
Radiation Safety Information Computational Center



Oak Ridge National Laboratory
POST OFFICE BOX 2008
OAK RIDGE, TENNESSEE 37831-6171

Managed by
UT-Battelle, LLC
for the U.S. Department of Energy
under contract DE-AC05-00OR22725

phone 865-574-6176 fax 865-241-4046
email PDC@ORNL.GOV
www <http://rsicc.ornl.gov/>

No. 552

February 2011

Not everything that is faced can be changed, but nothing can be changed until it is faced.—James Baldwin

\$3,000 Robert J. Sorenson Memorial Scholarship.....	1
CHANGES TO THE RSICC CODE AND DATA COLLECTION	2
CONFERENCES, COURSES, SYMPOSIA	2
TRAINING	2
CONFERENCES	6
CALENDAR.....	8

\$3,000 Robert J. Sorenson Memorial Scholarship

Applications Accepted until April 1

Requirements

- The applicant must be an Institute of Nuclear Materials Management (INMM) member/student member or be sponsored by an INMM member.
- The applicant must be enrolled full time in a recognized college or university, preferably at least a junior in college or equivalent, and pursuing a degree applicable to nuclear materials management. Such curriculum would include but not be limited to physics, chemistry, engineering, mathematics, accounting, statistics, international studies, and business.
- An essay specifying his/her qualifications for the scholarship
- Proof of student status
- Two letters of recommendation, one of which should be a faculty member familiar with the applicant's qualifications and one from a non-family member

First and second year students may be considered on a case by case basis. No qualified applicant will be discriminated against because of sex, race, country of origin, citizenship, or family income. Return completed application and supporting documents to:

Institute of Nuclear Materials Management
Sorenson Scholarship Fund
111 Deer Lake Road, Suite 100
Deerfield, IL 60015 USA

Details and the application form may be found at http://www.inmm.org/Scholarships_and_Awards/1970.htm.

The Robert J. Sorenson Memorial Scholarship Fund is named in honor of an INMM member who passed away unexpectedly in 1998. His employer, Pacific Northwest National Laboratory (PNNL), and friends of the Sorenson family graciously provided the seed money to initiate the Fund.

Applications for the 2011 Sorenson Scholarship will be accepted until April 1, 2011.

CHANGES TO THE RSICC CODE AND DATA COLLECTION

New code/data package announcements have been delayed due to the implementation of the new RSICC database. Code/data package announcements will return next month.

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, U.K.
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

2011 Classes		
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		
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](mailto: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
April 4–8	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 <i>ORIGEN-ARP will be offered for 1-day registration of \$800</i> (ORIGEN-ARP/TRITON)	ORNL, Oak Ridge, TN
April 11–15	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
April 18–21	Special Topics in SCALE Analysis A new course in burnup credit analysis for transportation casks and fuel storage racks using OrigenArp, STARBUCS, and TRITON)	ORNL, Oak Ridge, TN

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@ornl.gov.

Course	Dates
CHP Part I Review	April 5–7, 2011
Gamma Spectroscopy	April 11–15, 2011

ENEN Courses

The European Nuclear Education Network (ENEN) has provided the following information on upcoming courses.

Operation & Safety of PWR—May 16–27, 2011

The objective is to develop the working skills for design, operation, and safety of pressurized water reactors (PWR) with basic knowledge of thermal-hydraulics and core physics to support the technical aspects of PWR architecture, systems, and control and management procedures.

Thermal Hydraulics of Light Water Reactors—June 14–24, 2011

The course will provide the fundamentals of reactor thermal hydraulics, including single- and two-phase flows, heat and mass transfer phenomena and fuel thermal behavior. Design and safety of light water reactors is addressed, particularly thermal and hydraulic limitations.

Contact: Nadia Nowacki at

The European Nuclear Education Network Association (ENEN)

PO Box 35

Commissariat à l'Energie Atomique / Saclay

INSTN/UEIN - Bld 395

91191 GIF-SUR-YVETTE Cedex

FRANCE

phone + 33 1 69083092

fax + 33 1 69087782

nadia.nowacki@cea.fr

sec.enen@cea.fr

www.enen-assoc.org

<http://www-instn.cea.fr/>

MMCTP Users Course

A one-day course on MMCTP, sponsored by the Medical Physics Unit at McGill University, is scheduled for June 11, 2011, at Montreal General Hospital, in Montreal, Canada. Workshop is limited to 12 participants; the registration deadline is April 29, 2011. Details regarding the workshop can be found at <http://www.medphys.mcgill.ca/~mmctp/MMCTP/course/MMCTPCourse/Welcome.html>.

MMCTP is a radiotherapy research environment built for students and researchers to plan and calculate complex Monte Carlo treatment plans. MMCTP makes use of the popular BEAMnrc code for modeling linear accelerators and DOSXYZnrc for modeling the patient geometry.

The course will train individuals on the use of MMCTP with the intent that they will be able to return to their institutions with the knowledge required to implement MMCTP. The workshop will include lectures and hands-on laboratories. Attendees are required to bring along a laptop (Windows or MAC) to participate in the hands-on laboratories.

