPSS. The deadline for receiving nominations for any of these Awards is January 31st of each year. All nomination forms and supporting materials must be received by this deadline to be considered. The NPSS Awards are submitted electronically. Forms and instructions for submission can be found at http://ewh.ieee.org/soc/npss/awards.htm.

In addition, our Technical Committees sponsor awards that are generally given only to people who work in that specific technical field. The Awards are administered by the individual Technical Committees, and so their nomination deadlines, forms, and submission instructions depend on the Award.

Most NPSS conferences also present an Award for the Outstanding Student Paper presented at that conference. For information on the submission instructions, forms, and application deadlines for these Awards, please contact the General Chairman of the relevant Conference. In addition, NPSS-sponsored Conferences that have Short Courses solicit nominations for Paul Phelps Continuing Education Grants. These grants are intended either for tuition in NPSS Sponsored Short Courses or for partial or total travel expenses to attend NPSS Short Courses. The grants are available for outstanding Student Members of NPSS and unemployed members of NPSS who need assistance in changing career directions. Application forms can be obtained using the link below, and information on the submission instructions and application deadlines should be obtained from the General Chairman of the relevant Conference.

Finally, the Nuclear Science Symposium and the Medical Imaging Conference offer Valentin T. Jordanov Radiation Instrumentation Travel Grants to promote graduate-level study and research on radiation instrumentation. Jordanov Travel Grant awardees will be reimbursed for expenses associated with traveling to and participating in the NTS/MIC. Information on the submission instructions and application deadlines should be obtained from the NTS/MIC Conference web site.

Links to information on these Awards can be found on the NPSS Web site at http://ewh.ieee.org/soc/npss/awards.htm. A useful summary of all NPSS and Technical Committee awards which includes the description of the award, prize, funding, eligibility, and basis for judging can be found at http://ewh.ieee.org/soc/npss/docs/npssawards.pdf. Please take a moment to review the summary and use it as a guide to identify colleagues who have earned recognition in the categories. If you have questions about awards, please email Craig Woody, our NPSS Awards Chair, at woody@bnl.gov.
Secretary’s Report

Our next AdCom meeting will have been held on November 2nd in Seoul, Korea, following the NSS/MIC/RTSD conferences, so will be reported on in the March newsletter. The first AdCom meeting of 2014 will be in Santa Fe, New Mexico on Friday, February 28th and Saturday, March 1st and will include a retreat as well as an AdCom meeting.

As it is the end of the year, we have election results to report as well as the announcement of some new technical committee chairpersons. Newly elected (some are old-timers elected yet again) include Stefan Ritt, Computer Applications in Nuclear and Plasma Sciences; Steven Gold, Plasma Science and Applications; Weihsia Jiang, Pulled Power Sciences and Technology; David Hiemstra, Radiation Effects; and Dick Lanza, Radiation Instrumentation. The new technical committee chairpersons include Martin Perschke (ENE), Computer Applications in Nuclear and Plasma Sciences; Dimitris Voutsis (University of Brest, FR), Nuclear Medical and Imaging Science and Technology. The March 2014 Newsletter will contain more information about these individuals.

We thank the following outgoing AdCom members, both elected and TC chairs, for their service: Christian Bohm (CANPS), Gerald Cooperstein (PPST), Paul Dold (RE), Glenn Knoll (RF), and Suleman Surti (NMISC).

Albee Larsen, IEEE NPSS Secretary and Newsletter Editor, can be reached at SLAC National Accelerator Laboratory, MS 64, 2575 Sand Hill Road, Menlo Park, CA 94025; 650-926-2748; email: almlarsen@slac.stanford.edu.

Bill Moses Elected Division IV Director

Congratulations go to Bill Moses, who was recently elected to the IEEE Board of Directors. He represents Division IV, which includes the NPSS as well as six other IEEE Societies (Antennas & Propagation, Broadcast Technology, Consumer Electronics, Electromagnetic Compatibility, Magnetics, and Microwave Theory & Techniques), and his two-year term begins in January 2015.

For the next year he will serve as Director-elect and ‘learn the ropes’ from the current Division IV Director, Josef Modelski.

Bill received his B.A. from Dartmouth College, graduating Magna Cum Laude with Highest Distinction in Physics, and his Ph.D. in Physics from the University of California, Berkeley in 1986. Since then he has worked at Lawrence Berkeley National Laboratory, where he is a Senior Staff Scientist. His career has centered on imaging ionizing radiation, including nuclear medicine imaging (especially Positron Emission Tomography or PET), homeland security, subatomic particle physics, and environmental remediation.

