Radiation Safety Information Computational Center

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Progress in every age results only from the fact that there are some men and women who refuse to believe that what they knew to be right cannot be done.—Russell W. Davenport

Changes to the Computer Code and Data Collection

CCC-553/RASCAL 3.0.5

Athey Consulting, Charles Town, West Virginia, and the U.S. Nuclear Regulatory Commission, Washington, D.C., contributed a newly frozen version of the Radiological ASsessment for Consequence AnaLysis code system designated RASCAL Version 3.0.5, December 2006 release with May 2008 updates. RASCAL can estimate reactor source terms, atmospheric transport and doses resulting from radiological emergencies and can be used to assist in making protective action decisions. It was developed for the U.S. Nuclear Regulatory Commission and is designed to be used in the independent assessment of dose projections during response to radiological emergencies.

The May 2008 update improves the map backgrounds displayed behind RASCAL plume results. The original maps were created using a single geographic projection for all sites. This meant that the maps were not always exactly aligned with true North. This distortion was more pronounced for sites in the eastern and western parts of the U.S. The new maps were created using a UTM projection that greatly improves the alignment.

RASCAL runs on personal computers under Windows operating systems. The software has been tested mostly under Windows XP. Microsoft Visual Basic 6.0 and Compaq Visual Fortran 6.5 compilers were used to create the executable included in the package. No source files are distributed. Included are the referenced documents and one CD which includes executables, data, help files, and an install procedure. Source files are not included in this release. References: NUREG-1887 (August 2007) and NUREG-1889 (September 2007). Fortran 77, Basic; Pentium running Windows (C00553PC58609).

[CCC-746/MCNPX 2.6.0 and MCNPDATA](#)

Los Alamos National Laboratory, Los Alamos, New Mexico, contributed a newly frozen version of MCNPX. This general purpose Monte Carlo radiation transport code was designed to track many particle types over broad ranges of energies. The previous MCNPX 2.5.0 release was distributed in the same package with MCNP5. The new MCNP5 1.50 code and new MCNPDATA libraries derived from ENDF/B-VII have encountered a slight delay and will be released later. Announcements will be posted on the RSICC website and newsletter when the new MCNP5/MCNPX combined package is available. RSICC will not accept orders for the new packages until they are announced on our website. No patches will be released to create new versions of the codes from the current release, nor will free upgrades be distributed.

New capabilities and enhancements of MCNPX 2.6.0 beyond MCNPX 2.5.0 are listed below. For details, see LA-UR-08-1808.pdf posted on the MCNPX website http://mcnpx.lanl.gov/.

- Depletion/burnup;
- Heavy-ion (Z>2) transport;
- LAQGSM physics model;
- CEM03 physics;
- Long file names;
- Delayed-particle emission;
- Criticality source convergence acceleration;
- Energy-time weight windows;
- Spherical mesh weight windows;
- Charged ions from neutron capture in table range;
- Tallies terminated at desired precision: STOP card;
- Numerous corrections/enhancements/extensions;
- Muon capture physics.

The package includes MCNPDATA from the November 2005 data release for MCNP 5.1.40 and MCNPX 2.5.0, consisting of X-Division neutron data libraries, photoatomic libraries, photonuclear data library LA150U, electron libraries EL1 and EL03, an updated XSDIR file, and MAKXSF to convert the ascii data libraries into binary form. ENDF/B-VII derived libraries are not included in this package but will be released at a later date. An optional Windows installer is included to install MCNPDATA. The installer uses the open-source 7z.exe program to expand files under Windows then sets environmental variable DATAPATH.

Visual Editor, version VISED X_22S, is included for interactively constructing and visualizing MCNPX geometry. VISED runs only on Windows PCs. More VISED information is on the web at the Visual Consultants website http://www.mcnpvised.com/.

MCNPX runs under Unix, Linux, and Windows operating systems and has been implemented on various 32- and 64-bit workstations and personal computers. C and Fortran 90 compilers are required to compile. MCNPX 2.6.0 executables created by the LANL developers for the systems listed below are included. Each of these files contains precompiled executables and corresponding binary data libraries for bertin and phtlib.

- Windows 8-byte integer executables, with Intel 9.1 on a 32-bit XP OS.
- Windows MPICH-2 executables, with Intel 9.1 on a 32-bit XP OS.
- Windows 8-byte integer MPICH-2 executables, with Intel 9.1 on a 32-bit XP OS.
- Windows executables, with CVF 6.6 on a 32-bit XP OS.
- Linux executables, with INTEL 9.1 on a 64-bit GNU/Linux OS.
- Sun executables on a 32-bit Solaris OS.

