Radiation Safety Information Computational Center

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No. 560 **November 2011**

And in the end, through the long ages of our quest for light, it will be found that truth is still mightier than the sword. For out of the welter of human carnage and human sorrow and human weal the indestructible thing that will always live is a sound idea.—Gen. Douglas MacArthur

ANS Presents Awards to Distinguished Industry Leaders

On November 2 the ANS honored sixteen internationally renowned scientists and engineers for nuclear achievements and contributions. Dr. Eric P. Loewen, ANS President, said of the honorees, "These individuals have dedicated themselves to advancing nuclear science and technology and we thank them for their service. I speak for all of our members when I say I am proud to be associated with them and congratulate them on their success."

The recipients and their awards include:

ANS Fellows

Bryan Allen Chin, for outstanding contributions in the development of theories to describe the welding of highly irradiated materials and mechanisms of irradiation effects on fatigue, creep and swelling of in-core materials.

David A. Petti, for exceptional leadership in the development and demonstration of advanced fuels and materials for fission and fusion systems; in particular, the very successful re-engineering, re-establishment of industrial fabrication capability, and irradiation testing and demonstration of high burnup particle fuels for High Temperature Gas Cooled Reactors.

Presidential Citations

Audeen W. Fentiman, for her exceptional support to the ANS through dedicated service in many volunteer and governance positions and her personal contributions to the Society are most noteworthy. Some examples are her exceptional leadership of the Local Sections, Planning and Public Policy Committees, as well as the ANS President's Special Committee on Used Nuclear Fuel Management Options and her term as a Member on the ANS Board of Directors. Her long time commitment to service is demonstrated by her dedicated leadership, wisdom and judgment which have markedly enhanced the value of ANS.

N. Prasad Kadambi, for his outstanding efforts in support of the ANS Standards Board. In particular, Prasad is recognized for safeguarding ANS interests in development of joint PRA standards with ASME, improving utility participation, increasing communication with stakeholders, representing ANS at national and international standards meetings and conferences, and for over 35 years of dedication to the ANS Standards program.

Anil Kakodkar, for his critical leadership role in successfully negotiating the Indo-U.S. civil nuclear agreement as Chairman of the Atomic Energy Commission and Secretary of the Department of Atomic Energy, and his outstanding technical contributions as an eminent nuclear scientist and mechanical engineer. He is also recognized for his dedicated service in support of the Bhabha Atomic Research Centre, Veermata Jijabai Technological Institute, Indian Institute of Technology Bombay and the Indian Nuclear Society and for all of the contributions he has made to India and to the international nuclear community.

Mary Jane Oestmann Professional Women's Achievement Award

Sama Bilbao y Leon, for outstanding personal dedication and technical achievement in the fields of nuclear science, engineering, research or education and for her tireless efforts, selfless generosity and steadfast dedication to the development of nuclear education opportunities at Virginia Commonwealth University. Dr. Sama Bilbao y Leon is Director of Nuclear Engineering Programs at Virginia Commonwealth University and has been an ANS member since 1994.

Robert L. Long Training Excellence Award

John Gutteridge, for an individual or group who has demonstrated sustained excellence in nuclear training and education and in recognition of his leadership and significant contributions made to the growth and sustainability of nuclear-related education, as a result of his development and management of innovative programs at both the US Department of Energy and the US Nuclear Regulatory Commission, which revitalized nuclear science and engineering education in the United States. Mr. Gutteridge, an ANS Member since 2002, is a consultant with the U.S. Nuclear Regulatory Commission.

Mark Mills Award

Robert Joseph Zerr, for his graduate work in nuclear science entitled "Solutions of the Within-Group Multidimensional Discrete Ordinates Transport Equations on Massively Parallel Architectures." Dr. Zerr, of Los Alamos National Laboratory, has been an ANS Member since 2001.

Theos J. (Tommy) Thompson Award

Michael L. Corradini, in recognition of his international leadership in understanding the safety and risk assessment of nuclear reactor operations and fuel cycles. Dr. Michael L. Corradini is a professor in the Department of Nuclear Engineering at the University of Wisconsin-Madison. He has been an ANS Member since 1979.