He has been active in the NSS/MIC for many years and has served in a variety of positions within IEEE. He helped organize the first Medical Imaging Conference (MIC) in 1991 and helped found the RISC in 1995. He has been elected to serve on AdCom three times, representing the NMISC from 1996–2000 and the RISC from 2002–2006 and 2011–2015. He was President of the NSS/MIC from 2004 to 2006, and has also been active at higher levels in the IEEE, and presently serves as a member of the Publication Products and Services Board and as Chair of the IEEE Conferences Committee.

The platform that he ran on was that of helping the volunteers within IEEE, who are its lifeblood. He feels that they create and manage the IEEE conferences and publications, and they develop the innovations that IEEE needs, and that IEEE needs to make it easier for them to run conferences—to make conference organizers want to run their conferences under IEEE because it is so easy! In addition, he feels that IEEE is an aging organization and it needs to attract, encourage, mentor, and empower the next generation of scientists and engineers.

Bill Moses can be reached by email at wvmoses@bl.gov.

MEDITERRANEAN BLUE
BY: MOUNIR LAROUSSI

A sea like no other sea, Theater of the Odyssey, and of Cleopatra and Anthony. The sea of war and of peace. Cradle of known civilizations, and jealous keeper of secrets of civilizations yet unknown.

To me, it is simply the sea, where I took my first swim, and at the surface I saw a reassuring face smiling at me. My father was standing in chest deep water, and I heard him saying, "son, you got to keep your legs and arms moving." To me, it is simply the sea, where I fell in love with the Mediterranean blue, where I lingered long summer hours at the shore lazily dreaming, about people and lands beyond the faraway infinite line, that elusive border separating two magical shades of the azure.

Mounir Laroussi is Professor and Director of the Laser & Plasma Engineering Institute at Old Dominion University, Norfolk, VA. He can be reached at mlarouss@odu.edu

OR TEACH IT?
What better way to prove you understand a subject than to make money out of it.

—Harold Rosenberg

OUTMATCHED!
Men play the game, women know the score.

—Roger Waddis

WHERE IGNORANCE IS BLISS...
Doctors are men who prescribe medicines of which they know little, to cure diseases of which they know less, in human beings of whom they know nothing.

—Voltaire

SO I PRESUME
Assumption is the mother of screw-up.

—Angela Donghia

DOWN TO EARTH
An atheist is a man who has no invisible means of support.

—John Buchan (Lord Tweedsmuir)

FROM YOU TOO!
Honest criticism is hard to take, particularly from a relative, a friend, an acquaintance, or a stranger.

—Franklin P. Jones

Bill Moses Division IV Director-elect
Planning of the next Real Time Conference goes ahead at full speed. It will take place in Nara, Japan, on May 27th to May 30th, 2014. The University of Osaka, the RIKEN Research Institute and the KEK High Energy Accelerator Research Organization are the organizing bodies under the chairmanship of Masaharu Nomachi. The conference poster is currently in press, and the web site will open soon. An executive committee site visit will have happened in conjunction with the 2013 NYS/MIC conference which was held in late October in Seoul, Korea, not far from Japan. This visit allowed many details of the conference to be finalized such as the program format, the banquet and the traditional excursion.

The historic town of Nara has many old temples and shrines identified as a UNESCO world cultural heritage site and is therefore a major traditional excursion.

Suleman Suri can be reached at University of Pennsylvania, Department of Radiology, 404 Blockley Hall, 423 Guardian Drive, Philadelphia, PA 19104 USA; Phone: +1 215-662-7214; Fax: +1 215-57-480; E-mail: surit@mail.med.upenn.edu

Nuclear Medical and Imaging Sciences

As you read this newsletter the 2013 IEEE NSS/MIC/Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC) held at the COEX Convention Center in Seoul, South Korea from Oct. 27th-Nov. 02nd will be over. I would like to thank Hae-Joung Kim (General Chair), Jae Sung Lee (MIC Program Chair), Craig Levin (MIC Program Deputy Chair), and all other meeting organizers for their hard work in organizing a successful meeting. A total of 691 abstracts were submitted for the MIC program. From all these submissions, 136 MIC talks were presented over two joint (NSS-MIC) and one triple-joint (NSS-MIC-RTS) oral sessions, and 14 MIC oral sessions. Also, 497 posters were presented over nine poster sessions. The 14 MIC oral sessions were split into five parallel and four single sessions, while the nine poster sessions were distributed over three parallel sessions. Two plenary sessions were also held on Wednesday Oct. 30th. The first plenary session had two invited talks. The first talk, entitled “SEE the Future of Medical Imaging through Consumer Electronics and Information Technologies,” was presented by Dr. J. O. Samsung Electronics, Suwon, Korea). The second talk, entitled “Forays into Molecular Imaging,” was presented by Dr. M.C. Pomper (Johns Hopkins Medical Institution, Baltimore, MD, USA). In the second plenary session we honored this year’s Edward J. Hoffman Medical Imaging Scientist and Bruce Hasegawa Young Investigator Medical Imaging Science award winners, followed by four scientific presentations.