The package is distributed on a single DVD in GNU compressed Unix tar files. WinZIP 8.0 or newer is required to expand the MCNPX code under Windows. Included are MCNPX source code,

MCNPDATA, VISED executable for Windows, makefiles, build scripts, executables for PC Windows, PC Linux, and Sun/Solaris; test problems, and electronic documents. References: LA-CP-07-1473 (April 2008), LA-UR-08-2216 (April 2008), and VISED report (February, 2008). Fortran 90 and C; Windows PCs, Linux PCs, Sun; IBM; DEC (C00746MNYCP00).

ANS News

JOURNAL REVIEWERS NEEDED

The ANS journal, *Nuclear Technology*, is looking for technical reviewers with expertise in the area of radiation protection and shielding. Topical areas include:

- radiation detection and measurements,
- radiation metrology and regulations,
- regulations and reactor shielding,
- space radiation,
- shielding benchmarks,
- electron-photon data,
- Monte Carlo methods and applications,
- radiation physics for medical applications, and
- nuclear data.

If you are interested in serving as a reviewer for the journal, or can recommend individuals with expertise in these topics, please contact the journal editorial assistant, E. Pantle, at nt@ans.org or call 708/579-8281.

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.

Introductory and Advanced MCNP Visual Editor Training

Date	Class	Location
July 21–25, 2008	Introduction to the Visual Editor for Advanced MCNP/MCNPX Users	Seattle, WA
Sept. 8–12, 2008	Introduction to MCNP using the MCNP/MCNPX Visual Editor	Richland, WA
Nov. 3–7, 2008	Introduction to MCNP using the MCNP/MCNPX Visual Editor	Reno, NV

Classes are taught using the most recent (beta) version of the Visual Editor Code. Beta versions will only be available to students that own the RSICC version 5 release. Bring proof of ownership to the class.

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.

MCNP Class Schedule

August 18–21, 2008	Advanced - Variance Reduction	Los Alamos National Laboratory
August 25–28, 2008	Advanced - Criticality	Los Alamos National Laboratory
Sept. 29–Oct. 3, 2008	Introduction to MCNP5 and MCNPX	Los Alamos National Laboratory
October 27–31, 2008	MCNP/MCNPX Intermediate Workshop	Munich, Germany
November 3–7, 2008	MCNP/MCNPX Intermediate Workshop: Focus on Homeland Security	Washington, DC

Introductory classes are for people 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 specification), Variance Reduction Techniques, Statistical Analysis, Criticality, Plotting of Geometry and Tallies, and Neutron / Photon / Electron Physics.

Advanced classes 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 students. Classes on specific topics are offered when there is sufficient interest. In the recent past, classes on variance reduction and on criticality have been taught.

Registration and the most current information can be found at http://mcnp-green.lanl.gov/classinformation.html.

Verification and Validation for Nuclear Systems Analysis Workshop

Dates: July 21–25, 2008
Location: Center for Higher Education, Idaho Falls, ID
Workshop Cost: $250.00
Leading international nuclear experts will conduct sessions on the current and future issues of verification and validation (V&V) and uncertainty quantification (UQ) for nuclear systems analysis. In addition, key national and international experts will conduct plenary lectures and tutorials.

Topics include:

Reactor physics
Thermal Fluids and multiphysics
Fuels development
Data V&V methods

The workshop is sponsored by the Center for Advanced Energy Studies (CAES), Idaho National Laboratory (INL), Idaho State University (ISU), and North Carolina State University (NCSU). Contact: Nikki Iwert-Bays (Nikki.Iwert-Bays@inl.gov).

Short Courses on Monte Carlo Analysis and Nuclear Criticality Safety

The Department of Nuclear Engineering at the University of Tennessee-Knoxville is offering short courses for radiation transport and criticality safety specialists during Tennessee Industries Week (TIW-43), August 11–15, 2008.

Nuclear Criticality Safety—Engineers, scientists, and technical managers who wish to increase their knowledge and understanding of nuclear criticality safety will be interested in the criticality safety course. The topics covered in the course are based primarily on the experience of the five instructors which totals over 120 years of nuclear criticality safety related experience. Such a wealth of experience needs to be shared with the criticality safety community including both new professionals in the field as well as experienced professionals.

Monte Carlo Analysis—Monte Carlo is often the method of choice to solve complex problems in nuclear criticality safety and radiation shielding. To use Monte Carlo effectively, the analyst must understand the theoretical and computational fundamentals of the method, as well as the computational options available in particular computer tools. Also, it is sometimes advantageous to create new special-purpose Monte Carlo programs to solve particular problems rather than use an existing program. The Monte Carlo course runs for 5 days.

