Radiation Safety Information Computational Center

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*Indeed, what is there that does not appear marvelous when it comes to our knowledge
for the first time? How many things, too, are looked upon as quite impossible until
they have been actually effected.—Pliny the Elder. 23 79 A. D.* (**Translation by
J. Bostock, M. D., and H. T. Riley, B. A., with slight alterations.**)

CHANGES TO THE RSICC CODE AND DATA COLLECTION

CCC-726/ CNCSN 2009

The Keldysh Institute of Applied Mathematics, Moscow, Russia, contributed this code system for calculating one-, two- and three-dimensional Coupled Neutral and Charged particle SN (CNCSN) transport calculations. The system includes KATRIN 2.5, KASKAD-S and ROZ-6 to solve the multigroup transport equation for neutrons, photons and charged particles in 3D, 2D, and 1D geometries, respectively. This release includes updated versions of KATRIN and KASKAD-S which have added parallel and multithread execution capability as well as the serial versions of KATRIN and KASKAD-S from the previous release. The transport equation for charged particles can be solved with direct treatment of the continuous slowing-down (CSD) term; for 1D plane and spherical geometries the Boltzmann-Fokker-Plank equation can be solved with direct treatment of both CSD and continuous scattering terms. The scattering anisotropy can be treated in the P_L approximation. The adjoint solution of the problem can also be obtained (for neutral particles only). The principal application is the solving of the deep-penetration transport problems, typical for radiation protection and shielding calculations. Fission problems (subcritical boundary value problem and k-eff), problems with upscattering (thermalization, etc), and electron-photon and hadron cascade problems can be also solved. Numerous printed edits of the results are available and output solution/source files can be written for subsequent analysis by postprocessors, KATRIF, KASF and ROZ6F.

In addition to the transport codes named above, CNCSN includes the following codes to prepare cross sections as well as post processors:

1

ARVES-2.5:	Preprocessor for the working macroscopic cross-section FMAC-M format for transport calculations
MIXERM:	Utility for preparing mixtures on the base of multigroup cross-section libraries in ANISN format
CEPXS-BFP:	A version of Sandia National Laboratory multigroup coupled electron-photon cross-section generating code CEPXS, adapted for solving the charged-particle transport in the Boltzmann-Fokker-Planck formulation with the use of discrete ordinate method
SADCO-2.4:	Institute for High-Energy Physics modular system for generating coupled nuclear data libraries to provide high-energy particle transport calculations by multigroup method

The codes were developed and tested on X86 and X86_64 personal computers under Windows XP and VISTA. The Fortran 90 language standard is followed closely. The Intel Visual Fortran 11.1 compiler is recommended to make the multithreaded PC executables. The Compaq Visual Fortran 6.6C compiler can also be used to make the PC serial executables for solving problems. Some routines from the IMSL library are used for estimation of spectral shape of acceleration corrections in outer iterations acceleration algorithm. Commercially available graphical software codes, GRAPHER™ and SURFER™, are used to visualize geometry/results of calculations. The package is transmitted on a CD in a WinZIP file that contains the referenced manuals, Fortran source, makefiles to compile/link, executables, and sample problems input/output. References: KIAM reports (2004, 2007). Fortran 90, PC (X86 X86_64) under Windows XP or Vista (C00726PCX8601).

DLC-234/PGAA-IAEA

PGAA-IAEA was contributed by the Nuclear Data Section Division of Physical and Chemical Sciences, International Atomic Energy Agency, Vienna, Austria, through the Nuclear Energy Agency Data Bank, Issy-les Moulineaux, France. The Database for Prompt Gamma-ray Neutron Activation Analysis (PGAA) provides a variety of tables for all natural elements (from H to U) including the following data: isotopic composition, thermal radiative cross section (total and partial), Westcott g-factors, energy of the gamma rays (prompt and delayed), decay mode, half life and branching ratios. PGAA can be used in fields such as material science, geology, mining, archeology, environment, food analysis and medicine.

The PGAA is delivered with:

- A database viewer for carrying out searches by isotope, energy and cross-section.

- An isotope explorer 2.2 ENSDF viewer for displaying the level-scheme drawings and tables.

