Radiation Safety Information Computational Center

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Justice remains the greatest power on earth. To that tremendous power alone will
we submit. –Harry S. Truman

CHANGES TO THE RSICC CODE AND DATA COLLECTION

CCC-743/CARL 2.3

University of Pisa, DIMNP, Pisa, Italy, through the OECD Nuclear Energy Agency Data Bank, Issy-les-Moulineaux, France, contributed CARL 2.3 to the RSICC code collection. The CARL (Calculation of Radiotoxicities Lifetime) code, developed in 2003, calculated the radiotoxic (ingestion) inventory evolution vs. time of a given radionuclide composition. It was developed in order to perform the complex calculations regarding the nuclear spent fuel hazard vs. time.

Version 2.3 includes more radionuclides in the database, mainly utilized in nuclear applications different from energy production: Na-24, Ca-45, B-r82, Ba-140, Ir-192, Po-218, Ra-226, Ra-228. Moreover it was designed in order to allow radiation shielding calculations: the gamma spectrum was improved and a new plot indicating the activity x energy vs. time was added (in order to determine the most dangerous gamma emission spectrum over time).

CARL 2.3 runs on personal computers under the Windows 2000 or XP operating systems. It requires Matlab® 6.5 (or higher). The package is transmitted on a CD containing documentation, source code, sample input and output. Interactive; Windows-based PCs (C00743PC58601).

DLC-254/BUGJEFF311.BOLIB

The Italian National Agency for New Technologies, Energy and the Environment "E. Clementel" Research Centre, Bologna, Italy and Institute of Physics and Power Engineering, Obninsk, Russian Federation through the OECD Nuclear Energy Agency Data Bank, Issy-les-Moulineaux, France contributed the update to this package. The only change in this new version is an updated document. No changes have been made to the data.

The data libraries and documents are transmitted on DVD, which includes data libraries in FIDO-ANISN format. Uncompressed files are about 210 MB. Unix workstation, PC, or Mac (D00254MNYCP01).

DLC-257/VITJEFF311.BOLIB

The Italian National Agency for New Technologies, Energy and the Environment "E. Clementel" Research Centre, Bologna, Italy and Institute of Physics and Power Engineering, Obninsk, Russian Federation through the OECD Nuclear Energy Agency Data Bank, Issy-les-Moulineaux, France contributed the update to this package. The only change in this new version is an updated document. No changes have been made to the data.

The data libraries and documents are transmitted on DVD, which includes data libraries in AMPX format. Uncompressed files are about 442 MB. Unix workstation, PC, or Mac (D00257MNYCP01).

DLC-262/BUGENDF70.BOLIB

ENEA-Bologna Nuclear Data Group, Bologna, Italy through the OECD Nuclear Energy Agency Data Bank, Issy-les-Moulineaux, France has released BUGENDF70.BOLIB, a broad-group coupled neutron and photon working cross section library, dedicated to LWR shielding and pressure vessel dosimetry applications and is based on the US ENDF/B-VII.0 library of evaluated nuclear data. The neutron and photon energy group structures (47 neutron groups + 20 photon groups) of BUGENDF70.BOLIB are the same as those of the corresponding BUGLE-96 library generated at ORNL in 1996, based on the US ENDF/B-VI.3 evaluated nuclear data. BUGENDF70.BOLIB was produced from the ENEA-Bologna VITENDF70.BOLIB fine-group mother library in AMPX format, based on ENDF/B-VII.0 data. The fine-group data of VITENDF70.BOLIB were collapsed and in some cases shelf-shielded, through the ENEA-Bologna 2007 Revision of the SCAMPI nuclear data processing system, using neutron and photon flux spectra typical of PWR and BWR reactor models. BUGENDF70.BOLIB, different from BUGLE-96 which contains only prompt neutron fission spectra and prompt neutrons per fission data, includes total (prompt + delayed) neutron fission spectra for 34 fissionable nuclides (Am-242 not included because MF=4 MT=18 is missing in the evaluated data) and total (prompt + delayed) neutrons per fission for 35 fissionable nuclides.