The deadline for registration is **July 28, 2008**. Classes are limited in size and will be filled on a first-come, first-serve basis. For additional information on these and other courses offered during TIW-43, contact Kristin England at the University of Tennessee, phone (865) 974-5048, email kengland@utk.edu, url http://www.engr.utk.edu/nuclear/TIW.html.

FLUKA Training Course

A Training Course on FLUKA, a fully integrated particle physics Monte Carlo simulation package, will be held September 29–October 3, 2008, at OECD/NEA Data Bank, Issy-les-Moulineaux, France. The registration deadline is **June 30**. The course will be based on the new release of FLUKA, which, among other improvements, will contain a new and improved neutron library. If you are interested in attending, please complete the registration form at http://www.nea.fr/html/dbprog/Newsletter/FLUKA-course2008-09.html. Contact Cristina Lebunetelle, OECD/Nuclear Energy Agency Data Bank (email programs@nea.fr or fax +33 1 45241109).

SCALE Training Courses at ORNL

Date	Title	Description
October 13–17, 2008	**KENO V.a**	Criticality safety with the most widely used version of KENO
October 20–24, 2008	**ORIGEN-ARP/ TRITON Course**	ORIGEN-ARP: Isotopic depletion/decay and source terms using latest version of ORIGEN TRITON: 2-D reactor physics analysis using NEWT
October 27–31, 2008	**KENO-VI/MAVRIC**	KENO-VI: Criticality safety using the generalized geometry version of KENO MAVRIC: 3-D automated variance reduction for deep-penetration and complex shielding problems
November 3–7, 2008	**TSUNAMI Sensitivity/ Uncertainty Tools Course**	1-D and 3-D sensitivity/uncertainty analysis using XSDRNPM

	(Experienced KENO users only)	

The registration fee is $1800 for each course. A late fee of $300 will be applied after September 13. A discount of $300 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 5 or 5.1 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.

CAARI-2008

This year CAARI-2008 (Conference on the Application of Accelerators in Research and Industry) will be held August 10–15, 2008, in Fort Worth, Texas. CAARI-2008 brings together scientists, engineers, physicians, and industrial leaders from all over the world who use particle accelerators in their research and industrial applications. The CAARI conference can be considered a collection of symposia for topics ranging from Accelerator Technology to Ion Beam Analysis to Nanoscale Fabrication. In particular, the National and Homeland Security (NHS) topic area consists of seven sessions covering the broad use of accelerators in security applications. More information about the conference can found at http://www.caari.com.

PHYSOR'08

The International Conference on the Physics of Reactors (PHYSOR'08) will be held at the Kursaal Conference Center, Interlaken, Switzerland, September 14–19, 2008. The conference theme is "Nuclear Power: A Sustainable Resource," and is jointly organized by the Paul Scherer Institut and the Swiss Nuclear Society. This international conference follows the tradition of the earlier PHYSOR meetings and seeks to provide a forum for worldwide experts in reactor physics, nuclear power plant analysis and related technologies. Relevant information may be found at http://www.physor2008.ch/.

18th Topical Meeting on the Technology of Fusion Energy

The 18th Topical Meeting on the Technology of Fusion Energy (18th TOFE) will be held in San Francisco, California, September 28–October 2, 2008. The TOFE meeting provides a forum for sharing the exciting progress made in fusion research as well as presenting the future plans for national and worldwide fusion programs. The conference is sponsored by the American Nuclear Society (ANS), Northern California Section of the ANS, Lawrence Livermore National Laboratory, and the Atomic Energy Society of Japan. The call for papers has been issued and abstracts on the following topics may be submitted beginning on March 1, 2008.

- NIF, ITER and other experimental devices
- Material and component testing facilities
- Magnets
- Next step facilities & Demo
- Diagnostics
- Power plant studies
- First walls, blankets & shields
- Alternate, non-electric applications
- IFE driver and chamber technology

- Plasma engineering, heating and control
- IFE target design, fabrication and injection
- Diverters and other high heat flux components
- Tritium breeding, handling and processing
- Nuclear analysis and experiments
- Safety and environment

- Computational tools and validation experiments
- Materials development and modeling
- Fabrication, assembly and maintenance
- Power conversion and conditioning

For additional information, please contact the General Chair: Jeff Latkowski, 18th TOFE Meeting, 4435 First Street #155, Livermore, CA 94551 (phone 925-423-9378, fax 925-424-6401, email: latkowski@llnl.gov). Check the website, http://www.18th-tofe.com/, frequently for updated information, registration information, etc.

