Radiation Safety Information Computational Center

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A man has to live with himself, and he should see to it that he always has good company.—Charles Evans Hughes

RSICC AND NEADB CO-SPONSOR GEANT4/SWORD WORKSHOP

Joint Geant4/SWORD Workshop, presented by Geant4 Developers (*SLAC* National Accelerator Laboratory/Lawrence Livermore National Laboratory) and SWORD Developers (Naval Research Laboratory) at Oak Ridge National Laboratory, March 7–11, 2011. Contact: http://rsicc.ornl.gov/rsiccnew/geant4-sword-workshop/geant4-sword.htm

U.S. Department of Energy Scholars Program Now Accepting Applications

The U.S. Department of Energy (DOE) Scholars Program is now accepting applications for summer 2011. Visit http://orise.orau.gov/doescholars for more information or to apply—deadline is **January 31, 2011**.

Are you interested in participating in the most recent scientific research and development? Would you like to gain experience in discovering solutions to power and securing America's future, specifically in energy security, nuclear security, scientific discovery and innovation, environmental responsibility and management excellence?

The Department of Energy Scholars Program offers summer internships with stipends of up to $650 per week depending on academic status to undergraduates, graduate students and post graduates at accredited institutes of higher education. Majors accepted include: engineering; physical sciences; environmental sciences; computer science and information technology; physics; program management; math; statistics; safety and health; accounting and finance; law; and other related discipline areas. Applicants must be US Citizens—no exceptions.

Internships provide participants with the opportunity to conduct hands-on research while showcasing their education, talent and skills. Interns will also have a unique opportunity to explore the options for federal careers with DOE.

For more information, please contact Leslie Fox, Program Manager or Barbara Dunkin, Program Specialist at barbara.dunkin@orau.org. The DOE Scholars program is managed by the Oak Ridge Institute for Science and Education (ORISE).

CHANGES TO THE RSICC CODE AND DATA COLLECTION

MIS-011/GANAPOL-ABNTT

University of Arizona, Tucson, AZ, USA, released GANAPOL-ABNTT through the OECD Nuclear Energy Agency Data Bank, Issy-les-Moulineaux, France. The developers of computer codes involving neutron transport theory for nuclear engineering applications seldom apply analytical benchmarking strategies to ensure the quality of their programs. A major reason for this is the lack of analytical benchmarks and their documentation in the literature. The few such benchmarks that do exist are difficult to locate, as they are scattered throughout the neutron transport and radiative transfer literature. The motivation for this benchmark compendium is to gather several analytical benchmarks appropriate for nuclear engineering applications under one cover. The following three subject areas are considered: neutron slowing down and thermalization without spatial dependence, one-dimensional neutron transport in infinite and finite media, and multidimensional neutron transport in a half-space and an infinite medium. Each benchmark is briefly described, followed by a detailed derivation of the analytical solution representation. Finally, a demonstration of the evaluation of the solution representation includes qualified numerical benchmark results. All accompanying computer codes are suitable for the PC computational environment and can serve as educational tools for courses in nuclear engineering. While this benchmark compilation does not contain all possible benchmarks it does include some of the most prominent ones and should serve as a valuable reference. The package is transmitted in a WinZIP file which contains the book, source code, Windows executables, and documentation. Fortran 77, PDF format; many computers (M00011MNYCP00).

MIS-013/PREPRO2010

The Nuclear Data Center at the International Atomic Energy Agency, Vienna, Austria, contributed a newly frozen version of PREPRO2010, the pre-processing code system for data in ENDF/B format. The ENDF/B pre-processing codes are designed to be a modular set of computer codes, each of which reads evaluated nuclear data in the ENDF/B format, processes the data and outputs it in the ENDF/B format. Each code performs one or more independent operations on the data. The codes are named “the pre-processing” codes because they are designed to pre-process ENDF/B data for subsequent use in applications. These codes are designed to operate on virtually any type of computer with the included capability of optimization on any given computer. They can process datasets in any ENDF/B format, ENDF/B-I through ENDF/B-VI, and are even designed to handle new ENDF/B-VII evaluations.