This library utilizes the Evaluated Nuclear Structure Data File (ENSDF) format. The database and the associated files are in Excel, pdf, and text formats. The package is written in DOS, Linux shell script, HTML, and Java. A large number of modifications were necessary to run the code under Linux, all involving the file and directory names which included mixed upper and lower case letters in the original version, while on the contrary the calling procedures uses either upper case only or lower case only letters.

This package requires 337 MB of disk space. It is compatible with Windows or Linux operating systems. The CD contains the database, the retrieval system and the three RCM reports. Reference: IAEA-TECDOC-DRAFT (December 2003). (D00234MNYCP00).

Obituaries

Edward K. Fujita, PhD., distinguished nuclear engineer with over 32 years of service at Argonne National Laboratory, died in June 2010. He was Deputy Director of Argonne's Nuclear Engineering Division, a member of the Argonne National Laboratory Reactor Safety Review Committee, a member of the Department of Energy Methods and Experiments Subcommittee, a U.S. delegate to the NEA/OECD Working Party on Nuclear Criticality Safety, a U.S. representative to the IAEA Technical Working Group on Fast Reactors and Accelerator Driven Systems, a member of the American Nuclear Society, Sigma Xi, and Tau Beta Pi. Dr. Fujita earned his B. S. in nuclear engineering from New York University. His MS and PhD. in nuclear engineering were completed at M.I.T. Dr. Fujita was awarded the University of Chicago Distinguished Performance Award in 1995.

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.

Date 2010	Class	Location
September 13–17	Introduction to MCNP using the MCNPX Visual Editor	Myrtle Beach, SC
November 15–19	Introduction to MCNP using the MCNPX Visual Editor	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

2010 Classes		
Date	**Class**	**Location**
August 16–20	Intermediate MCNPX	Seattle, WA
September 20–24	Intermediate MCNPX	Virginia Beach, VA
October 25–29	Intermediate MCNP5/MCNPX	Barcelona

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.

Cost of the U.S. workshops is $2,300 US with an early registration discount of $300 (i.e., if paid 30 days before the scheduled workshop). 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
October 11-15	SCALE Lattice Physics and Depletion Course	ORIGEN-ARP: Isotopic depletion/decay and source terms using latest version of ORIGEN-S TRITON: 2-D reactor physics analysis using NEWT/ORIGEN-S and 3-D Monte Carlo depletion using KENO/ORIGEN-S (**ORIGEN-ARP**/**TRITON**)
October 18-22	SCALE Criticality Safety and Shielding Course	KENO-VI: Criticality safety using the generalized geometry version of KENO MAVRIC: 3-D Monte Carlo shielding analysis automated variance reduction for deep-penetration and complex shielding problems Criticality accident alarm system analysis (**KENO-VI**/**MAVRIC**)
October 25-29	SCALE Sensitivity/Uncertainty Tools Course	1-D and 3-D sensitivity/uncertainty analysis using TSUNAMI with XSDRNPM and KENO. Advanced S/U methods for code and data validation. (**TSUNAMI**)
November 1-5	SCALE Criticality Safety Course	Criticality safety with the most widely used version of KENO, KENO V.a. (**KENO V.a**)

The registration fee is $2000 for each course. A discount of $200 per each additional week will be applied for registration to multiple courses. Class size is limited and course 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
NEW—MARSAME	August 31–September 3, 2010
Applied Health Physics	September 13–October 15, 2010
Air Sampling for Radioactive Materials	October 18–22, 2010
Radiation Medicine for Safety Professionals	November 1–5, 2010
MARSSIM	November 1–5, 2010
Introduction to Radiation Safety	November 8–12, 2010
Gamma Spectroscopy	December 6–10, 2010
MARSSIM	January 10–14, 2011
Site Characterization in Support of Decommissioning: Planning, Implementation, and Evaluation	January 24–28, 2011
Applied Health Physics	February 28–April 1, 2011
CHP Part I Review	April 5–7, 2011
Gamma Spectroscopy	April 11–15, 2011

CONFERENCES

AFRIRPA 2010

The Eastern Africa Association for Radiation Protection (EAARP) invites you to the 3rd African Regional IRPA Congress (AFRIRPA 2010) in Nairobi, Kenya, September 13–17, 2010. The theme is "Strengthening Radiation Protection Infrastructures in Africa: Towards Establishing Effective and Sustainable Regional Cooperation and Networks." AFRIRPA 2010 is co-sponsored by the International Atomic Energy Agency (IAEA), World Health Organization (WHO), International Radiation Protection Associaton (IRPA), the Government of Kenya, and others. It is organized in collaboration with the Association Marocaine de Radioprotection (AMR), South African Radiation Protection Association (SARPA) and Egyptian Radiation Protection Association (Egypt-IRPA).