For future meetings, the 2014 IEEE NSS/ MIC meeting will take place at the Washington State Convention Center, Seattle, WA from Nov. 07th–10th. Tony Lavietes will be the General Chair for the meeting, while George Eli Fahri and Katia Parodi will serve as the MIC Program Chair and Deputy Program Chair, respectively. The organizing committee is actively planning to make a successful meeting and will have a poster and preliminary schedule ready in the near future.

The 2015 IEEE NSS/MIC meeting will take place at the Town and Country Resort in San Diego, CA with Veena Soni as the General Chair for the conference. Meeting. Adam Alessie and Lawrence MacDonald will serve as the MIC Program Chair and Deputy Program Chair, respectively. The 2016 IEEE NSS/MIC meeting will take place in Strasbourg, France with Maxim Titov as the General Chair.

For this year’s elections we had a total of eight candidates for five seats on the NMISTIC. The new elected Council members are David Bassive, Anna Celler, Katia Parodi, Dennis Schaart, and Stefano Vandenberghhe with three-year terms starting on January 01, 2014. I would like to thank all of the candidates for volunteering their time to serve the NMISTIC council. If you are interested in becoming more involved in the oversight of the MIC meeting please consider running for an NMISTIC council position. Five individuals are elected each year for a three-year term. For more information please go to the NMISTIC webpage (http://ewh.ieee.org/soc/nps/nmistic/index.html).

As a reminder, NMISTIC has oversight of the Medical Imaging Conference component of the annual IEEE NSS/MIC. This includes voting on site selection, approval of the MIC chair, and promotion of activities useful to all IEEE NSS/MIC members who are interested in medical imaging. If you are interested in serving on the NMISTIC please contact Andrew Goertzen (Andrew.Goertzen@med.unamibasa.ca), NMISTIC Secretary and Chair of the Nominations Subcommittee.

Finally, this newsletter marks the last to be written by me since my term as the NMISTIC chair ends on Dec. 31st, 2013. It was an honor to serve this committee and I would like to thank all of the members and individual subcommittee chairs for making my job easier. Dennis Schaart will be taking over the duties of NMISTIC chair starting on Jan 01st, 2014. I am sure he will do an excellent job and I wish him all the best.

Suleman Suri can be reached at University of Pennsylvania, Department of Radiology, 404 Blockley Hall, 423 Guardian Drive, Philadelphia, PA 19104 USA; Phone: +1 215-662-7214; Fax: +1 215-57-480; E-mail: surit@mail.med.upenn.edu

RADIATION EFFECTS NEWS

Radiation Effects Committee—July 2013 Annual Report

Marty Shaneyfelt is the present chairman of the Radiation Effects Steering Group, which oversees NSREC Conferences. The IEEE Radiation Effects Committee (REC) held its annual open meeting on July 11th, 2013, at the Hyatt Regency Hotel, San Francisco, during the 2013 Nuclear and Space Radiation Effects Conference (NSREC). The meeting included presentations from the general chairs of the 2012 through 2014 NSRECs. In addition, presentations were made on the upcoming RADECS 2013 conference.

An election was held during the open meeting for a new junior member-at-large to the Radiation Effects Steering Group (REC). The REC welcomes Sylvain Girard, Université de Saint-Etienne, as its newly elected junior Member-at-Large. Sylvain joins Nick van Vroon, Interstel Corporation, and Gary Lum, Lockheed Martin Space Systems Company, who are serving as Senior-Member-at-Large and Member-at-Large, respectively.

During the Open Meeting, Marty presented awards to outgoing REC Member-at-Large Vincent Pouget, ITE—CNES and outgoing Senior Associate Editor for Radiation Effects of the IEEE TNS Jim Schwick, Sandia National Laboratories. He also thanked guest editors Pascale Gouker, MIT Lincoln Laboratory, Veronique Ferlet-Cavrois, ESA, and Jonathan Pellish, NASA GSFC for their contributions to the June 2013 Special Issue of the IEEE Transactions on Nuclear Science (TNS) commemorating the 50th Anniversary of the NSREC. The special issue consists of papers that provide historical reviews and that summarize current issues of interest to our colleagues in the radiation effects community. Marty announced the general chairs for the upcoming NSRECs: Robert Ecoffet, CNES, Mike Xapsos, NASA GSFC, Robert Reid, Vanderbilt, and Veronique Ferlet-Cavrois, ESA, for the 2014—2017 NSRECs, respectively.