The package is transmitted on a CD which contains the referenced document in electronic form and 5 machine-dependent compressed files. The extracted directories contain Fortran 77 source files, executables for PC, Linux, and MAC, sample input and output, and information files. Reference: IAEA-NDS-39, Rev. 14 (Oct. 31, 2010). Fortran 77 on PC, Linux, Unix and MacOSX (M00013MNYCP00).

ANS News

ANS Fellows

Luiz C. Leal, member since 1988 and staff member of the Reactor & Nuclear Systems Division of Oak Ridge National Laboratory, was selected a Fellow in recognition of "outstanding leadership in the development of neutron resonance parameters and the evaluation of associated cross sections and data uncertainties. This work, including the establishment of the definitive resonance evaluation for uranium-235 and the production of new data for the uranium-233/thorium cycle, has led to significant improvements in neutronics analyses for reactor and fuel-cycle safety applications."

Piero Ravetto, member since 1991 and professor of nuclear reactor physics and dean of the Energy Engineering Program at Italy's Politecnico di Torino, was selected in recognition of "his seminal development of the second-order form of the neutron transport equation; his consequent role in the formation of efficient and practical new methods for reactor physics calculations; and his significant contribution to space-time kinetics and various applications in current reactors and in innovative nuclear systems for power production and actinide transmutation."

Lance L. Snead, a member since 2001 and a research staff member of the Materials Science and Technology Division of Oak Ridge National Laboratory, was selected for "groundbreaking research on radiation effects in silicon carbide and other ceramic composites for use in fusion and advanced fission reactors and his development of a new class of radiation-tolerant ceramic composites. This work has led to significant advances in the fundamental understanding of radiation-induced microstructural evolution in structural materials."

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

Introductory MCNP, Advanced MCNP, 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.

2011 Classes		
March 7–11	Introduction to MCNP using the MCNPX Visual Editor	London, UK
April 11–15	Introduction to MCNP using the MCNPX Visual Editor	Las Vegas, NV
April 18–22	Intermediate MCNP Visual Editor with a special emphasis on tallies and variance reduction	Las Vegas, NV
June 6–10	Introduction to MCNP using the MCNPX Visual Editor	Anaheim, CA
June 13–17	Intermediate MCNP Visual Editor with a special emphasis on tallies and variance reduction	Anaheim, CA
September 12–16	Introduction to MCNP using the MCNPX Visual Editor	Myrtle Beach, SC
September 19–23	Intermediate MCNP Visual Editor with a special emphasis on tallies and variance reduction	Myrtle Beach, SC
October 24–28	Introduction to MCNP using the MCNPX Visual Editor	London, U.K.
November 7–11	Introduction to MCNP using the MCNPX Visual Editor	Las Vegas, NV
November 14–18	Intermediate MCNP Visual Editor with a special emphasis on tallies and variance reduction	Las Vegas, NV

The introductory classes combine teaching on MCNP physics, along with instructions on how to use the Visual Editor. The advanced class assumes the user has experience using MCNP or MCNPX and focuses on Visual Editor topics. Computer demonstrations and exercises will focus on creating and interrogating input files with the Visual Editor. Advanced visualization work using MCNP will also be demonstrated. Both the introductory and advanced classes will be taught on Pentium computers running Windows 2000. Attendees are encouraged to bring their own input files for viewing and modifying in the visual editor. The course description and registration information can be found at http://www.mcnpvised.com/index.html.

MCNPX Training

2011 Classes		
Feb 28–March 4	MCNPX Intermediate Workshop	Paris, France
May 9–13	MCNPX Intermediate Workshop	Chicago, IL
September 26–30	MCNPX Intermediate Workshop	Washington, DC
October 17–21	MCNPX Intermediate Workshop	London, U.K.