AFRIRPA 2010 will attract radiation protection professionals; users and manufacturers of radiation technologies; service providers; regulators; governmental, non-governmental and international organizations; and members of the general public. It will provide a platform to share the latest scientific updates, current developments, and future trends in radiation technology and radiation protection.

For information on registration, as well as sponsorship and exhibition opportunities, contact: Amidu Mustapha (email amustapha@uonbi.ac.ke, info@eaarp.or.ke, or eaarp@yahoo.co.uk). The conference website is http://www.eaarp.or.ke.

SNA & MC 2010

Japan Atomic Energy Agency is organizing the Joint International Conference on Supercomputing in Nuclear Application + Monte Carlo 2010 Tokyo (SNA + MC2010) to be held in Tokyo, October 17–20, 2010, at the Hitotsubashi Memorial Hall. The conference is designed to discuss computational science, technology and applications concerning nuclear research and Monte Carlo simulation from wide viewpoints. The conference is mainly composed of plenary and technical sessions. Submitted papers will be presented in oral or poster sessions. It is planned that papers of high quality will be peer reviewed and published in special issues of *Journal of Nuclear Science and Technology*. Student awards will be given to young students presenting outstanding work. Bookmark the website, http://www.sna-mc-2010.org/, to keep abreast of developments for the meeting. You may also contact CCSE, Japan Atomic Energy Agency 8F, Sumitomo-Ueno Bldg. No.8 , 6-9-3 Higashi-Ueno, Taito-ku, Tokyo 110-0015, Japan (email: info@sna-mc-2010.org or fax: +81-3-5246-2537).

3D S.UN.COP 2010

The Nuclear Research Group of San Piero a Grado (GRNSPG) of University of Pisa (UNIPI), the Institute for Energy (IE) of the Joint Research Center (JRC) of European Commission (EC), the University of Zagreb (FER) and the School of Industrial Engineering of Barcelona (ETSEIB) 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 from October 18–22, 2010, in Amsterdam, and October 25–November 5, 2010, at the Institute for Energy (IE) of JRC in Petten (The Netherlands). 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 of the methodologies

2) Industrial applications (e.g. AECL, AREVA, Westinghouse, GEH) coupling methodologies and code hands-on training (e.g. RELAP, CATHARE, PARCS, TRACE, Star-CD) and special sessions devoted to computational fluid dynamics, severe accident analysis, WEER and CANDU technologies and GEN-IV

3) Advanced user training, including code hands-on training for transient analysis and foundation of statistical methods

Further details will be available at: http://nrgspg.ing.unipi.it/3dsuncop.

INES-3

The Third International Symposium on Innovative Nuclear Energy Systems - Innovative Nuclear Technologies for Low-Carbon Society (INES-3) will be held on October 31–November 3, 2010, at Tokyo Institute of Technology, Tokyo, Japan. The Symposium aims to summarize recent research activities relevant to the development of innovative nuclear reactor systems and innovative separation/transmutation systems with a broad perspective and flexible ideas for realization of a low-carbon society. The symposium is organized by the Center for Research into Innovative Nuclear Reactors, CRINES and Tokyo Tech. Conference topics include:

1. Innovative reactors
2. Innovative transmutation and separation systems
3. Fuel cycles including HLW disposal and nuclear nonproliferation issues
4. Innovative nuclear energy systems

5. Innovative neutron utilization
6. Materials for innovative nuclear energy systems

Please refer to the conference webpage, http://www.nr.titech.ac.jp/ines3/, for information regarding the submission of abstracts, registration, etc. You may also contact Yukitaka Kato, Associate Professor, CRINES, Tokyo Institute of Technology, 2-12-1-N1-22, Ookayama, Meguro-ku, Tokyo, 152-8550, Japan (phone/fax +81 3 5734 2967, email ines3@nr.titech.ac.jp).

Technical Meeting on Low-Power Critical Facilities and Small Reactors

Papers are requested for a mini-conference on small research reactors and critical facilities that will be held in Ottawa, Ontario, Canada, November 1–3, 2010, approximately 1 week before the ANS Winter Meeting in Las Vegas. This conference is inspired by the upcoming 50th Anniversary of the ZED-2 Heavy Water Critical Facility at AECL - Chalk River Laboratories.