The BUGENDF70.BOLIB package is transmitted on CD and includes documentation and data files. The package requires 109 MB of diskspace. PC Windows and Linux (D00262PCX8600).

DLC-263/IRPHE-VENUS-RECYCLE

SCK/CEN Mol, Belgium through the OECD Nuclear Energy Agency Data Bank, Issy-les-Moulineaux, France has released IRPHE-VENUS-RECYCLE, an archive of three volumes of documentation concerning the SCK/CEN-Belgonucleaire VENUS critical experiments and the results obtained from the "Plutonium Recycling Physics Project".

The first volume contains the basic data relating to the fuels used in the VENUS critical experiments. These data represent the latest knowledge available about the fuels (1974). They have been updated to the times of the experiments by taking account of the Pu-241 decay rate. The second volume contains all the experimental results obtained for configurations No. 1 and 27. The third volume contains a few notes on measurement campaigns relating to specific problems.

The fuel stock for the VENUS facility consisted of 2 800 fuel rods divided into 7 different types of chemical composition (UO2, UO2-PuO2, U2-Gd2O3) and 3 different types of fabrication (pellets, homogenous and heterogeneous vibrated oxides). It also included an additional 6 600 pellets of 8 different kinds used either separately or in fuel rods capable of disassembly.

The IRPHE-VENUS-RECYCLE package is transmitted on CD and includes documentation and data files. Microsoft Word and Acrobat Reader are required; PC, UNIX Workstations, MAC (D00263MNYCP00).

PSR-582/BURD
The Korea Atomic Energy Research Institute, Daejeon, Republic of Korea through the Nuclear Energy Agency Data Bank, Issy-les-Moulineaux, France contributed BURD (Bayesian Update for Reliability Data), a simple code that can be used to obtain a Bayesian estimate easily in the data analysis of PSA (Probabilistic Safety Assessment). According to the Bayes' theorem, basically the code facilitates calculations of posterior distribution given the prior and probable (evidence) distributions.

The distinctive features of the program, BURD, are the following:
- The input consists of the prior and probable functions that can be chosen from the built-in statistical distributions.
- The available prior distributions are uniform beta, gamma, and log-normal that are most-frequently used in performing PSA.
- For likelihood function, the user can choose from four statistical distributions, e.g., beta, gamma, binomial and poisson.
- A simultaneous graphic display of the prior and posterior distributions facilitates an intuitive interpretation of the results.
- Export facilities for the graphic display screen and text-type outputs are available.
- Three options for treating zero-evidence data are provided.
- Automatic setup of an integral calculus section for a Bayesian updating.

The BURD package includes documentation and source code. Visual Basic; IBM PC; Windows 98 SE, NT, 2000, ME and XP (P00582IBMPC00).

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.

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.

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 has 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 arwoodjw@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. Please provide a website address for the event if one is available.

Every attempt is made to ensure that the links provided in the Conference and Calendar sections of this newsletter are correct; however, if the links become unavailable, please call the point of contact for the event.

TRAINING COURSES

LANL 2013 MCNP CLASS SCHEDULE

Date	Course Name and Description	Location	Cost
June 3-7, 2013	**Introduction to MCNP6** Registration is open to all. Non-U.S. citizens must register by 4/1/13. Minimum of 8 students-Maximum of 15, Monday 12:30 p.m. - Friday 12:00 p.m.	Los Alamos, NM	$1,900 or $1,600*
June 10-14, 2013	**Introduction to MCNP6** Registration is open to all. Non-U.S. citizens must register by 4/8/13. Minimum of 8 students-Maximum of 15, Monday 12:30 p.m. - Friday 12:00 p.m.	Los Alamos, NM	$1,900 or $1,600*