The MCNPX team at Los Alamos National Laboratory offers interactive workshops for training users in the capabilities of MCNPX. Three levels are offered:

- introductory (for users with 0–1 year of experience),
- intermediate (for users with 1–3 years of experience), and
- advanced (for users with more than 3 years of experience).

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 15 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, indicating the workshop of interest to you.

SCALE Training Courses

Date	Title / Description	Location
March 7–11	**SCALE Lattice Physics and Depletion Course** Isotopic depletion/decay and source term characterization using ORIGEN, 2D reactor physics analysis using NEWT, and 3D Monte Carlo depletion using KENO **(ORIGEN-ARP/TRITON)**	NEA Data Bank,Paris, France
March 28–April 1	**SCALE Criticality Safety Course** Criticality safety with the KENO Monte Carlo codes for multi-group and continuous-energy calculations using standard and generalized geometry **(KENO V.a/KENO-VI)**	ORNL, Oak Ridge, TN, USA
April 4–8	**SCALE Criticality Safety and Shielding Course** Introduction to criticality safety using the generalized geometry version of KENO, shielding analysis using automated variance reduction for deep-penetration and complex problems, and criticality accident analysis system analysis **(KENO-VI/MAVRIC)**	ORNL, Oak Ridge, TN, USA
April 11–15	**SCALE Lattice Physics and Depletion Course** Isotopic depletion/decay and source term characterization using ORIGEN, 2D reactor physics analysis using NEWT, and 3D Monte Carlo depletion using KENO *ORIGEN-ARP will be offered for 1-day registration of $800* **(ORIGEN-ARP/TRITON)**	ORNL, Oak Ridge, TN, USA
April 18–21	**SCALE Burnup Credit Calculations** A new course in burnup credit analysis for transportation casks and fuel storage racks using OrigenArp, STARBUCS, and TRITON **(Burnup Credit)**	ORNL, Oak Ridge, TN, USA

A discount of $200 will be applied for registration of multiple courses. Class size is limited and courses may be canceled if minimum enrollment is not obtained one month prior to the course. Course fees are refundable up to one month before each class. Note that all attendees must be registered SCALE 6 users. All foreign national visitors must register a minimum of 40 days prior to the start date of the training course they plan to attend. Course descriptions may be found at http://www.ornl.gov/sci/scale/course_description.htm.

ORAU Offers Health Physics and Radiation Safety Training

ORAU is pleased to offer the following courses. If you wish to discuss having a customized course delivered at your site, please contact Paul Frame at 865-576-3388 or Paul.Frame@orau.org.

Course	Dates
Applied Health Physics	February 28–April 1, 2011
CHP Part I Review	April 5–7, 2011
Gamma Spectroscopy	April 11–15, 2011

CONFERENCES

PSA 2011

The 2011 Probabilistic Safety Analysis conference (PSA 2011) will be held in Wilmington, North Carolina, March 13–17, 2011. The conference is sponsored by the ANS Nuclear Installations Safety Division (NISD) and the Wilmington Area Local Section of the ANS (WLS). Bookmark and check the conference website at http://meetingsandconferences.com/psa2011/ often to remain informed about deadlines and activities.

MTAA 13

Texas A&M will host the 2011 Modern Trends in Activation Analysis (MTAA-13) Conference March 13–18, 2011—fifty years after the first MTAA conference also hosted by what was then the A&M College of Texas. The scope of the conference will include activation analysis methodology, methodological enhancements, applications of activation analysis to the fields of energy, environment, biology and medicine, geology, archaeology, homeland security, etc. However, this conference will broaden the subject matter somewhat in that it will invite and entertain contributed presentations from all areas of nuclear analytical methods as well as competing technologies.

Conference organizers will provide incentives to selected potential attendees in the form of travel awards. We anticipate making up to twelve awards to students and another twelve to young scientists who submit applications. Awardees will be expected to participate in the meeting by submission of abstracts and manuscripts to the proceedings. While financial need will be considered, recipients will be those considered by the conference organizers to be most likely to provide meaningful participation and future advancement of the science. Details concerning application procedures and criteria for selection will appear in subsequent announcements as well as the conference website.