Eugene P. Wigner Reactor Physicist Award

Nils G. Sjöstrand, for his outstanding contributions to the advancement of the field of nuclear reactor physics, including his pioneering contributions to the early development of reactor physics, in

particular for his work with pulsed neutron experiments and the invention of the area ratio method; for his work on accurate numerical solutions of the transport equation; and for his leadership in establishing reactor physics education at Chalmers University of Technology, Gothenburg, Sweden.

W. Bennett Lewis Award

Theodore Rockwell, in recognition of his outstanding life-long pioneering contributions in support of sustainable and economically-viable development based on nuclear fission technology in multiple areas, including energy, defense, industry, medicine and agriculture. Dr. Rockwell, an ANS Member since 1992, is a founding officer of MPR Associates, Inc.

Utility Leadership Award

John R. McGaha, in recognition of exemplary performance throughout his career in the nuclear industry through his tireless and endless efforts which continually demonstrated to those around him the importance of improvement, sustained performance and excellence in the industry.

Ray Goertz Award

Norbert R. Grant, in recognition of his outstanding contributions to the field of robotics and remote technology.

Edward Teller Award

Christine Garban-Labaune and Bruce A. Remington, in recognition of their pioneering research and leadership in inertial fusion sciences and applications.

Octave J. Du Temple Award —Recognizes meritorious service to the Society by a member of the staff

Edward O. Du Temple, in acknowledgement of his more than 20 years of meritorious service, as a member of ANS staff, proving his dedication to improving and maintaining an excellent work environment for staff and visiting members, exhaustively pursuing and implementing opportunities to increase efficiencies, achieve cost savings, and enhance the image of the Society through a wide variety of projects and initiatives.

Loewen concluded, "On behalf of everyone in the Society, we offer our thanks to these individuals who have worked so tirelessly to push forward the nuclear science and technology community. "

ANS press release, November 2, 2011. For more information about the American Nuclear Society, visit www.ans.org.

ANS Announces 2012 Candidates

The ANS Nominating Committee has nominated Roger S. Reynolds and Joe C. Turnage for vice president/president-elect. The candidate who is elected will succeed Michael L. Corradini when he assumes the office of president at the June 2012 ANS Annual Meeting.

U.S. Director At-Large Position Candidates are *Margaret E. Harding* (4 Factor Consulting), *Angelina S. Howard* (Howard-Johnson Associates), *Kimberlee Kearfott* (University of Michigan), *Andrew C. Klein* (Oregon State University), *Charles (Chip) R. Martin* (Defense Nuclear Facilities Safety Board), *Stephen P. Schultz* (Consultant), *Amir Shahkarami* (Exelon), and *Gary J. Taylor* (Entergy).

Non-U.S. Director At-Large Position Candidates are *Hong Jiang* (China Nuclear Power Engineering Co., Ltd.) and *Mingguang Zheng* (Shanghai Nuclear Engineering Research and Design Institute).

CHANGES TO THE RSICC CODE AND DATA COLLECTION

CCC-786/RESRAD 6.5

RESRAD 6.5 was contributed by the Argonne National Laboratory, Argonne, Illinois. RESRAD is designed to calculate site-specific residual radioactive material guidelines, radiation dose and excess cancer risk to an on-site resident (maximally exposed individual). A guideline is a radionuclide concentration or level of radioactivity that is acceptable if a site is to be used without radiological restrictions. Guidelines are expressed as concentrations of residual radionuclides in soil. Soil is unconsolidated earth material, including rubble and debris that may be present. The guidelines are based on the following principles: (1) the total effective dose equivalent should not exceed 100 mrem/yr for all plausible land use and 30 mrem/yr for current and likely future land uses, and (2) doses should be kept as low as reasonably achievable (ALARA). Nine environmental pathways are considered: direct exposure, inhalation of dust and radon, and ingestion of plant foods, meat, milk, aquatic foods, soil, and water.

Included are the referenced documents, executables, data, and sample templates in a self-extracting Windows executable on CD. Source files are not included in this release. Fortran 95 and BASIC; Windows OS (C00786PCX8600).