Ken Lavel, NASA/GSFC, 2012 Conference General Chair, recognized his conference committee and government and corporate supporters. Ken and his team organized an outstanding NSREC conference in Miami, FL.

Jeff Black, Sandia National Laboratories, 2013 Conference General Chair, summarized some statistics for the 2013 conference. A total of 456 people attended the technical sessions and 338 people attended the short course. In addition, we registered 106 attendees for the industrial exhibits session only and there were 266 registered guests. The technical sessions were very strong, with 133 papers presented during the four-day conference (47 oral presentations, 45 posters, and 41 Data Workshop). It is also of interest to note that a high school student presented one of the data workshop posters at the conference. This is the first time that a high school student has ever presented a paper at NSREC. In addition to the technical program, there were four outstanding tutorial reviews given during the short course on July 8th. To commemorate the 50th Anniversary of the NSREC conference, attendees received a DVD that included all of the prior published IEEE TNS papers from the conference, a copy of the June 2013 Special Issue of the IEEE TNS, and attended a special 50th Anniversary Celebration Reception on Monday evening, July 8th.

Robert Ecoffet, CNES, 2014 Conference General Chair, announced that NSREC will be held July 14th–18th, 2014, in Paris, France, at the Marriott Rive Gauche. This conference will feature a...
NPSS News

Maximum of $8,000/year for all

At any major NPSS-sponsored

While I said above that members of our Society are eligible, nonmembers of NPSS and IEEE are also eligible to be nominated. Also, the award can be given to up to three people who either independently or working as a team, were responsible for a seminal development within the scope of the award.

Curie Award

The areas of technology that would be eligible for recognition through the Curie Award are those associated with nuclear and plasma sciences and engineering. This covers a fairly broad scope of activities, but the unifying themes are ionizing radiation and ionized gases, especially their behavior, measurement and effects. Specific areas include, but are not limited to, radiation instrumentation, radiation effects, nuclear medical imaging, plasma science, pulsed power, particle accelerators, controlled nuclear fusion and computer applications.

Criteria considered by the IEEE Marie Skłodowska-Curie Award Selection Committee include importance of individual scientific contributions, importance of scientific contributions made by teams led by the candidate, seminal nature of the contributions, innovation/originality, societal benefit, impact on the profession and the quality of the nomination.

The award consists of a bronze medal, certificate and an honorarium.

For more information, nomination forms and a guide to nominating, please go to: http://www.ieee.org/about/awards/files/curie.html.

Healthcare Technology

The purpose of the IEEE Medal on Innovations in Healthcare Technology is to recognize and identify the outstanding achievements and contributions for the work of engineers in the fields of medicine and biology.

The medal is presented annually to an individual, a team of individuals, or multiple recipients for outstanding contributions and/or innovations in engineering within the fields of medicine, biology, and healthcare technology. The areas of technology that would be eligible for recognition of this award include (but are not limited to) bio-signal processing, biomedical image and image processing (ultrasound, PET, MRI, etc), bioinstrumentation, biosensors, bio-micro/nano technologies, bio-informatics, computational biology and systems biology and systems biology, cardiovascular and respiratory systems engineering, neural and rehabilitation engineering, cellular and tissue engineering, bio-materials, bio-robotics, bio-mechanics, therapeutic and diagnostic systems, medical device design and development, healthcare information systems, telemedicine, and emerging technologies in biomedicine (e.g., bioinformatics).

The criteria that are considered by the IEEE Medal on Innovations in Healthcare Technology Selection Committee shall include impact on the profession and/or society, succession of significant technical or other contributions, leadership in accomplishing worthwhile goal(s), previous honors, and other achievements as evidenced by publications or patents or other evidence.

For more information, forms and guidance, please go to: http://www.ieee.org/about/awards/medals/healthcare.html.

Nuclear and Plasma Sciences Society Awards

for you to demonstrate the respect you have for both peers and students at both the Society and the Technical Committee level.

Nominations are due January 31, 2014 for the Nuclear and Plasma Sciences Society Awards and encompass recognition of both scientific and technical achievement at various levels as well as one for professional service. The NPSS Awards are funded directly by the Society and are comprised of:

MERIT AWARD

Description: To recognize outstanding technical contributions to the fields of Nuclear and Plasma Sciences. The prize is $5,000, Plaque, and Certificate.