August 5-9, 2013	**Criticality Calculations with MCNP6** Registration is open to all. Non-U.S. citizens must register by 6/3/13. Minimum of 8 students-Maximum of 15, Monday 12:30 p.m. - Friday 12:00 p.m.	Los Alamos, NM	$1,900 or $1,600*
August 12-16, 2013	**Variance Reduction with MCNP6** Registration is open to all. Non-U.S. citizens must register by 6/10/13. Minimum of 8 students-Maximum of 15, Monday 12:30 p.m. - Friday 12:00 p.m.	Los Alamos, NM	$1,900 or $1,600*
October 7-11, 2013	**Introduction to MCNP6** Registration is open to all. Non-U.S. citizens must register by 8/5/13. Minimum of 8 students-Maximum of 15, Monday 12:30 p.m. - Friday 12:00 p.m.	Los Alamos, NM	$1,900 or $1,600*

*Early payment discount: A discount of $300 per student is given when the registration payment is received in full at least 4 weeks prior to the start of class.

Introductory classes are for those who have little or no experience with MCNP. This class surveys the features of MCNP so the beginning user will be introduced to the capabilities of the program, and will have hands-on experience at running the code to solve simple problems. Course topics include Basic Geometry, Source Definitions, Output (Tallies), Advanced Geometry (repeated structures specifications), Variance Reduction Techniques, Statistical Analysis, Criticality, Plotting of Geometry and Tallies, and Neutron / Photon / Electron Physics.

Intermediate workshops cover the entire spectrum of MCNP/MCNPX, but proceed at a much faster pace and are more in-depth than the introductory classes. These workshops are open to new users; the first day of class is a review of basics. However, the intermediate workshops are targeted toward more experienced users and are more problem solving than lecture classes. Intermediate workshops feature flexible course content, skip topics of least interest to the participants, and provide significantly more depth than introductory classes.

Advanced classes- Variance Reduction and Criticality are for people with MCNP experience who want to extend their knowledge and gain depth of understanding. Most areas of MCNP operation will be discussed in detail, with emphasis on Advanced Geometry, Advanced Variance Reduction Techniques, and other advanced features of the program. Time will be available to discuss approaches to specific problems of interest to participants. Classes on specific topics are offered when there is sufficient interest.

Note: While MCNP supports a number of platforms, LANL class computers are Windows based. More information about the MCNP courses at LANL is available on their website at https://laws.lanl.gov/vhosts/mcnp.lanl.gov/classes/classinformation.shtml.

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.

Visual Editor Classes 2013		
June 10-14, 2013	**Introduction to MCNP/MCNPX** using the MCNPX Visual Editor	Barcelona, Spain
June 24-28, 2013	**Intermediate MCNPX Visual Editor** with a special emphasis on tallies and variance reduction.	Barcelona, Spain
July 15-19, 2013	**Introduction to MCNP/MCNPX** using the MCNPX Visual Editor	Livermore, CA
July 22-26, 2013	**Introduction to MCNP/MCNPX** using the MCNPX Visual Editor	Anaheim, CA
July 29-August 2, 2013	**Intermediate MCNPX Visual Editor** with a special emphasis on tallies and variance reduction.	Livermore, CA
August 19-23, 2013	**Introduction to MCNP/MCNPX** using the MCNPX Visual Editor	Las Vegas, NV
August 26-30, 2013	**Intermediate MCNPX Visual Editor** with a special emphasis on tallies and variance reduction.	Albuquerque, NM
September 3-6, 2013	**Advanced MCNPX Visual Editor** with emphasis on solving user problems.	Myrtle Beach, SC
September 16-20, 2013	**Introduction to MCNP/MCNPX** using the MCNPX Visual Editor.	Myrtle Beach, SC
September 23-27, 2013	**Intermediate MCNPX Visual Editor** with a special emphasis on tallies and variance reduction.	Myrtle Beach, SC

PENELOPE Class 2013		
May 6-9, 2013	**Introduction to PENELOPE** *(VEC is pleased to offer PENELOPE training taught by Frances Salvat, the primary author of the code)*	Las Vegas, NV

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 2013		
May 13-17, 2013	**MCNP/MCNPX Intermediate Workshop**	Pleasanton, CA
June 17-21, 2013	**MCNP/MCNPX Intermediate Workshop** *(The NEA handles registration for this class.)*	Barcelona, Spain
September 9-13, 2013	**MCNP/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.