MeV Summer School

The 2011 MeV Summer School on Reactor Physics Computations, Validation and Integration in Multiphysics Codes will be held July 19-28, 2011, at the Advanced Photon Source (APS) Facility at Argonne National Laboratory. The school is once again co-sponsored by the Idaho National Laboratory (INL), Idaho State University (ISU), and Argonne National Laboratory (ANL). This year the Center for

Advanced Energy Studies (CAES) and Oak Ridge National Laboratory (ORNL) are also co-sponsors. The objective of the school is to provide early career nuclear engineers with advanced studies in integrated modeling, experimentation, and validation to prepare them for some of the key challenges and demands facing the nuclear energy renaissance. The 2011 focus is Reactor Physics Computations, Validation and Integration in Multiphysics Codes and includes the following major topics:

- reactor physics modeling and analysis methods;
- nuclear data theory, measurements, and evaluation;
- multiphysics (thermal hydraulics, neutronics, materials, fuels, i&c) of plant dynamics in operational, abnormal transients and accidents;
- basics and advances in nuclear energy systems modeling and simulation that encompasses critical review of equations and numerical methods;
- experimental measurements of reactor physics behavior;
- sensitivity analysis, uncertainty quantification and data assimilation methods; and
- advanced verification and validation methods.

Students will be grouped in teams to work on course assignments that build on the lecture materials and address challenging questions in reactor physics and safety. Each team will be working closely with and mentored by senior scientists and professors who are leaders in the field. Successful students will take away a solid theoretical foundation as well as a set of practical examples to guide their future work on experimental design, model development, and validation. Classroom instruction will be augmented by tours to the Exelon Dresden Generation Station (nuclear plant) in Morris, Illinois, and to the Advanced Photon Source (APS) Facility at Argonne National Laboratory. Registration, schedule, and other important information is posted at the website, <http://mevschool.org/>.

CONFERENCES

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.

Nuclear 2011

The 4th Annual International Conference on Sustainable Development through Nuclear Research and Education (Nuclear 2011) will be held May 25–27, 2011, in Pitești, România. Organized by the Romanian Academy, Nuclear 2011 intends to bring together a large representation of nuclear research and industry, academia and energy policy in order to address the major challenges facing nuclear energy today from the perspective of the future: safety, security in energy supply, waste management, radioprotection and environmental protection, knowledge transfer. The first call for papers has been issued soliciting work on the following topics:

1. Nuclear Energy
 - Nuclear Safety and Severe Accidents
 - Nuclear Reactors
 - Nuclear Technologies and Materials
2. Environmental Protection
 - Radioprotection
 - Radioactive Waste Management
 - Air, Water and Soil Protection
3. Sustainable Development
 - Policies and Strategies in Nuclear Research
 - Research Infrastructure
 - Education, Continuous Formation and Knowledge Transfer
 - International Partnerships for a Sustainable Development

Abstract submission and registration begins **February 28**. Additional information may be found at <http://www.nuclear.ro/news.html> or by contacting Cristina Alice Margeanu, Reactor Physics, Nuclear Fuel Performances and Nuclear Safety, Institute for Nuclear Research Pitești #1, Campului Street, Mioveni, 115400, Romania (phone +40 248 213 400; fax +40 248 262 449).

International Conference on Transport Theory (ICTT-22)

The 22nd International Conference on Transport Theory will be held in Portland, Oregon, September 11–15, 2011. The intent of the conference is to bring together researchers in the several fields of engineering and science who use similar, or identical, mathematical methods in their studies, meaning those which evolved from the Boltzmann transport theory. Abstracts are due via email to ictt22@oregonstate.edu by **May 1, 2011**. The topics for the conference include:

- kinetic theory,
- transport problems in plasma physics,
- neutron transport and applications to reactor physics,
- stochastic transport problems - non conventional applications,
- quantum transport problem,
- inverse transport problems,
- computational methods, and
- radiative transfer - fluid-dynamics.

All conference information will be posted to the website, <http://ne.oregonstate.edu/ICTT/>.

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. 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 Ltd PO Box 406 West Byfleet KT14 6NN UK (phone +44 (0) 20 7017 5518, fax +44 (0) 20 7017 4745, email energycustserv@informa.com).

CALENDAR

March 2011

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, April 10–14, 2011, Albuquerque, NM. Contact: Margaret Chu (phone 505-293-4375, fax 505-294-8995, email mpsychu@comcast.net) url www.new.ans.org/meetings/m_115.

ANS Student Conference, April 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.
- 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@enygf.eu) url www.enygf.eu.
- ISR-14, May 22–27, 2011, Bretton Woods, New Hampshire. Contact: Dr. David W. Vehar, Sandia National Laboratories (dwvehar@sandia.gov) url <http://www.reactordosimetry.com/>.
- Nuclear 2011, May 25–27, 2011, Pitești, România. Contact: Cristina Alice Margeanu, Reactor Physics, Nuclear Fuel Performances and Nuclear Safety, Institute for Nuclear Research Pitești #1, Campului Street, Mioveni, 115400, Romania (phone +40 248 213 400; fax +40 248 262 449) url <http://www.nuclear.ro>.

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, Sept. 11–15, 2011, Portland, Oregon. Contact: Todd Palmer, Technical Program Chair, Oregon State University (palmerts@ne.orst.edu) url <http://ne.oregonstate.edu/ICTT/>.
- ICNC2011, Sept. 19–22, 2011, Heriot-Watt University, Edinburgh, United Kingdom. Contact: Energy Customer Services, Informa UK Ltd PO Box 406 West 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.