Eligibility: Any IEEE NPSS member who has made technical contributions to the fields of Nuclear and Plasma Sciences.

Basis for Judging: Selection criteria, in order of importance are: 1) importance of individual technical contributions; 2) importance of technical contributions made by teams led by the candidate; 3) quality and significance of publications and patents; 4) years of technical distinction; 5) leadership and service within the fields of nuclear and plasma sciences and related disciplines.

Presentation: One award presented annually at an NPSS-sponsored meeting chosen by the Awardee.

RICHARD F. SHEA DISTINGUISHED MEMBER AWARD

Description: To recognize outstanding contributions through leadership and service to the NPSS and to the fields of Nuclear and Plasma Sciences. The prize is $5,000, Plaque and Certificate.

Eligibility: Any member of the IEEE and NPSS who has contributed to the fields of nuclear and plasma sciences through leadership and service.

Basis for Judging: Selection criteria are: leadership roles and leadership quality; innovative and important contributions to Society activities; service and dedication to the NPSS; technical achievements.

Presentation: One award presented annually at an NPSS-sponsored meeting chosen by the Awardee.

EARLY ACHIEVEMENT AWARD

Description: To recognize outstanding contributions to any of the fields making up Nuclear and Plasma Sciences, within the first ten (10) years of an individual's career. The prize is $3,000, Plaque, and Certificate.

Eligibility: Member of the IEEE NPSS who at the time of the nomination is within the first ten (10) years of his or her career within the fields of interest of NPSS.

Basis for Judging: Three (3) letters of recommendation, publications and/or reports, patents, etc. which demonstrate outstanding contributions early in the nominee's career.

Presentation: At any major NPSS-sponsored conference chosen by the Awardee.

GRADUATE SCHOLARSHIP AWARD

Description: To recognize contributions to the fields of Nuclear and Plasma Sciences. The prize is $1,500, Certificate, and one-year paid membership in the NPSS.

Eligibility: Any graduate student in the fields of Nuclear and Plasma Sciences.

Basis for Judging: 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.

Presentation: Up to four (4) awards presented annually. Check and certificates sent to nominator to be presented at a special occasion at the winner's institution.

Additionally, NPSS funds a special category award—a Phelps grant—given to encourage Short Course attendance at NPSS conferences that offer them. The criteria are:

PAUL PHELPS CONTINUING EDUCATION GRANT

Description: To promote continuing education and encourage membership in NPSS.

Prize: Maximum of $9,000/year for all recipients, mostly for tuition in NPSS Sponsored Short Courses but in selected cases, also for partial travel expenses to NPSS Short Courses.

Eligibility: Outstanding Student Members of NPSS and unemployed Members of NPSS who need assistance in changing career directives.

Basis for Judging: Exceptional promise as a Graduate Student in any of the fields of the NPSS; exceptionally good work in those fields for currently unemployed NPSS members; and an expectation that attendance to one or more of the Short Courses will result in improved possibility of obtaining a job in the NPSS fields.

Presentation: Presented each year at the NPSS-sponsored conference in which the Short Courses are given. The awards will be handled prior to the dates of the Conference, so that award recipients can apply the corresponding funds towards covering tuition and/or traveling costs to the Short Courses.

Those interested in applying for a Phelps Grant should contact the Technical Committee chair hosting the conference with a Short Course. There are also a larger number of Technical Committee Awards given each year. Nominations for these vary by the conference, but many conferences held in the summer have award deadlines at the end of January. More information on these and other relevant Awards, including submission information and tips for writing a successful award nominations, is available at: http://ewh.ieee.org/IoC/npss/npssnews.html

This article was originally prepared for the December 2013 NPSS Newsletter by Jane Lehr. Relevant dates have been amended. Craig Woody is the current NPSS Awards chair and can be reached by email at woody@bnl.gov

OUCH!

They say the dog is man’s best friend. I don’t believe that. How many of your friends have you neutered?

—Larry Zeig

THE NAME IS FAMOUS...

Forgive your enemies but never forget their names.

—John F. Kennedy

NOT TO ME

I’ve given offence by saying I’d as soon write free verse as play tennis with the net down.

—Robert Frost

AT LEAST IT’S EXERCISE

When you get to my age, life seems little more than one long march to and from the lavatory.

—John Mortimer
2013 Radiation Effects Award

DALE G. PLATTETER

Dale G. Platteter, retired, received the 2013 NSREC Radiation Effects Award. Dale received his BSIE degree from the University of Wisconsin (1972). Upon graduation, he joined the radiation effects group at the Naval Surface Warfare Center in Crane, Indiana, where he was employed for 3.5 years performing failure analysis and radiation hardening of integrated circuits. Dale managed the radiation effects group at Crane for 19 of those years.