6th Joint INMM/ESARDA Workshop

Meeting Safeguards Challenges in an Expanding Nuclear World is the theme for the 6th Joint INMM/ESARDA Workshop, October 6–9, 2008, at the International House of Japan in Roppongi, Tokyo. The Workshop is organized by the Institute of Nuclear Materials Management (INMM) International Safeguards Division and Japan and Korea INMM Chapters, and the European Safeguards R&D Association (ESARDA) .

The workshop will address in depth the current issues in international safeguards and the nonproliferation regime, under the following main themes.

- Safeguards Implementation and State Evaluation
- Technical Progress: The Safeguards Toolbox
- Safeguards and Nonproliferation Policy and Institutional Issues
- Academic and Applied Safeguards and Nonproliferation Programs in Asia, Europe and the United States

The workshop will have opening and closing plenary sessions and two days of parallel Working Group sessions. Four Working Groups, each led by co-chairs, will address the Workshop themes. Experts will introduce the particular topics in each Working Group with time allotted for full discussion. The Working Group Chairs will present the Working Group results at the Closing Plenary session.

For more information, contact: Jim Larrimore, Workshop Co-Chair, Chair, INMM International Safeguards Division (phone (+1) 858-509-9604, fax (+1) 858-509-2890, email JamesLarrimore@san.rr.com) or Gotthard Stein, Workshop Co-Chair, Vice-Chair, INMM International Safeguards Division (phone (+49) 228-676988, fax (+49) 2461-61-2496, email g.stein@fz-juelich.de). The url for the Workshop is http://www.inmm.org/events/esarda08.cfm.

ARIA 2008

The Paul Scherrer Institut, Villigen PSI in collaboration with Oak Ridge National Laboratory (ORNL) has scheduled the First International Workshop on Accelerator Radiation Induced Activation for October 13–17, 2008, in Villigen, Switzerland.

This workshop seeks to bring together scientists and engineers interested in problems of radionuclide transmutation in various applications at accelerator facilities. While the primary focus will be on computational methods to calculate radionuclide buildup and depletion and on experimental benchmarks for comparison, the workshop will also include discussion of transmutation systems, nuclear data and practical applications. The workshop should appeal to those interested in neutron- and accelerator-induced activation; radioactive waste generation, transmutation and burnup; medical isotope production; and radionuclide production in accelerator-driven physics facilities.

Topics include:

- Calculation methods (e.g. Monte Carlo methods, buildup and decay codes)
- Nuclear data (e. g. activation cross sections, nuclear reaction codes, decay data bases, cross section measurements)
- Experimental validation and applications (e.g. benchmark experiments, practical application in radiation protection, etc.)

To express your interest in attending the workshop send an e-mail to ARIA'08. See http://aria.web.psi.ch or contact Daniela Lerch, Secretary (phone +41 56 310 33 82, email daniela.lerch@psi.ch) for further information.

3D S.UN.COP 2008

The 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 2008).

The Seminar will take place from October 13–31, 2008, at the Institute for Energy (IE) of JRC, in Petten, close to Amsterdam (The Netherlands). The deadline for registration is July 11, 2008. 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, GE) Coupling Methodologies and Code Hands-on Training (e.g. RELAP, CATHARE, PARCS, TRACE, Star-CD) and Special Sessions devoted to WWER, GEN-IV, CANDU Technologies; Computational Fluid Dymanics and Severe Accident Analysis;

3) Code Hands-on Training for Transient Analysis in ITF.

Further information may be requested from Alessandro Petruzzi at the following email address: a.petruzzi@ing.unipi.it or may be obtained from the Seminar's home page: http://dimnp.ing.unipi.it/3dsuncop.

IRPA 12

The 12th International Congress of the International Radiation Protection Association (IRPA 12), will take place in Buenos Aires, Argentina, October 19–24, 2008. To support the Congress motto, "strengthening radiation protection worldwide," the scientific areas and topics are divided into three parts.

Part 1: Epistemological Basis of Radiation Protection
    1. Characterisation of Radiation Exposure
    2. Biological Effects of Radiation Exposure

Part 2: Radiation Protection Paradigm
    1. Developing the Radiation Protection Framework
    2. Developing Protection Policies, Criteria, Methods and Culture
    3. Emergency Planning, Preparedness and Response

Part 3: Radiation Protection and Safety in Practice
    1. Nuclear Installations

2. NIRs
3. Medicine
4. NORM in Industry
5. Other Applications and Practices

All information regarding registration, technical program, etc., may be found at the website, www.irpa12.org.ar. Questions regarding all aspects of the Congress may be addressed to secretariat@irpa12.org.ar.