Make sure you are on the conference contact list by completing the form found at: https://tti.tamu.edu/conferences/mtaa13/registration_interest.htm. Information on the conference will be posted to http://tti.tamu.edu/conferences/mtaa13/. You may also contact William D. (Dennis) James, Center for Chemical Characterization and Analysis, Texas A&M University, 3144 TAMU, College Station, TX 77843-3144 (phone 979 845-7630, email wd-james@tamu.edu).

3D S.UN.COP 2010

The Nuclear Research Group of San Piero a Grado (GRNSPG) of University of Pisa (UNIPI), the Faculty of Electrical Engineering and Computing (FER) of Zagreb and the School of Industrial Engineering of Barcelona (ETSEIB) in cooperation with General Electric Hitachi (GEH), Westinghouse (W), AREVA-NP and Idaho National Lab (INL) are jointly organizing the seminar and training to transfer competence, knowledge and experience in the area of Scaling, Uncertainty and 3D Coupled Code Calculations (3D S.UN.COP 2010).

The seminar will take place in Wilmington, North Carolina (USA) from March 28 to April 15, 2011. It will be held in classrooms equipped with data projectors and networked PCs suitable for running advanced best estimate thermal-hydraulic codes. The seminar is divided into three parts and participants may choose to attend a one-, two- or three-week course depending on their interest in the following topics:

1) Fundamental theoretical aspects

2) Industrial applications, coupling methodologies, and hands-on training sessions

3) Advanced user training

Further details are available at: http://www.grnspg.ing.unipi.it/3dsuncop/2011/index.html

ICAPP

The 2011 International Congress on Advances in Nuclear Power Plants (ICAPP 2011) will be held May 2–5, 2011, in Nice, France. Participants in the conference will benefit from the opportunity to meet experts in the nuclear industry and to review the recent evolution in reactor physics, thermal-hydraulics, materials, operation and maintenance, safety and licensing of new nuclear power plants. Information regarding the conference will be posted at the website, https://www.sfen.fr/index.php/plain_site/icapp_international_congress_on_advances_in_npps. You may also contact Sylvie Delaplace at icapp2011@sfen.fr.

MC 2011

The 2011 International Conference on Mathematics and Computational Methods applied to Nuclear Science and Engineering (MC 2011) will be held in Rio de Janeiro, May 8–12, 2011. The conference will provide an international forum for scientists to present their most recent work and exchange ideas on a powerful class of methodologies extensively used for solving mathematical models of physical phenomena and processes applied to nuclear science and engineering. One of the aims is to promote new research tools and procedures that help link mathematics, applied sciences and technology. Therefore, MC 2011 will offer an opportunity for direct information exchange between participants from both academia and industry. General Chair of the meeting is Cassiano de Oliveira (cassiano@unm.edu). Bookmark the conference website, http://www.mc2011.org, to keep abreast of conference information.

ISRD-14

The 14th International Symposium on Reactor Dosimetry (ISRD-14) will be held May 22–27, 2011, at the Omni Mount Washington Resort, Bretton Woods, New Hampshire. This Symposium, held approximately every three years, provides a forum for the interchange of state-of-the-art techniques, data bases and standardization of radiation metrology. The Symposium will be of value to those involved in reactor dosimetry, including researchers, manufacturers and representatives from industry, utilities and regulatory agencies. The Symposium is jointly sponsored by ASTM International and the European Working Group on Reactor Dosimetry (EWGRD). It is organized by ASTM Committee E10 on Nuclear Technology and Applications.

The Symposium theme is dosimetry for the assessment of irradiated reactor materials and reactor experiments, featuring radiation metrology techniques, data bases and standardization. It is organized into oral and poster presentations, as well as informal round-table workshops. The meeting language is English. Papers accepted for presentation at the symposium will be published in the on-line *Journal of ASTM International*. Bookmark the conference website, http://www.reactordosimetry.com/, to remain current with conference information.