DLC-245/VITAMIN-B7/BUGLE-B7

Oak Ridge National Laboratory, Oak Ridge, TN, contributed BUGLE B7, broad-group, and VITAMIN-B7, fine group, coupled neutron/gamma cross-section libraries. The new libraries, updates of the widely used VITAMIN-B6 and BUGLE-96 libraries, are based on Release 0 of ENDF/B-VII data. The fine-group library, designated VITAMIN-B7, was prepared by processing ENDF/B-VII data into the group structure used in the VITAMIN-B6 library (199 neutron groups and 47 gamma groups). The fine-group library was then collapsed into the broad-group BUGLE-B7 library using the same group structure as BUGLE-96 (47 neutron groups and 20 gamma groups) with fine-group weighting spectra representative of various regions of pressurized water reactors (PWRs) and boiling water reactors (BWRs).

BUGLE-B7 and VITAMIN-B7 are available in AMPX and ANISN formats, respectively, for use in a range of multigroup deterministic and stochastic radiation transport codes. Although these libraries were developed primarily for use in LWR shielding applications, they may potentially be used for other types of analyses provided they are validated in an appropriate manner. The data libraries and electronic document are transmitted on DVD in a zip file. Many computers (D00245MNYCP00).

DLC-247/POINT2011 Beta 4

Lawrence Livermore National Laboratory, Livermore, California, and the International Atomic Energy Agency (IAEA), Vienna, Austria, contributed this update to the temperature-dependent, linearly interpolable, tabulated cross section library based on the recently released ENDF/B-VII.1 data library. The latest ENDF/B-VII.1 beta4 data library was recently and is now freely available through the National Nuclear Data Center (NNDC), Brookhaven National Laboratory. This release completely supersedes all preceding releases of ENDF/B. The ENDF/B-VII.1 data library was processed into the form of temperature dependent cross sections and is being distributed as POINT2011. For use in our applications the ENDF/B-VII.1 library has been processed into cross sections at eight neutron reactor like temperatures—between 0 and 2100 Kelvin—in steps of 300 Kelvin (the exception being 293.6 Kelvin, for exact room temperature at 20 Celsius). The data has also been processed to five astrophysical like temperatures—1, 10, and 100 eV; and 1 and 10 keV. For reference purposes, 300 Kelvin is approximately 1/40 eV, so that 1 eV is approximately 12,000 Kelvin. At each temperature the cross sections are tabulated and linearly interpolable in energy.

A table in the documentation summarizes the contents of the ENDF/B-VII.1 general purpose library. This library contains evaluations for 418 materials (isotopes or naturally occurring elemental mixtures of isotopes). Each evaluation is stored as a separate file. The entire library is in the computer-independent ENDF-6 character format, which allows the data to be easily transported between computers. The entire library requires approximately 16 GB of storage. Reference: LLNL-TR-479947 Rev 2 (September 30, 2011). (D00247MNYCP01).

Washington Internships for Students of Engineering

Applications are due on December 31, 2011, for the 2012 summer program of the Washington Internships for Students of Engineering (WISE). Founded in 1980 through the collaborative efforts of several professional engineering societies, WISE has become one of the premier Washington internship programs. The program's goal is to groom future leaders of the engineering profession who are aware of and can contribute to the important intersection of science, technology and public policy.

Each year the WISE societies select outstanding 3rd or 4th year engineering students in a nation-wide competition. The students spend nine weeks in the summer in Washington, D.C., during which they learn how government officials make decisions on complex technological issues and how engineers can contribute to legislative and regulatory public policy decisions. Throughout the program, the students interact with leaders in Congress and the Administration, industry, and prominent non-governmental organizations. Meetings with congressional committees, executive office departments, and corporate government affairs offices are daily activities.

In addition, each student researches and presents a paper on a topical engineering-related public policy issue that is important to the sponsoring society. The students work under the guidance of a prominent engineering or public policy professor who serves as Faculty-Member-in-Residence. Students also interact with and are mentored by representatives of their sponsoring societies.