Dale is a recognized leader in the NSREC community, serving on the IEEE Radiation Effects Steering Group (RESG) for 12 years. He was General Chairman of the IEEE Nuclear and Radiation Effects Conference in Madison, Wisconsin (1995) and served as RESG Chairman (2000—2003). Dale was instrumental in developing several NSREC conference guideline documents, designing and maintaining the first NSREC website (1995—2006), and served as editor of the NSREC Archive of Radiation Effects Short Course Notebooks (GDRM) (1996, 2002, 2006). As a researcher/manager, Dale directed radi-hard semiconductor process developments in support of Navy, Army, and Air Force strategic nuclear weapons programs. He performed radiation effects studies for Navy, NASA, Office of Naval Research, Central Intelligence Agency, Defense Intelligence Agency, and GPS Satellite program offices. He served as technical lead for bipolar technology research for Defense Threat Reduction Agency programs for 20 years. During his career, Dale designed several bipolar technology "test chips" for studying low-dose-rate (LDRS) effects and published more than 20 papers in IEEE journals. Dale was co-author of the OutStanding Conference Paper at NSREC (1963). He developed fault-tolerant circuits to protect microprocessor chips from single-event upset (1980).

Citation: For significant contributions to the Radiation Effects Committee of the IEEE/NPSS.

ICALEPCS 2013 Lifetime Achievement Awards

PETER CLOUT

ICALEPCS 2013 (International Conference on Accelerator and Large Experimental Physics Control Systems) was held in San Francisco during the week of October 7th. Despite U.S. Government travel restrictions, the attendance was a record 550 for a very full week.

The conference has a Lifetime Achievement Award which this year was presented to the six people, two from each of Europe, North America and Asia, who were involved in starting the conference series and accelerating it to the success it has been ever since. The history of ICALEPCS goes back about 24 years: In 1983 my small controls group at Los Alamos National Laboratory working on the Proton Storage Ring Control System had some poster papers at the Santa Fe Particle Accelerator Conference. I was disappointed that these posters were lost in a big general session and also that there was no opportunity to discuss controls issues at the meeting.

In the 1970s and early 1980s, controls groups were nearly always the scapegoat for project delays and cost overruns. Not only was the startup of a project delayed, but any necessary changes in the control system took too long to implement. It was not unusual that the software was so monolithic that any small change was a major undertaking.

I realized the projects got what they paid for. Clearly, delays and cost overruns were not good for research progress and to address this we needed to develop the controls community. Accelerator project managers had to take controls seriously if their projects were to be successful (on time and under budget). Also, the technologies used and implementations, especially the software, needed to be developed to be better suited to the changing requirements of physics and experiment controls.

In 1984 I asked for and obtained support from my Group Leader and Division Leader to organize an Accelerator Controls Workshop in Los Alamos in October 1985. We had hoped to attract about 60 participants but in the end 130 attended from around the world and 50 papers were presented. I also wanted the proceedings published to develop a literature on controls and the proceedings were quickly published after the conference as a NIM volume.

At about the same time as we started to organize the meeting, I was invited, along with 16 others from outside Brookhaven National Lab, to a workshop in January 1985 to help BNL with controls decisions for the light source. My understanding was that this meeting was by invitation only. Later that year, in April I believe, Winfred Busse organized a meeting in Berlin on controls and simulation for accelerators, which I was not able to attend.

During the four-day Los Alamos meeting, Berend Kaper and Axel Daneels discussed with me the possibility of organizing the following meeting (to include experiment controls) and this was held in Villars-sur-Ollon at the end of September 1987 as the Europhysics Conference on Control Systems for Experimental Physics. It was the 1989 meeting organized by Dave Curd in Vancouver, Canada that coined the current meeting title.

The following meeting was organized in Japan by Shin-ichi Kurokawa. He told me last week that the Los Alamos workshop was his first introduction to the international controls community.

I think that everyone involved can feel proud of the success that sparked from the 1985 meeting into a thriving community that ensures the prompt and continuing success of so many physics and astrophysics projects around the world. Our end is not controls but the best research possible with the machines to which we add the controls.

The Awardees of the Lifetime Achievement Award were:

- Daniela Buñone (Italy),
- Peter Clout (USA),
- Axel Daneels (Switzerland),
- David Curd (Canada),
- Shin-ichi Kurokawa (Japan) and
- Rypero Tanaka (Japan)

KNOW THAT FEELING...