5th Workshop on Neutron Measurements, Evaluations and Applications Nuclear Data for Sustainable Nuclear Energy

The 5th Workshop on Neutron Measurements, Evaluations and Applications Nuclear Data for Sustainable Nuclear Energy will be held October 27-29, 2008, in Ljubljana, Slovenia. The aim of the workshop is to provide a comprehensive overview of nuclear data production methods and their relation to the data needs for applications with potential economic impact. Contributions should highlight state-of-the-art and new developments of relevance for meeting the requirements on nuclear data associated with advanced reactor systems. Data users are invited to present comprehensive views on data needs.

In order to enhance the workshops' potential for high-quality networking, experts worldwide are invited to attend and the participation of post doctoral fellows and PhD students who wish to present their work is encouraged.

Workshop topics include:
- Advanced reactor concepts−-Generation IV, GNEP
- Accelerator driven systems
- Advanced fuel cycles
- Measurements
- Evaluations
- Benchmarking, testing and adjustments

September 15, 2008, is the deadline for submitting abstracts. Details regarding the submission of abstracts and other information related to the workshop may be found at http://candide.nri.cz/nemea.php. Contact Carmen Cabanillas Platero, European Commission, Joint Research Centre, Institute for Reference Materials and Measurements, Retieseweg 111, B-2440 Geel, Belgium (phone +32 (0)14 571 411, fax+32 (0)14 571 862, email jrc-irmm-nemea-5@ec.europa.eu).

International Workshop on Gamma Spectrometry Analysis Codes for U and Pu Isotopics

The Oak Ridge National Laboratory will host a joint INMM/ESARDA workshop "International Workshop on Gamma Spectrometry Analysis Codes for U and Pu Isotopics" November 3–7, 2008. The objective of the workshop is to provide an international forum for code developers, commercial distributors and end users to interface and develop solutions to many of the programmatic and technical issues associated with each of the codes capabilities, limitations, applicability, sustainability, and version control. Featured codes include FRAM, MGA, MGAU, NaIGEM, WinU235, WinUF6 and U235HI. Other codes may also be included. The workshop will also provide an international forum for discussing development of an internationally accepted standard test method for such codes. For more information contact Alena Zhernosek (phone 865-241-2552, email zhernosekav@ornl.gov) url http://www.inmm.org/events/gamma/index.cfm.

LOWRAD 2008

The 7th International Meeting on the Effects of Low Doses of Radiation in Biological Systems: New Perspectives on Human Exposure will be held in Lisbon, Portugal, November 27–29, 2008. The meeting is being organized by members of the Radiobiology group of the Department of Radiological Protection and Nuclear Safety of the Portuguese Nuclear and Technological Institute. Topics include:

- Epidemiology of occupational and environmental low dose exposure
- Novel biomarkers for population screening in low dose exposures
- Non-targeted effects
- Computer simulation and modelling for low dose radiation risk
- Genetic susceptibility
- Radioecology
- Low dose and protracted exposure effects
- Validity of the linear non-threshold model
- Hormesis and adaptive response
- Microenvironment modulation of radiation response
- Radioactive waste management
- Micro-array and proteomic analysis
- DNA repair and misrepair
- Radioprotectors and radiosensitizers
- Molecular and biophysical approaches to radiation-induced carcinogenesis
- Non-genetic effects of radiation
- Genomic and chromosomal instability
- Long term effects of the medical applications of radiation
- Microdosimetry and nanodosimetry

Contact Margarida Goulart de Medeiros (phone +351 21 994 6347, fax +351 21 994 1995), Octávia Monteiro Gil (phone +351 21 994 6344, fax +351 21 994 1995), or Secretariat, Luisa Oliveira (email lowrad2008@itn.pt), Nuclear and Technological Institute Department of Radiological Protection and Nuclear Safety Estrada Nacional 10, 2686 - 953 Sacavém, Portugal. Watch the website, http://www.lowrad2008.itn.pt/index.html, for abstract submission and up-to-date information.

CONTE 2009

The Conference on Nuclear Training and Education, CONTE 2009, an American Nuclear Society Topical Meeting, will be held February 8–11, 2009, in Jacksonville, Florida. Titled "Education, Training & Workforce Development—The Global Path to the Nuclear Energy Future," participants will learn about:

- Current Nuclear Energy Issues and Challenges
- New Education & Training Techniques
- Workforce Development Strategies
- Emerging Nuclear Power Options
- Benchmarking
- Knowledge Retention
- Successful Methods to Address these Challenges

Information about the conference will be posted on the webpage at http://www.ans.org/meetings/calendar.cgi?d=2-8-2009. The program co-chairs are Kent W Hamlin (INPO, email HamlinKW@INPO.org) and Brian K. Hajek (Ohio State University, email hajek.1@osu.edu).