Those performing work relating to research reactors and/or critical facilities at government or national laboratories, or universities, will benefit from this opportunity to share experiences, exchange ideas, and to network with peers in the international community.

Abstracts must be submitted on the website and are due **August 15, 2010,** on the following topics:

- Safety and licensing of critical facilities
- Measurements in critical facilities
- Analysis of measurements from critical facilities
- The use of measurements from critical facilities in reactor physics code validation
- Extension of bias and uncertainty from the critical facility to the test reactor
- Other uses of measurements from critical facilities
- Design development of instrumentation for measurements in or control of critical facilities
- Different fuel compositions, geometries, reactivity worth of devices, kinetics parameters, reactor types
- Measurements of irradiated materials, actinides
- Reactor physics benchmark databases and activities
- Education and research with small reactors

Further information can be found at the website, http://www.cns-snc.ca/events/tmlpcfsr/.

CONTE 2011

The 2011 Conference on Nuclear Training and Education (CONTE 2011) will be held in Jacksonville, Florida, February 6–9, 2011. A call for papers has been issued for summaries on the following topics:

1. Human performance improvement
2. Workforce planning/recruiting
3. Personnel training/qualification/education
4. Accreditation
5. Developing educational partnerships—university/industry/government
6. Engineering education/distance learning
7. Leadership development
8. International perspectives
9. Training for new nuclear power facilities

Summaries must be submitted using the ANS template and "Guidelines for Summary Preparation" provided on the ANS Web site, www.ans.org, by **October 29, 2010**. General chair of the meeting is

Stephen Kuczynski, Senior VP of Engineering and Technical Services, Exelon Nuclear. For further information, please visit the ANS website, www.ans.org/meetings.

NETS-2011

The Nuclear and Emerging Technologies for Space (NETS-2011) topical meeting will be held February 7–10, 2011, in Albuquerque, NM. The meeting is sponsored by the ANS Aerospace Nuclear Science and Technology Division and the ANS Trinity Section. NETS-2011 will address strategies for implementing advanced power and propulsion technologies, as well as radiation shielding protection, in support of manned and unmanned missions into space. It will provide a communications network and forum for information exchange for research and management personnel from government, industry, academia, and the national laboratory system who are involved in space nuclear activities. Papers may be submitted by **August 9, 2010**, on the following topics:

Track I: Missions and Architectures
· Space Science Missions
· Exploration Missions
· Spacecraft Concepts
· Lunar and Mars Surface Concepts
· Mission Analysis and Validation Missions
· Space Policy

Track II: Fission Power and Propulsion
· Reactor Design
· Shield Design
· Reactor Simulation
· Power Conversion
· Supporting Technologies (including Heat Rejection and Power Management and Distribution)
· Nuclear Electric Propulsion Systems
· Tools and Modeling
· Testing and Validation
· Materials and Radiation Testing

Track III: Radioisotope Power SYSTEMS
· Isotope Heat Sources
· Stirling Power Conversion
· Thermoelectric Power Conversion
· Advanced Power Conversion
· Mechanical, Thermal, and Electrical Integration
· Tools and Modeling
· Testing and Validation

Track IV: Nuclear Thermal Propulsion
· Fuel Development
· History
· Design Concepts
· System Integration
· Tools and Modeling
· Testing and Validation

Track 5: Advanced Concepts
· Multi-Megawatt Systems
· Fusion

Registration, program, exhibit, and other information may be found on the conference website at http://anstd.ans.org/NETS2011/AboutNETS2011.htm.