I just need enough to tide me over until I need more.  
— Jerry Dennis

I (DON’T) HEAR YOU

Women like silent men. They think they are listening.  
— Marcel Achard

THE PRICE OF KNOWLEDGE

Education is the path from cocky ignorance to miserable uncertainty.  
— Mark Twain

ANY CALLUSES?

Don’t tell me how talented you are. Tell me how hard you work.  
— Arthur Rubenstein
is one of the world’s top tourist destinations. For the ICOPS-Beams 2014 Companion Tour program, the following tours are under consideration:

- Tour of Mt. Vernon, home of our first president George Washington.
- Udvar-Hazy Tour (the Smithsonian’s Air and Space Museum Expansion, featuring an SR-71 Blackbird, the Space Shuttle Discovery, and a Concorde)
- Washington Nationals—Florida Marlins baseball game

Please check the website for the final listing of these activities.

CONFERENCE HOTEL AND WASHINGTON, DC AREA

Experience Washington, DC like a local at Washington Marriott Wardman Park. Unique shopping and quaint restaurants with a DC neighborhood feel are right outside the door. Our hotel is close to the National Zoo and is just two Metro stops away from top area attractions via the Metro station outside the hotel. This NW Washington, DC hotel’s stunning guest rooms, expansive event space and impeccable service make it the perfect choice, topping the experience with charm, elegance and an historic landmark setting. With 1,314 guest rooms, including 125 VIP suites, plus an outdoor pool and sundeck, our hotel is the perfect place for vacationers to enjoy their down time. The hotel’s comprehensive conference services and expert staff ensure every event runs smoothly and flawlessly.

The conference has negotiated a discounted rate of US $209 per night (not including taxes) for reservations made prior to the group rate deadline of April 28th, 2014. At this regular conference rate is lower than the prevailing government per diem of US$224 per night, no government block is being made available. Links to hotel registration can be found on the conference website.

ADDITIONAL INFORMATION

For the latest ICOPS-Beams 2014 information (abstract submission, technical program, conference and social registration forms, hotel and travel information, etc.), please visit the conference website at: [www.ece.unm.edu/icops-beams2014/](http://www.ece.unm.edu/icops-beams2014/).

To stay informed about what’s happening at ICOPS-Beams 2014, join the mailing list, or ask a question by e-mailing us at icopsbeams2014@ieee.org.

On behalf of the entire organizing team, we look forward to seeing you all in Washington, DC next spring.

Joseph Schumer, General Chair of the 2014 ICOPS-BEAMS meeting can be reached by email at joseph.schumer@nrl.navy.mil.
Larry always took personal interest in the projects he funded. This included mentorship of young researchers in the field of pulsed power; he would never shy away from discussing any issue with the many graduate students involved in his projects. A number of these students carry on his legacy and have gone on to successful careers in the area of compact pulsed power and related fields.

LARRY L. ALTGILBERS 1945–2013

Dr. Larry Altgilbers passed away on 20th Sept. 2013 in Huntsville, Alabama after an extended battle with cancer. Larry will be remembered as a champion of compact pulsed power that would enable applications in the gigawatt power regime while keeping volume and weight within limits. His tenacity and will to foster pulsed power programs aimed at miniaturization are exemplary. Only two months before his passing, Larry organized and held his annual Directed Energy Workshop in Huntsville.

Through original management and salesmanship, he has funded diverse programs in pulsed-power technology in excess of $41M. The sum total of his efforts has established the State-of-the-Art in small advanced energy conversion systems such as Magnetic Flux Compression Generators, Ferroelectric Generators, Ferromagnetic Generators, and High Power Microwave sources, all of which are critical to the development of pulsed high-power RF generation. The program, broad in scope, has developed switching technology, radiating structures, energy storage elements, power conditioning and chemical-to-electrical energy conversion.

Larry always took personal interest in the projects he funded. This included mentorship of young researchers in the field of pulsed power; he would never shy away from discussing any issue with the many graduate students involved in his projects. A number of these students carry on his legacy and have gone on to successful careers in the area of compact pulsed power and related fields.

2007 as a voting member on the NPSS Pulsed Power Science and Technology Committee and actively contributed to the success of the IEEE International Pulsed Power Conference. His multifaceted, international contributions are also witnessed by being a member of the International Steering Committee for the Megajoule Generator for many years. Larry was actively involved in research up until a week before his death; he will be greatly missed by pulsed-power researchers in many countries.