Advances in Nuclear Fuel Management IV

Advances in Nuclear Fuel Management IV will be held April 12–15, 2009, in Hilton Head, South Carolina. The meeting is a forum for addressing a broad spectrum of front-end nuclear fuel management

activities, within the context of reactor physics and fuel cycle economics. Topics will range from methods development and verification to design and implementation of new in-core fuel products and strategies.

Technical sessions will include the following proposed topics:

- Addressing Practical Design Constraints On Fuel Management
- Advanced Fuel Assembly and Burnable Absorber Designs
- Advanced Fuel Management and Multi-dimensional Burnup Analysis
- Advances In Reactor Stability
- Automated and Interactive Fuel Management Design and Optimization Tools
- Error Quantification of Core Simulation Capabilities
- Experiences and Advances In On-Line Core Monitoring
- Extended Fuel Cycles and Economic Analysis
- Fuel and Core Design Based On Thorium Cycles
- Fuel Cycle Core Design for Advanced Reactor Concepts
- Fuel Temperature Feedback for Steady-State and Transients
- Generation of Cross Section Libraries and Whole Core Transport Calculations
- Generation-IV Design Concepts
- High Enrichment >5wt% UO2 Studies
- Innovative Core Loading Strategies and Methods
- Management, Design, and Operation Issues of Advanced Reactor Fuels
- Model Comparisons Against Measured Reactor Power Data
- Monte Carlo-based Depletion and Full Core Analysis: New Developments and Issues
- MOX Utilization In Reactors
- Nodal and Lattice Physics Methods
- Nuclear Data Needs to Enhance Core Simulation Fidelity
- Reactor-Based Plutonium Disposition
- Research Reactor Topics—Fuel Management Practices
- Simulation and Study of Advanced Nuclear Fuel Cycles
- Utilities Experience In Reload Design and Licensing
- Utilization of Zero Power Physics Tests and Core Follow Data to Enhance Core Simulation Fidelity
- Validation of Core Analysis Tools for Fuel Management

The deadline for electronic submission is **October 31, 2008**. General Chair for the conference is John Siphers, Progress Energy (phone 919-546-4032, email john.siphers@pgnmail.com) and the Technical Program Co-chairs are Ivan Maldonado, University of Tennessee (phone 865-974-7562, email imaldona@utk.edu) and Atul Karve, Global Nuclear Fuel, (phone 910-675-5802, email atul.karve@gnf.com). Additional details at the conference Web Site: http://anfm2009.org.

2009 International Conference on Advances in Mathematics, Computational Methods, and Reactor Physics

The 2009 International Conference on Advances in Mathematics, Computational Methods, and Reactor Physics will be held May 3–7, 2009, in Saratoga Springs, New York. The Conference will provide an international forum to present and discuss recent research in mathematical modeling and computing as applied to nuclear engineering and particle transport. This conference is part of a series of topical meetings organized by the Mathematics and Computation Division of the American Nuclear Society and returns to Saratoga Springs, New York—the site of the 1997 conference in this series. The technical program will consist of plenary sessions, parallel oral presentation sessions, and poster sessions. There will also be one or more workshops.

The call for papers has been issued soliciting work in all areas of computational and mathematical methods for analysis of nuclear systems as well as from related disciplines including reactor physics,

materials science, shielding, fluid dynamics, medical and biological applications, environmental sciences, fundamental mathematics, and benchmarking. Subject categories include:

- Deterministic Transport Theory Methods
- Monte Carlo Transport Theory Methods
- Hybrid Methods in Particle Transport
- Perturbation and Variational Methods
- Computational Fluid Dynamics
- Computational Environmental Science
- Nuclear Data Methods and Analysis
- Criticality and Safety Analysis
- Computational Materials Science
- High-Performance / Large-Scale Computing
- High-Impact Software Design
- Characteristic and Diffusion Theory Methods

- Nuclear Reactor Analysis
- Reactor Kinetics Methods
- Accelerators and Subcritical Systems
- Computational Plasma Physics
- Radiation Protection and Shielding
- Methods for Advanced Reactor Concepts
- Optimization Methods
- Computer Codes and Benchmarks (Poster Session)
- Multi-Physics Simulation Methods
- Computational Medical Physics
- Verification and Validation Methods

A 1500-word summary must be submitted to the conference electronically no later than **September 30, 2008** in order to ensure that it is included in the review process. Check the conference website http://local.ans.org/ne-ny/topical_2009_neny.html for instructions for submitting your work for consideration and for general conference information. General chair of the conference is Ray Gamino (ray.g.gamino@lmco.com).