MCNPX-PoliMi Workshop

Sara A. Pozzi, Shaun D. Clarke, Marc Ruch
July 24 – 26, 2013 *University of Michigan*
Department of Nuclear Engineering and Radiological Sciences
2355 Bonisteel Blvd. Ann Arbor, MI 48109

The MCNPX-PoliMi code is an enhanced version of MCNPX v. 2.7.0 that provides unique capabilities for simulating correlated-particle measurements and detector response. This three-day workshop will introduce new users to the capabilities of the MCNPX-PoliMi code and acquaint experienced users with new features.

- MCNPX-PoliMi source capabilities
- Detector-response calculations with the MPPost code
- Simulations of time-of-flight and cross-correlation distributions
- Simulations of multiplicity distributions

Seating is limited; therefore, the registrations will be accepted on first-come-first-serve basis. Registration deadline: July 5, 2013. Additional information about the courses can be found at the website, http://www-ners.engin.umich.edu/labs/dnng/polimi_workshop.html .

NRSHOT 2013

Nuclear Reactor Simulation Hands-On Training

The Nuclear Research Group of San Piero a Grado (GRNSPG) of the University of Pisa (UNIPI), the Nuclear Research Institute (UJV Rez) and the Innovative Systems Software (ISS) are jointly organizing Hands-on Trainings directed toward beginner and intermediate users of System Thermal-Hydraulic Codes and 3D Neutron Kinetic Coupling. The seminar-trainings will take place in Prague, Czech Republic from June 24-28, 2013 at the Nuclear Research Institute (UJV Rez).

The seminar is open to vendors, utilities, regulatory bodies, national laboratories, consulting companies and universities. A website with the latest news is available at: http://www.grnspg.ing.unipi.it/nrshot/.

OECD Nuclear Energy Agency-Data Bank Training Courses

May 21-24, 2013	**Depletion Calculations Using VESTA 2.1.5**	NEA, Paris, France
May 27-31, 2013	**SCALE/KENO Criticality Safety Calculations Schedule**	NEA, Paris, France
June 3-7, 2013	**SCALE/TSUNAMI Sensitivity and Uncertainty Calculations**	NEA, Paris, France
June 10-13, 2013	**PHITS Monte-Carlo Particle and Heavy Ion Transport Code System**	NEA, Paris, France
July 2-5, 2013	**PENELOPE**	University of Barcelona, Spain
October 16-18, 2013	**EASY, the European Activation System**	NEA, Paris, France
November 4-8, 2013	**TRIPOLI 4**	NEA, Paris, France

These workshops combine teaching by the authors on program physics, along with instructions on how to use the software. The courses include a large number of practical exercises. Note that the number of participants to the courses is limited. Priority is given to nationals from NEA Data Bank member countries. Class sizes are limited and courses may be cancelled if minimum enrollment is not obtained one month prior to course. Course fees are refundable up to one month before each class. After one month, course fees will not be refunded. Note that all attendees must be registered users. Registration information is available at: http://www.oecd-nea.org/dbprog/trainingcourses.htm.

Spring 2013 Training Courses

Date	Title	Location	Cost
May 27–31, 2013	**SCALE/Criticality Safety Calculations Course** *Introductory through advanced criticality calculations using KENO Va and KENO-VI; resonance self-shielding techniques*	NEA Data Bank, Issy-les-Moulineaux, France	€2000
June 3–7, 2013	**SCALE/Sensitivity and Uncertainty Calculations Course** *TSUNAMI: 1D, 2D, and 3D k_{eff} sensitivity/uncertainty analysis; 2D generalized sensitivity analysis for lattice physics; reactivity sensitivity analysis; advanced S/U methods for code and data validation using trending analysis and data assimilation (data adjustment) techniques; k_{eff} burnup credit validation*	NEA Data Bank, Issy-les-Moulineaux, France	€2000

Please register at least 40 days before the start of the desired course. For more information, including course descriptions, discounts, registration deadlines, and online registration, please visit http://scale.ornl.gov/training.shtml.