For more information contact the program coordinator, Alan Levin at alevin@alum.mit.edu or visit the WISE website at www.wise-intern.org.

Science Education Programs at Oak Ridge National Laboratory

Looking for an internship or post graduate opportunity at Oak Ridge National Laboratory? The Science Education Programs at Oak Ridge National Laboratory provide paid opportunities for undergraduates, grad students, recent graduates, and faculty to participate in high-quality research alongside world-class scientists to solve real-world problems. Opportunities are available for internships and co-ops, research appointments, and sabbaticals. All opportunities are limited to scientific, technical, engineering, or mathematical fields.

You can access all available opportunities through the website at http://www.orau.org/ornl. The Talent and Opportunity System allows you to create a profile, and then answer only 5 or 6 questions for each program or job posting for which you apply.

Individuals who choose an internship or research opportunity at ORNL are paired with world-class scientists to solve real-world problems. All levels of participants from undergraduates to faculty are encouraged to publish research papers with their mentors. Please browse through the Research Profiles on the different participants and their research experiences at the right hand side of the bottom of the web site listed above. Also, there is a video of research participants at ORNL sharing their thoughts on how access to world-class research facilities and staff have catapulted their careers in science and technology. You can find it on YouTube at http://ow.ly/2EQLz.

CONFERENCES, COURSES, SYMPOSIA

RSICC attempts to keep its users and contributors advised of conferences, courses, and symposia in the field of radiation protection, transport, and shielding through this section of the newsletter. Should you be involved in the planning/organization of such events, feel free to send your announcements and calls for papers via email to riceaf@ornl.gov with "conferences" in the subject line by the 20th of each month. Please include the announcement in its native format as an attachment to the message. If the meeting is on a website, please include the url.

Every attempt is made to ensure that the links provided in the Conference and Calendar sections of this newsletter are correct and live. However, the very nature of the web creates the possibility that the links may become unavailable. In that case, please call or mail the contact provided.

TRAINING

MCNPX and Visual Editor Training

Classes are taught using the most recent (beta) version of the Visual Editor Code. All class attendees must have a valid MCNP/MCNPX RSICC license. Bring proof of receipt (letter or email) to the class.

2012 Classes for Visual Editor		
January 16–20	Introduction to MCNP/MCNPX using the MCNPX Visual Editor	Las Vegas, NV
January 23–27	Intermediate MCNPX Visual Editor with a special emphasis on tallies and variance reduction	Las Vegas, NV
February 6–10	Intermediate MCNPX Visual Editor with a special emphasis on tallies and variance reduction	Richland, WA
February 20–24	Introduction to MCNP/MCNPX using the MCNPX Visual Editor	Paris, France
February 27–March 2	MCNPX Intermediate Workshop	Paris, France
April 16–20	Introduction to MCNP/MCNPX using the MCNPX Visual Editor	Las Vegas, NV
April 23–27	Intermediate MCNPX Visual Editor with a special emphasis on tallies and variance reduction	Las Vegas, NV
May 14–18	Introduction to MCNP/MCNPX using the MCNPX Visual Editor	Honolulu, HI
July 16–20	Introduction to MCNP/MCNPX using the MCNPX Visual Editor	Livermore, CA
July 23–29	Introduction to MCNP/MCNPX using the MCNPX Visual Editor	Anaheim, CA
July 29–August 3	Intermediate MCNPX Visual Editor with a special emphasis on tallies and variance reduction	Anaheim, CA

2012 Classes for Visual Editor		
August 6–10	Intermediate MCNPX Visual Editor with a special emphasis on tallies and variance reduction	Livermore, CA
September 10–14	Introduction to MCNP/MCNPX using the MCNPX Visual Editor	Myrtle Beach, SC
September 17–21	Intermediate MCNPX Visual Editor with a special emphasis on tallies and variance reduction	Myrtle Beach, SC

The introductory workshops combine teaching on MCNP basics and how to create MCNP input files using the Visual Editor. The intermediate Visual Editor workshops focus on more advanced topics such as tallies and variance reduction using the Visual Editor.