Radionuclide Therapy and Radiopharmaceutical Dosimetry

The 3rd International Symposium on Radionuclide Therapy and Radiopharmaceutical Dosimetry and Workshop on Alpha-Emitting Radionuclides in Therapy will convene June 13–17, 2009, in Toronto, Canada, in conjunction with the 2009 Society of Nuclear Medicine (SNM) Annual Meeting, which is being planned. This symposium follows the successful first (Helsinki 2004) and second (Athens 2006) symposiums. This 2009 RTRD Symposium will blend with SNM sessions in oncology, radiopharmaceutical chemistry, radiobiology and dosimetry. The workshop will highlight current progress in the use of alpha-emitters for cancer therapy, continuing a series of successful alpha-emitter workshops. Symposium topics will include:

- Data collection and quantitative imaging
- Biodistribution and pharmacokinetics
- Clinical dosimetry and treatment planning
- Alpha emitters in cancer therapy
- Auger electron emitters
- Radiobiological studies
- Therapy of skeletal metastases and bone pain palliation

All announcements and mailings for the symposium will be electronic and by website postings. Those who wish to participate in the symposium must register with SNM to attend the Annual Meeting. Separate symposium registration will not be offered. Registration, housing, local arrangements, transportation, and other logistical arrangements will be handled by SNM. Local arrangement details will be available at a later date on the SNM website at: www.snm.org. A future announcement will provide instructions for submitting abstracts. George Sgouros (gsgouros@jhmi.edu) is Vice-chair of the organizing Committee and Michael Lassmann (Lassmann_M@klinik.uni-wuerzburg.de) is Chair of the Committee.

NEUDOS-11

The 11th Neutron and Ion Dosimetry Symposium (NEUDOS-11), hosted by the Laboratory for Accelerator-Based Sciences (iThemba LABS), will be held October 12–16, 2009, in Capetown, South Africa. The Symposium is being held under the auspices of the European Dosimetry Group (EURADOS). All previous Symposia in the series, which began in 1972, have been held in Western Europe.

A full and diverse scientific program will be offered which will encompass the complete range of neutron and ion dosimetry topics. In addition, both oral and poster "Young investigators" sessions will be held. At these sessions presentations on any topic related to the dosimetry of any radiation modality (i.e., not limited to neutron or ion dosimetry) can be presented.

Check the website, http://www.neudos11.tlabs.ac.za, frequently for new information. You may also contact Dr. D. Jones / Ms. N. Haasbroek, iThemba LABS, P O Box 722, Somerset West 7129, South Africa (phone +27 21 843 1259 / 1032, fax +27 21 843 3525, email Neudos11@tlabs.ac.za).

CALENDAR

July 2008

49th INMM Annual Meeting, July 13–17, 2008, Nashville, TN. Contact: INMM, Suite 100, 111 Deer Lake Road, Deerfield, IL 60015 USA (phone 847-480-9573, fax 847-480-9282, inmm@inmm.org) url http://inmm.org/meetings/index.htm.

Introduction to the Visual Editor for Advanced MCNP/MCNPX Users, July 21–25, 2008, Seattle, WA. Contact: http://www.mcnpvised.com/index.html.

Verification and Validation for Nuclear Systems Analysis Workshop, July 21–25, 2008, Idaho Falls, ID. Contact: March Curr (phone 208-526-2942, email marcy.curr@inel.gov) url https://secure.inl.gov/vvnsaws08/.

August 2008

CAARI-2008, August 10–15, 2008, Fort Worth, Texas. Contact: Ms. Margaret Hall, Conference Secretary, CAARI-2008, University of North Texas, PO Box 311427, Denton, Texas 76203-1427 USA (phone 940-565-3250, fax 940-565-2227, email caari@unt.edu) url www.caari.com.

September 2008

Introduction to MCNP using the MCNP/MCNPX Visual Editor, Sept. 8–12, 2008, Richland, WA. Contact: http://www.mcnpvised.com/index.html.

MACCS2 user workshop, Sept. 8, 2008, Bethesda, Maryland. Contact: Larry L. Humphries, Sandia National Laboratory (email llhumph@sandia.gov) url http://melcor.sandia.gov/.

MELCOR user workshop, Sept. 9–15, 2008, Bethesda, Maryland. Contact: Larry L. Humphries, Sandia National Laboratory (email llhumph@sandia.gov) url http://melcor.sandia.gov/.

PHYSOR'08, Sept. 14–19, 2008, Interlaken, Switzerland. Contact: info@physor2008.ch, url http://www.physor2008.ch/.