ICNC2011

The International Conference on Nuclear Criticality (ICNC2011) which will be held at Heriot-Watt University, Edinburgh, United Kingdom, September 19–22, 2011, allows specialists from around the world to meet to discuss, analyze and study the latest developments in the area of nuclear criticality safety. Abstracts relevant to the following topical categories may be submitted online by February 28, 2011:

Development of Standards and Assessment Methodology
Operational Practice
Criticality Codes and Nuclear Data
Criticality Experiments
Uncertainty Analysis
Analysis of Criticality Accidents and Incidents
Burnup Credit
Waste Management Issues
Professional Development Issues

Complete details on the conference are available at the website, http://www.informaglobalevents.com/event/icnc2011. For information about registering, delegate information or any other customer service enquiries, please contact Energy Customer Services, Informa UK LtdPO Box 406West Byfleet KT14 6NN UK (phone +44 (0) 20 7017 5518, fax +44 (0) 20 7017 4745, email energycustserv@informa.com).

CALENDAR

March 2011

2011 Annual Meeting of the National Council on Radiation Protection and Measurements, March 7–8, 2011, Bethesda, MD. Contact: David Schauer, NCRP (phone 301-657-2652 X 20, fax 301-907-8768, email schauer@ncrponline.org) url www.ncrponline.org.

Geant4/SWORD Training Course, March 7–11, 2011, Oak Ridge National Laboratory, Oak Ridge, TN. Contact: http://rsicc.ornl.gov/rsiccnew/geant4-sword-workshop/geant4-sword.htm.

PSA 2011, International Topical Meeting on Probabilistic Safety Assessment and Analysis, March 13–17, 2011, Hilton Wilmington Riverside, Wilmington, NC. Meeting information: http://meetingsandconferences.com/psa2011/.

Modern Trends in Activation Analysis (MTAA-13), March 13–18, 2011, College Station, TX. Contact: William D. (Dennis) James, Center for Chemical Characterization and Analysis, Texas A&M University, 3144 TAMU, College Station, TX 77843-3144 (phone 979 845-7630, email wd-james@tamu.edu) url: http://tti.tamu.edu/conferences/mtaa13/.

European Research Reactor Conference (RRFM 2011) March 20–24, 2011, Rome. Contact: Kirsten Epskamp, ENS (phone 32 0 2 505 30 54, fax 32 0 2 502 3902, email rrfm2011@euronuclear.org) url www.euronuclear.org/meetings/rrfm2011/.

5th Annual European Nuclear Forum, March 22–23, 2011, Paris. Contact: Marketforce (phone 44 0 20 7760 8699, email conferences@marketforce.eu.com) url www.marketforce.eu.com/eunuclear/.

April 2011

AccApp '11 - Tenth International Topical Meeting on Nuclear Applications of Accelerators, April 3–7, 2011, Knoxville, TN. Contact: Conference Chair, Phil Ferguson, Oak Ridge National Laboratory (phone 865-241-5702, email fergusonpd@ornl.gov) url: http://accapp11.org.

International High-Level Radioactive Waste Management Conference, Apr. 10–14, 2011, Albuquerque, NM. Contact: Margaret Chu (phone 505-293-4375, fax 505-294-8995, email msychu@comcast.net) url www.new.ans.org/meetings/m_115.

ANS Student Conference, Apr. 14–17, 2011, Atlanta, GA. Contact: Tim Cahill, ANS GT Student Section (phone 850-516-8449, email ans2011@gtans.org) url http://conference.gtans.org/.

May 2011

ICAPP 2011, May 2–5, 2011, Nice, France. Contact: Sylvie Delaplace, SFEN (phone 33 0 1 53 583216, fax 33 0 1 53533211, email icapp2011@sfen.fr) url www.sfen.fr/index.php/plain_site/icapp_11.