WM 2011

The annual Waste Management Conference (WM 2011) will be held February 27–March 3, 2011, in Phoenix, Arizona. Regarded as the premier international organization for the management of radioactive material and related topics, the 2011 conference expects to attract decision makers, project managers, and technical and procurement specialists representing the government and private organizations from over 35 countries. The conference theme is Global Achievements and Challenges in Waste Management. **August 13, 2010,** is the deadline for abstracts of 400–800 words that fit within the following tracks:

Track 1 Crosscutting and General Policies, Programs and Technologies
Track 2 High-Level Radioactive Wastes, Spent Nuclear Fuel/Used Nuclear Fuel and Long-Lived Alpha/Transuranic Radioactive Waste
Track 3 Low-Level, Intermediate Level, Mixed Waste, NORM, & TENORM
Track 4 Nuclear Power Plant Waste & On-Site Spent Nuclear Fuel Management
Track 5 Packaging and Transportation
Track 6 Decontamination & Decommissioning
Track 7 Environmental Remediation
Track 8 Public Communication, Participation, Education & Training

Track 9 Safety, Security, & Safeguards
Track 10 Miscellaneous: Unassigned & Late Abstracts, & Non-Paper Posters

In addition to the conference, two workshops are scheduled for March 3 and 4, titled "Commercial Low–Level Waste (LLW) Disposal Performance Assessment, the Safety Case, and Long–Term Monitoring " and "Joint Public Federal Workshop," respectively. Bookmark the website, http://www.wmsym.org/, to monitor the latest information with regard to the workshops, program, arrangements, etc.

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). Those who intend to submit a paper should contact Dennis@psa2011.org.

Papers describing significant work may be submitted electronically beginning September 2010 on the following topics:

Accident Analysis Level 2 & 3	Low Power / Shutdown PSA	Risk Informed Regulation & Licensing
Advanced Nuclear Systems	Next-Generation Reactors	
Dynamic PSA	Non-Light Water Reactor	Risk Perception & Communication
Common Cause Failures	Mitigating Systems Performance Index (MSPI) Issues	Safety Culture & Organizational Factors
Computer Codes		
Configuration Risk Management	NASA & Space Applications	Safety Margins & PSA
Digital I&C	Natural Hazards & External Events	Significance Determination Process (SDP) Issues
Cyber Security	Non-Reactor, Nuclear Applications	Seismic PSA
Environmental Impact		Software Reliability & Data Analysis
Fire & NFPA 805	Parameter & Modeling Uncertainty	Spent Fuel & Rad Waste Issues
Flooding PSA		Standardized Plant Analysis Risk (SPAR) Models Status
Fuel Cycle (Proliferation Risk)	Passive Systems Safety	
Generation Risk (All operating modes)	Proliferation Risk	Standards & Peer Reviews
	PSA Challenges – Manpower	Structural Reliability Methods
Human Reliability	PSA in DOE Facilities (Panel)	PSA Training & Education
Human Factors & Behavioral Sciences	PSA Standards Development	Transportation Risks
	Reliability Centered Maintenance	Waste Management & Decommissioning
Incorporation of Ageing Aspects	Risk Informed Plant Security	

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 the 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).

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. The interdisciplinary technical program will consist of plenary sessions, workshops, parallel oral presentation sessions and poster sessions. Papers may be submitted electronically by **October 31, 2010**, on the following subject categories:

- Accelerator & subcritical systems
- Advanced nuclear reactor concepts
- Atmospheric and ocean radiative transfer
- Computational fluid dynamics & thermal hydraulics
- Deterministic & stochastic neutral and charged particle transport modeling
- High-fidelity multiphysics simulations
- Medical physics
- Nuclear chemistry
- Nuclear criticality safety
- Nuclear data evaluation & application
- Nuclear fuel cycle
- Nuclear fuels

- Nuclear geophysics
- Nuclear materials sciences
- Nuclear non-proliferation and homeland security
- Nuclear production of hydrogen
- Nuclear radiation shielding & dosimetry
- Nuclear reactor analysis
- Optimization, data assimilation & artificial intelligence
- Plasma physics/fusion
- Radiobiology
- Structural mechanics
- Uncertainty quantification
- Verification & validation

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 is held approximately every three years to provide 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. Under this theme, summaries must be submitted electronically by **September 10, 2010,** in the following areas:

- Reactor surveillance and plant-life management
- Data evaluation, uncertainty analysis, and adjustment methods
- Retrospective dosimetry and decommissioning
- Dosimetry for assessment of reactor structural materials
- Neutron and gamma-ray transport calculations
- Dosimetry for core characterization and reactor physics
- Characterization of neutron and gamma-ray environments
- Damage correlation and exposure parameters
- Monitoring of irradiation experiments
- Nuclear data for dosimetry
- Benchmarking, calibrations and standards
- Fusion and high-energy neutrons
- Reactor and accelerator neutron sources
- Irradiation processing and testing of electronics
- Experimental techniques, new developments and optical methods
- Dosimetry for space nuclear power

Papers in these and other areas are expected to cover such applications as fission and fusion energy research and test and research reactor experiments. Health physics papers are outside the scope of this Symposium. The Symposium will be organized into oral and poster presentations, as well as informal round-table workshops. The meeting language will be English. All papers presented at the symposium will be subject to peer-review before acceptance for publication in the on-line *Journal of ASTM International*. Bookmark the conference website, http://www.reactordosimetry.com/, to remain current with conference information.