48th Tennessee Industries Week

TIW-48 will be held on the University of Tennessee Main Campus August 12-16, 2013. Tennessee Industries Week (TIW) began over forty years ago as a small short course program with instructors from the College of Engineering at The University of Tennessee, and attendees primarily from industry in Tennessee. Through the years, it has grown in scope and importance. The instructional staff is still composed mostly of UT professors but now also involves industry and government experts from throughout the U.S. and the world. Attendees also come from around the world. The emphasis is on putting knowledge to work and the atmosphere is organized but casual. Instructors present carefully planned lectures and demonstrations, and dialogues between instructors and attendees are encouraged in order to maximize benefits.

TIW-48 will include courses on Nuclear Criticality Safety, Radiological Assessment, and several other topics of interest (see http://www.engr.utk.edu/nuclear/TIW.html for more detailed information).

CONFERENCES

European Safeguards Research Development Association Annual Meeting

The 35th European Safeguards Research and Development Association (ESARDA) annual meeting will be a symposium on Safeguards and Nuclear Non-Proliferation, held at the Congrescentrum Oud St. Jan in Bruges, Belgium on May 27-30, 2013. The symposium will be preceded by meetings of the ESARDA Working Groups on May 27, 2013.

The symposium will be an opportunity for research organizations, safeguards authorities, and nuclear operators to exchange information on new aspects of international safeguards and non-proliferation, as well as recent developments in nuclear safeguards and non-proliferation related research activities and their implications for the safeguards community.

The symposium is anticipated to include a number of contributions from internationally-renowned authorities in the field.

For up-to-date information about this conference, visit their website at http://esarda.jrc.ec.europa.eu/index.php?option=com_content&view=article&id=70&Itemid=238. (Registration: http://esarda.sckcen.be/en/Registrationfee)

25th Symposium on Fusion Engineering (SOFE25)

The Symposium on Fusion Engineering (SOFE) is a biennial event organized and sponsored by the Fusion Technology Committee (FTC) of the IEEE Nuclear & Plasma Sciences Society and is to be held June 10-14, 2013 in San Francisco, CA. The Symposium covers engineering and scientific advances in both inertial confinement and magnetic confinement fusion, with attendees from major fusion energy research centers worldwide. For up-to-date information about this conference, visit their website at http://sofe2013.org/.

2013 IEEE Nuclear and Space Radiation Effects Conference

The 2013 IEEE Nuclear and Space Radiation Effects Conference will be held in San Francisco at the Hyatt Regency on July 8-12, 2013. The conference features a technical program consisting of eight to ten technical sessions of contributed papers describing the latest observations in radiation effects, a Short Course on radiation effects offered on July 8, a Radiation Effects Data Workshop, and an Industrial Exhibit. The technical program includes oral and poster sessions.   For up-to-date information about this conference, visit their website at http://www.nsrec.com/ .

2013 IEEE Nuclear Science Symposium and Medical Imaging Conference

"Beyond Imagination of Future Science" will be held in Seoul, South Korea from October 27th - November 2nd, 2013 at the COEX Convention Center. In addition to the presentation of original work, the conference will provide extensive educational opportunities via short courses and special emphasis seminars before and during the conference. This meeting has always been a great place to exchange ideas and share knowledge and experience in the nuclear science, medical imaging, and room-temperature semiconductor X-Ray and Gamma-Ray detector fields. For up-to-date information about this conference, visit their website at http://www.nss-mic.org/2013/NSSMain.asp .

2013 INMM Packaging and Transportation of Radioactive Materials Conference (PATRAM)

The 2013 INMM Packaging and Transportation of Radioactive Materials (PATRAM) will be held at the Hilton San Francisco Union Square in San Francisco, CA August 18-23, 2013. This conference brings together experts from government, industry and research organizations worldwide to exchange information on all aspects of packaging and transporting radioactive materials around the globe. For up-to-date information about this conference, visit their website http://www.patram.org/ .

GLOBAL 2013: International Nuclear Fuel Cycle Conference

The GLOBAL 2013 International Nuclear Fuel Cycle Conference will be held September 29-October 3, 2013 in Salt Lake City, UT.