MC 2011, May 8–12, 2011, Rio de Janeiro, Brazil. Meeting information: http://www.mc2011.org/.

Canadian Radiation Protection Annual Conference, May 8–12, 2011, Ottawa, Ontario, Canada. Contact CRPA (phone 613-253-3779, fax 888-551-0712, email secretariat2007@crpa-acrp.ca) url www.crpa-acrp.com/en.

Nuclear Engineering Science and Technology Education and Training (NESTet 2011), May 15–18, 2011, Prague, Czech Republic. Contact Contact: Kirsten Epskamp, ENS (phone 32 2 505 30 54, fax 32 2 505 3902, email nestet2011@euronuclear.org) url www.euronuclear.org/events/nestet/nestet2011/.

ICENES 2011, May 15–19, 2011, San Francisco, CA. Contact: ICENES 2011 (phone 925-423-4372, fax 925-424-3495) url www.icenes2011.org.

ICONE19, May 16–19, 2011, Makuhari, Chiba, Japan. Contact: JSME (email icone19@jsme.or.jp) url www.icone19.org or www.asmeconferences.org/icone19/.

Jahrestagung Kerntechnik (Annual Meeting on Nuclear Technology 2011), May 17–19, 2011, Berlin, Germany. Contact: CPO Hanser Service (phone 49 30 300-6690, fax 49 30 305-7391, email jtkerntechnik2011@cpo-hanser.de) url www.kerntechnik.info/en/home.html.

European Nuclear Young Generation Forum (ENYGF), May 17–22, 2011, Prague, Czech Republic. Contact: ENYGR (email info@enygt.eu) url www.enygf.eu.

ISRD-14, International Symposium on Reactor Dosimetry, May 22–27, 2011, Bretton Woods, New Hampshire. Contact: Dr. David W. Vehar, Sandia National Laboratories (dwvehar@sandia.gov) url http://www.reactordosimetry.com/.

June 2011

Workshop on Activation Data (Kopeck), June 1–3, 2011, Charles University in Prague, Czech Republic. Contact: Jean-Christophe.Sublet@ccfe.ac.uk, url http://www.ccfe.ac.uk/EASY_workshops.aspx.

32nd Canadian Nuclear Society Annual Conference and 35th CNS Student Conference, June 5–8, 2011, Niagara Falls, Ontario, Canada. Contact: CNS (phone 416-977-7620, email cns-snc@on.aibn.com) url http://conf2011.cns-snc.ca.

ANS Annual Meeting, June 26–30, 2011, Hollywood, FL. The website is http://www.new.ans.org/meetings.

IRRMA-8, Industrial Radiation and Radioisotope Measurement Applications, June 26–July 1, 2011, Kansas City, MO. Contact: William L. Dunn, Kansas State University (email dunn@k-state.edu) url http://www.dce.k-state.edu/conf/irrma/.

September 2011

SET 2011, 10th International Conference on Sustainable Energy Technologies, Sept. 4–7, 2011, Istanbul, Turkey. Contact: Prof. Dr. Sümer Sahin, Atılım University (email ssahin@atilim.edu.tr) url http://www.set2011.org.

ICTT-22, 22nd International Conference on Transport Theory, Sept. 11–15, 2011, Portland, Oregon. Contact: Todd Palmer, Technical Program Chair, Oregon State University (palmerts@ne.orst.edu).

ICNC2011, Sept. 19–22, 2011, Heriot-Watt University, Edinburgh, United Kingdom. Contact: Energy Customer Services, Informa UK LtdPO Box 406West Byfleet KT14 6NN UK (phone +44 0 20 7017 5518, fax +44 0 20 7017 4745, email energycustserv@informa.com) url http://www.informaglobalevents.com/event/icnc2011.

October 2011

2011 ANS Winter Meeting and Nuclear Technology Expo, Oct. 30–Nov. 3, 2011, Washington, DC. The website is http://www.new.ans.org/meetings/c_1.