CALENDAR

August 2010

International Course on Thermalhydraulics of Light Water Reactors, Aug. 23–Sept 3, 2010, Saclay, France. Contact: European Nuclear Education Network Association, Centre CEA de Saclay – INSTN – Bldg 395, F-91191 Gif-sur-Yvette Cedex, France (phone +33 1 69 08 97 57, fax +33 1 69 08 99 50, email sec.enen@cea.fr) url http://www.enen-assoc.org/en/activities/for-students/education.html.

September 2010

African Regional IRPA Congress (AFRIRPA 2010), Sept. 13–17, 2010, Nairobi, Kenya. Contact: Amidu Mustapha (email amustapha@uonbi.ac.ke, info@eaarp.or.ke, or eaarp@yahoo.co.uk) url http://www.eaarp.or.ke/ .

October 2010

Supercomputing in Nuclear Application and the 3rd Monte Carlo (SNA + MC2010), Oct. 17–20, 2010, Tokyo. Contact: CCSE, Japan Atomic Energy Agency, 8F, Sumitomo-Ueno Bldg. No.8, 6-9-3 Higashi-Ueno, Taito-ku, Tokyo 110-0015, Japan (email info@sna-mc-2010.org, fax +81-3-5246-2537) url: http://www.sna-mc-2010.org/.

3D S.UN.COP 2010, Oct. 18–22, 2010, Amsterdam, and Oct. 25–Nov. 5, 2010, Petten, The Netherlands. Contact: Alessandro Petruzzi (email: a.petruzzi@ing.unipi.it, fax 0039 050 2210384) url http://nrgspg.ing.unipi.it/3dsuncop.

International Symposium on Innovative Nuclear Energy Systems (INES-3), Oct. 31–Nov. 3, 2010, Tokyo. Contact:Yukitaka Kato, Associate Professor, CRINES, Tokyo Institute of Technology, 2-12-1-N1-22, Ookayama, Meguro-ku, Tokyo, 152-8550, Japan (phone/fax +81 3 5734 2967, email ines3@nr.titech.ac.jp) url http://www.nr.titech.ac.jp/ines3/.

November 2010

Technical Meeting on Low-Power Critical Facilities and Small Reactors, Nov. 1–3, 2010, Ottawa, ON, Canada. Contact: Blair Bromley, Computational Reactor Physics Branch (New), AECL - Chalk River Laboratories, Building 889 - Keys School - Room 130, 1 Plant Road, Chalk River, ON, K0J 1J0 (phone 613-584-8811 ext. 43676, fax 613-584-8055, email bromleyb@aecl.ca) url http://www.cns-snc.ca/events/tmlpcfsr/.

2010 ANS Winter Meeting and Nuclear Technology Expo, Nov. 7–11, 2010, Las Vegas, NV. The website is: http://www.new.ans.org/meetings/c_1.

February 2011

Conference on Nuclear Training and Education (CONTE 2011), Feb. 6–9, 2011, Jacksonville, Florida. Contact: Stephen Kuczynski, Senior VP of Engineering and Technical Services, Exelon Nuclear. The website is www.ans.org/meetings.

Nuclear and Emerging Technologies for Space 2011 (NETS 2011), Feb. 7-10, 2011, Albuquerque, NM The website is http://anstd.ans.org/NETS2011/AboutNETS2011.htm

March 2011

International Topical Meeting on Probabilistic Safety Assessment and Analysis (PSA 2011), March 13-17, 2011, Hilton Wilmington Riverside, Wilmington, NC. Meeting information: http://www.ans.org/goto/nad.cgi?id=1273208400-24

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/.

May 2011

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

International Symposium on Reactor Dosimetry (ISRD-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/.

June 2011

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

Industrial Radiation and Radioisotope Measurement Applications (IRRMA-8), 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/.