The conference is a forum for the discussion of the scientific, technical, social and regulatory aspects of the nuclear fuel cycle. Relevant topics include global utilization of nuclear energy, current fuel cycle technologies, advanced reactors, advance fuel cycles, nuclear nonproliferation and public acceptance.

For up-to-date information about this conference, visit their website at
http://www.new.ans.org/meetings/m_158 .

Joint International Conference on Supercomputing in Nuclear Applications & Monte Carlo

The Joint International Conference on Supercomputing in Nuclear Applications & Monte Carlo will be held on October 27-31, 2013, at the Cité des Sciences et de L'Industrie de la Villette in Paris, France.

The conference aims to highlight renewed strategy and simulation paradigms, and to identify future conceptual and technological breakthroughs. The objective is to increase the predictive capacity of the calculation tools designed and developed by teams of engineers and researchers all over the globe. The idea is to improve the performances accordingly in terms of calculation time, usability and maintainability. All these factors are indeed crucial for the central question of the role of a global nuclear application economy, including safety, optimizations, and costs.

For up-to-date information about this conference, visit their website at https://www.sfen.fr/SNA-and-MC-2013.

2013 CALENDAR

May

International Conference on Mathematics and Computational Methods Applied to Nuclear Science and Engineering (M&C 2013), May 5-9, 2013, Sun Valley, ID. For up-to-date information about this conference, visit their website at http://www.mc2013.org/.

35th European Safeguards Research and Development Association (ESARDA), May 27-30, 2013, Bruges, Belgium. For up-to-date information about this conference, visit their website at

http://esarda.jrc.ec.europa.eu/index.php?option=com_content&view=article&id=70&Itemid=238.

June

Society of Nuclear Medicine and Molecular Imaging (SNMMI) Annual Meeting, June 8-12, 2013 Vancouver, BC, Canada. For up-to-date information about this conference, visit their website at http://interactive.snm.org/index.cfm?PageID=5934.

25th Symposium on Fusion Engineering (SOFE25), June 10-14, 2013 San Francisco, CA. For up-to-date information about this conference, visit their website at http://sofe2013.org/.

American Nuclear Society (ANS) Annual Meeting, June 16-20, 2013 Atlanta, GA. For up-to-date information about this conference, visit their website at http://www.new.ans.org/meetings/m_80.

Nuclear Reactor Simulation Workshop – Hands on Training, June 24-28, 2013, Nuclear Research Institute, NRI, Prague, Czech. For up-to-date information about this conference, visit their website at http://www.grnspg.ing.unipi.it/nrshot/ .

July

Institute of Nuclear Materials Management (INMM) 54th Annual Meeting, July 14-18, 2013, Palm Desert, CA. For up-to-date information about this conference, visit their website at http://www.inmm.org/Meeting_Home.htm.

August

Utility Working Conference and Vendor Technology Expo, August 11-14, 2013, Hollywood, FL**.** For up-to-date information about this conference, visit their website at http://www.new.ans.org/meetings/m_142.

48th Tennessee Industries Week, August 12-16, 2013, The University of Tennessee Main Campus, Knoxville, TN**.** For up-to-date information about this conference, visit their website at http://www.engr.utk.edu/nuclear/TIW.html .

September

2013 LWR Fuel Performance Meeting/Top Fuel, September 15-19, 2013, Charlotte, NC. For up-to-date information about this conference, visit their website at http://www.new.ans.org/meetings/m_142.

International Topical Meeting on Probabilistic Safety Assessment and Analysis (PSA 2013), September 22-26, 2013, Columbia, SC. For up-to-date information about this conference, visit their website at http://psa2013.org/.

Global 2013: International Nuclear Fuel Cycle Conference, September 29-October 3, 2013, Salt Lake City, UT. For up-to-date information about this conference, visit their website at http://www.new.ans.org/meetings/m_158 .

October

Joint International Conference on Supercomputing in Nuclear Applications & Monte Carlo, October 27-31, 2013, Paris, France. For up-to-date information about this conference, visit their website at https://www.sfen.fr/SNA-and-MC-2013.