Exercises will focus on creating input files and visualizing output data with the Visual Editor. Attendees are encouraged to bring their own input files for viewing and modifying in the Visual Editor; this is particularly important for the intermediate workshop.

The course description and registration information can be found at http://www.mcnpvised.com/index.html.

MCNPX Classes 2012		
January 9–13	MCNPX Intermediate Workshop	Las Vegas, NV
February 27–March 2	MCNPX Intermediate Workshop	Paris, France
May 21–25	MCNPX Intermediate Workshop	Honolulu, HI
September 24–28	MCNPX Intermediate Workshop	Washington, DC

The MCNPX team at Los Alamos National Laboratory offers interactive workshops for training users in the capabilities of MCNPX at the intermediate level.

The list of workshops is tentative, as workshops may be added, removed, or modified throughout the year, depending on user interests. Workshops with fewer than 12 registrants on the early registration date are subject to cancellation or rescheduling.

In order to process non-U.S. citizens by the class date, non-U.S. citizens must register at least 6 weeks prior to the start of the training class. All non-U.S. citizens who reside in countries listed in the U.S. Code of Federal Regulations, Title 10, Part 810.8, are required to register at least 8 weeks prior to the start of the training class. These participants must be processed by the DOE and should not make travel arrangements until approval from DOE has been obtained.

Additional information about the courses can be found at the website, http://mcnpx.lanl.gov/. To register send an email to Randy Schwarz at randyschwarz@mcnpvised.com, indicating the workshop of interest to you.

Analytical Benchmarks: Case Studies in Neutron Transport Theory

A training course on "Analytical Benchmarks: Case Studies in Neutron Transport Theory," sponsored by the Nuclear Energy Agency Data Bank, will be held March 5–9, 2012, at the NEA, Issy-les-Moulineaux, France. Using the Handbook (including computer codes) published on "Analytical

Benchmarks for Nuclear Engineering Applications (Case Studies in Neutron Transport Theory)" the course is intended for transport methods developers and those who teach reactor physics and transport theory. In addition, the course would be appropriate for anyone with an analytical interest in solving equations and the application of numerical methods to obtain extreme accuracy. Prof. Barry D. Ganapol will instruct the class.

CONFERENCES

MARC IX (Methods and Applications of Radioanalytical Chemistry) will be held March 25–30, 2012, in Kailua-Kona, Hawaii. The MARC conferences promote a broad exchange of information on radioanalytical chemistry among scientists from participating countries. The MARC VIII conference attracted participants from more than 35 countries. The central geographic location of Hawaii encourages participation and attendance of scientists from Pacific Rim countries as well as providing European scientists with easy accessibility via major US airports. The scope of the conference includes, but is not limited to, techniques such as instrumental and radiochemical activation analysis; nuclear track analysis; radionuclide production; radiochemical separation methods; alpha, beta, gamma, x-ray and other nuclear spectrometries; *in situ* and remote sensing; radiochemical tracer methods, and mass spectrometry methods for the measurement of radionuclides. The conference will include both oral and poster sessions grouped around specific topics. Poster sessions will be organized around specific themes, similar, or in addition, to those included in the oral sessions. Papers presented at the conference will be peer reviewed and published in *The Journal of Radioanalytical and Nuclear Chemistry*. Abstracts on the following topics are due by **December 1, 2011**:

- Applications of Nuclear Techniques to National Security and Treaty Monitoring
- Ultra-sensitive Mass Spectrometric and Other Methods Applied to Environmental Problems
- Reference Materials for Nuclear Mass Spectrometry
- Quality Assurance Topics in Radioanalytical Chemistry
- Advances in Actinide Analytical and Radionuclear Chemistry
- Analytical Chemistry in Support of the Fuel Cycle
- Actinide Mass Spectrometry Techniques and Applications
- Speciation Studies of Radionuclides in the Environment
- Activation Analysis for Nuclear Materials
- Environmental Radioactivity
- The National Nuclear Forensics Expertise Development Program: Graduate, Post-Doctoral, and University Research and Education Efforts
- Nuclear Forensics
- Instrumental, Preconcentration, Radiochemical and Speciation Activation Analysis
- Instrumentation and Software for Nuclear Spectrometry

Questions concerning the scope and organization of the conference should be addressed to the General Chair, Stephen P. LaMont, LANL (phone 505-667-1008, email lamont@lanl.gov). The conference web site address is http://altmine.mie.uc.edu/nuclear/marc/, where information about the conference will be updated.