Submitted by Andreas Neuber on behalf of the Pulsed Power Science and Technology Technical Committee. Andreas Neuber can be reached at andreas.neuber@llnl.gov

FRED GOULDING 1925–2013

Fred Goulding, an Englishman and former Distinguished Staff Scientist at Lawrence Berkeley National Laboratory, began his electronics career working on radar during World War II. He then became involved in the development of nuclear instrumentation at Chalk River Laboratories in Canada, where he became head of the electronics group and developed the expertise in nuclear particle detection which was to become his career's unifying theme. In 1960, Fred was recruited to SNL as a group leader for electronics instrumentation in the then Nuclear Chemistry Division.

This was a dynamic period in laboratory history. The 88-inch cyclotron had recently been commissioned, the search for transuranic elements was being pursued actively at the HILAC, and the Bevatron was at the peak of its productivity. Fred's familiarity with electronics for experimental physics was a welcome addition to the Laboratory.

At this time, semiconductor devices were first introduced into experimental physics. Fred's demonstrated experience in electronic circuit design using discrete transistors was rapidly exploited with his development of state-of-the-art pulse processing systems for nuclear measurements. These were applied to semiconductor diodes for nuclear particle detection, which became critically important tools to study nuclear reactions at Laboratory accelerators. He was also recognized across the international nuclear community for developing lithium-drifted germanium detectors, which revolutionized gamma-ray spectroscopy, as well as the design of the low-resistive preamps and pulse-shaping networks needed to exploit these unique detectors. These custom radiation detection and pulse processing systems designed by Fred and his colleagues enabled the Lawrence Radiation Laboratory to be recognized as a world leader in the exploitation of these new technologies and established Fred's international reputation. Fred was frequently cited by research staff as a major contributor to the success of diverse research projects.

Fred continued in his leadership role in the area of nuclear instrumentation and measurement science for several decades. He was quick to recognize emerging areas of science and technology likely to be important to experimental science. Under his guidance, the Laboratory developed a strong program in Ge materials and detector technology resulting in large-volume, high-purity Ge gamma-ray detectors that have become the standard in the industry with application in fields as diverse as medical imaging, gamma-ray astronomy and homeland security. Silicon X-ray detectors likewise fabricated through Fred's efforts, are also widely used in analytical X-ray spectroscopy for environmental monitoring and other applications.

In 1977 he became Department Head for Measurement Science within the Engineering Division. The title, chosen by Fred, reflected his conviction that much of the science of experimental physics lay in the development of sophisticated tools with which to perform measurements. Fred's responsibilities included oversight of groups involved in instrumentation for, among others, the first Time Projection Chamber and the Kack Telescope. With his deep knowledge of physics and engineering concepts, Fred understood the fundamental requirements at a depth exceeding that of typical managers. He also supported the introduction of modern computer technology and integrated circuit design into the portfolio of techniques available to Lab researchers.

Fred's most enduring legacy may be the generations of young scientists, engineers and technical staff whom he mentored and inspired. His creative approach to problem solving served as a model for others to emulate. Whether remaining in the Laboratory or moving on to success in academia, industry and other national labs, all carry a strong sense of respect and gratitude for Fred's contribution to their careers.
The theme for the short course is the Effects of Radiation Environments on Devices and Test Procedures, and is being organized by Frederic Saigne, University of Montpellier—IES.

The presenters of the short course include:

- Sébastien Bourdarie, ONERA, who will give a talk on “Comparative Earth and Jovian Space Environment.”

- Philippe Adel, Jet Propulsion Laboratory, and Jérome Boch, Montréal 2 University, who will give a talk on “Update of the Most Recent Research about Dose Rate Effects in SiGe-Based Electronics.”

The short course should be of interest both to radiation effects specialists and newcomers to the field alike. Each short course attendee will receive a CD-ROM Archive of IEEE NSREC Short Course Notebooks (1980–2014).

For the most current information on the Nuclear and Space Radiation Effects Conference, including information on paper submission, please visit www.nsrc.ieee.org.

Marty Shanyefyldt, Chair of the Radiation Effects Technical Committee, can be reached by email at shaneymr@sandia.gov; Teresa Faris, Vice Chairperson of Publicity, can be reached by email at teresa.faris@jeronix.com.

A PRECIOUS FEW...

After all, when you come right down to it how many people speak the same language even when they speak the same language? — Russell Hoban

MONEY TALKS

I have found that people are usually much more moved by economics than by morals.

— Norah Phelps

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CONTRIBUTED ARTICLES

Publicity releases for forthcoming meetings, items of interest from local chapters, committee reports, announcements, awards, or other materials requiring society publicity or relevant to NSREC should be submitted to the Newsletter Editor by January 5, 2014 for publication in the March 2014 Newsletter.

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 denominations, 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 authors of such articles are invited by the editor.

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