Progress in Nuclear Energy and Education

The Progress in Nuclear Energy and Education Conference will be held March 20–22, 2012, in London, UK. The conference provides a forum for nuclear scientists to discuss the cutting edge science

and engineering aspects of nuclear energy together with increasingly more important safety, policy, resource and educational requirements of the industry.

The main areas of interest for this conference are advanced and evolutionary reactor designs, the safety of such plants, policy, engineering and resources, and educational challenges such as the shortfall of experience and skills in the sector.

The conference is organized by Elsevier in association with the Dalton Nuclear Institute, and endorsed by the Nuclear Industry Association. The supporting journal is *Progress in Nuclear Energy*. Visit www.progressnuclearenergy.com for more information, to submit your abstract and to register.

PHYSOR 2012

PHYSOR 2012, hosted by the ANS Oak Ridge/Knoxville Local Section, will be held April 15–20, 2012, in Knoxville, Tennessee. The technical program will meet the high standards of recent PHYSOR meetings, including timely and relevant special topics. Students will be included in all events and activities. Exciting workshops and technical tours will be offered. For further news, information, and instructions, please visit http://physor2012.org.

Monte Carlo Treatment Planning (MCTP2012)

The Third European Workshop on Monte Carlo Treatment Planning (MCTP2012) will be take place May 15–18, 2012, in Seville, Spain. The European Workgroup on MCTP is hosting the workshop. Since the first meeting in Ghent, Belgium (2006), and after the last workshop in Cardiff in 2009, the role of Monte Carlo in radiotherapy planning has continued to grow and become more relevant as more sophisticated and ambitious techniques are introduced. IGRT and 4-D planning are facing new cumulative uncertainties which require accurate calculations to justify the additional workload involved. This Workshop on MCTP of the European Workgroup (EWG-MCTP) will stimulate information exchange and generate international collaborations. Abstracts (**December 19** deadline) or posters (**December 27** deadline) on the following program topics may be submitted:

- Photon and electron
- Braquitherapy
- Nuclear Medicine
- Code development
- Hadrontherapy
- Linac modeling
- Dosimetry
- IGRT

Contributions accepted for the workshop will be published as a book of extended abstracts. An agreement is also in place with *Physics in Medicine and Biology*. Papers from MCTP2012 will be considered for publication in PMB and published as a "special feature" of the journal. See the "Submissions" page of the workshop website, http://www.mctp2012.com/index.php. The technical contact for the workshop is Rafael Moreno, Adriano Spain DMC, Adriano St., 26-28, 41001 Sevilla, Spain (phone +34 954 215 900, fax +34 954 216 211, email sevilla@mctp2012.com).

ICRS-12 and RPSD-2012

The 12th International Conference on Radiation Shielding (ICRS-12) and the 17th Topical Meeting of the Radiation Protection and Shielding Division of the American Nuclear Society (RPSD-2012) will be held in Nara, Japan,

September 2–7, 2012. The first ICRS conference was held in 1958 at Cambridge, United Kingdom. Since then, ICRS has been held in Europe, Japan, and the United States. The ICRS series occurs every four or five years.

This conference, organized by the Atomic Energy Society of Japan, will explore the scientific, technological and engineering issues associated with particle and ionizing radiation shielding in its broadest context, including nuclear energy systems, accelerator facilities, space and other radiation environments. It is one of the premier international radiation shielding events, regularly drawing hundreds of the world's top scientists and engineers.

The conference will open with a special session summarizing the facts and circumstances surrounding the Fukushima accident and consequent environmental assessment and recovery. The special session will complement the conference topics. Abstracts may be submitted electronically beginning **December 1, 2011**, on the following topics:

Fission Reactor Facilities
Fusion Reactor Facilities
Fuel Cycle Facilities
Transportation & Storage Issues
Waste Management Facilities
Accelerator Facilities
Medical Facilities
Aircraft Dosimetry & Space Technology
Medical Applications
Industrial Applications
Shielding Experiments & Benchmarks
Source Term Measurement & Evaluation
Activation Measurement & Analysis
Standardization of Radiation Field & Measurement
Monte Carlo Methods & Applications
Deterministic Methods & Applications
Empirical Methods & Applications
Visualization & User Interface
Nuclear Data
Advanced Phantoms
Shielding Materials
Radiation Detections & Measurements
Radiation Protections
Radiation Dosimetry
Decommissioning
Clearance
Environmental Assessment
International Collaboration

The deadline for submitting abstracts is **February 29, 2012**. Check the website http://www.icrs12.org or contact ICRS-12 & RPSD-2012 Local Organizing Committee secretariat (office@icrs12.org) for further information.

CALENDAR

December 2011

9th International Conference on CANDU Maintenance, Dec. 4–6, 2011, Toronto, Ontario, Canada. Contact: CNS (phone 416-977-7620, fax 416-663-3504, email cns-snc@on.aibn.com) url cmc2011.ca/cmc2011html/cmc2011_home.html.

Global 2011, Dec. 11–15, 2011, Chiba, Japan. Contact: JAEA (email global2011@jaea.go.jp) url http://global2011.org.

Nuclear Power International 2011, Dec. 13–15, 2011, Las Vegas, Nevada, USA. Contact: Libby Smith, PennWell (phone 918-831-9560, fax 918-831-9161, email nuclearconference@pennwell.com or registration@pennwell.com) url www.nuclearpowerinternational.com.

March 2012

Progress in Nuclear Energy and Education Conference, March 20–22, 2012, London, UK. For details visit: http://www.progressnuclearenergy.com.

MARC IX, "Methods and Applications of Radioanalytical Chemistry," March 25–30, 2012, Kailua-Kona, Hawaii. Contact: Stephen P. LaMont, LANL (phone 505-667-1008, email lamont@lanl.gov) url http://altmine.mie.uc.edu/nuclear/marc/.

April 2012

PHYSOR 2012, April 15–20, 2012, Knoxville, Tennessee. Contact: http://physor2012.org.

May 2012

MCTP2012, 3rd European Workshop on Monte Carlo Treatment Planning, May 15–18, 2012, Seville, Spain. Contact: Rafael Moreno, Adriano Spain DMC, Adriano St., 26-28, 41001 Sevilla, Spain (phone +34 954 215 900, fax +34 954 216 211, email sevilla@mctp2012.com) url http://www.mctp2012.com/index.php.

June 2012

2012 ANS Annual Meeting, June 24–28, 2012, Chicago, Illinois, USA. Follow the website for up-to-date information, http://www.new.ans.org/meetings/c_1.

- ICAPP '12, June 24–28, 2012, Chicago, Illinois. Contact: Lynne Schreiber, Administrator (email icapp@ans.org) url http://www.icapp.ans.org/icapp12/.
- NFSM 2012 "Nuclear Fuels and Structural Materials for the Next Generation Nuclear Reactors," June 24–28, 2012, Chicago, Illinois. Follow the website for up-to-date information, http://www.new.ans.org/meetings/c_1.
- Decommissioning, Decontamination and Reutilization and Technology Expo, June 24–28, 2012, Chicago, Illinois. Contact: Sue Aggarwal, Technical Program Chair (phone 303-984-5788, email saggarwal@nmnuclear.com) url http://ddrd.ans.org.

September 2012

ICRS-12 (12th International Conference on Radiation Shielding) and RPSD-2012 (17th Topical Meeting of the Radiation Protection and Shielding Division of the American Nuclear Society), Sept. 2–7, 2012, Nara, Japan. Contact: ICRS-12 & RPSD-2012 Local Organizing Committee secretariat (office@icrs12.org) url http://www.icrs12.org/.

November 2012

2012 ANS Winter Meeting and Nuclear Technology Expo, Nov. 11–15, 2012, San Diego, California, USA. Follow the website for up-to-date information, http://www.new.ans.org/meetings/c_1.