18th Topical Meeting on the Technology of Fusion Energy (18th TOFE), Sept. 28–Oct. 2, 2008, San Francisco, California. Contact: General Chair: Jeff Latkowski, 18th TOFE Meeting, 4435 First Street #155, Livermore, CA 94551 (phone 925-423-9378, fax 925-424-6401, email: latkowski@llnl.gov) url http://www.18th-tofe.com/.

FLUKA Training Course, Sept. 29–Oct. 3, 2008, OECD/NEA Data Bank, Issy-les-Moulineaux, France. Contact Cristina Lebunetelle, OECD/Nuclear Energy Agency Data Bank (email programs@nea.fr or fax +33 1 45241109) url http://www.nea.fr/html/dbprog/Newsletter/FLUKA-syllabus2008-09.html.

October 2008

6th Joint INMM/ESARDA Workshop, Oct. 6–9, 2008, Roppongi, Tokyo. Contact: Jim Larrimore, Workshop Co-Chair, Chair, INMM International Safeguards Division (phone (+1) 858-509-9604, fax (+1) 858-509-2890, email JamesLarrimore@san.rr.com) or Gotthard Stein, Workshop Co-Chair, Vice-Chair, INMM International Safeguards Division (phone (+49) 228-676988, fax (+49) 2461-61-2496, email g.stein@fz-juelich.de). The url for the Workshop is http://www.inmm.org/events/esarda08.cfm.

ARIA 2008, Oct. 13–17, 2008, Villigen, Switzerland. Contact: Daniela Lerch, Secretary (phone +41 56 310 33 82, email daniela.lerch@psi.ch) url http://aria.web.psi.ch.

SCALE Training Course–KENO Va, Oct 13–17, 2008, Oak Ridge National Laboratory, Oak Ridge, TN. Contact: http://www.ornl.gov/sci/scale/course_description.htm.

PBNC2008, October 13-18, 2008, Aomori, Japan. Contact: info@pbnc2008.org, url http://www.pbnc2008.org/.

3D S.UN.COP 2008, Oct. 13–31, 2008, at the Institute for Energy (IE) of JRC, in Petten, The Netherlands. Contact: Alessandro Petruzzi (a.petruzzi@ing.unipi.it) url http://dimnp.ing.unipi.it/3dsuncop.

12th International Congress of the International Radiation Protection Association (IRPA 12), Oct. 19–24, 2008, Buenos Aires, Argentina. Contact: secretariat@irpa12.org.ar, url www.irpa12.org.ar.

SCALE Training Course– ORIGEN-ARP/TRITON, Oct. 20–24, 2008, Oak Ridge National Laboratory, Oak Ridge, TN. Contact: http://www.ornl.gov/sci/scale/course_description.htm.

5th Workshop on Neutron Measurements, Evaluations and Applications Nuclear Data for Sustainable Nuclear Energy, Oct. 27–29, 2008, Ljubljana, Slovenia. Contact Carmen Cabanillas Platero, European Commission, Joint Research Centre, Institute for Reference Materials and Measurements, Retieseweg 111, B-2440 Geel, Belgium (phone +32 (0)14 571 411, fax+32 (0)14 571 862, email jrc-irmm-nemea-5@ec.europa.eu).

SCALE Training Course– KENO-VI/MAVRIC, Oct. 27–31, 2008, Oak Ridge National Laboratory, Oak Ridge, TN. Contact: http://www.ornl.gov/sci/scale/course_description.htm.

November 2008

13th International Conference on Neutron Capture Therapy, Nov. 3–7, 2008, Florence, Italy. Contact: ICNCT-13 Secretary General (icnct-13@pv.infn.it) url http://www.pv.infn.it/icnct-13/.

Introduction to MCNP using the MCNP/MCNPX Visual Editor, Nov. 3–7, 2008, Reno, NV. Contact: http://www.mcnpvised.com/index.html.

SCALE Training Course– TSUNAMI Sensitivity/Uncertainty Tools Course, Nov. 3–7, 2008, Oak Ridge National Laboratory, Oak Ridge, TN. Contact: http://www.ornl.gov/sci/scale/course_description.htm.

International Workshop on Gamma Spectrometry Analysis Codes for U and Pu Isotopics, Nov. 3–7, 2008, Oak Ridge National Laboratory, Oak Ridge, Tennessee. Contact: Alena Zhernosek (phone 865-241-2552, email zhernosekav@ornl.gov) url http://www.inmm.org/events/gamma/index.cfm.

American Nuclear Society: 2008 Winter Meeting, "Nuclear Power—Ready, Steady, Go," Nov. 9–13, 2008, Reno, Nevada. Contact: http://www.ans.org/meetings/index.cgi?c=n.

LOWRAD 2008, Nov. 27–29, 2008 Lisbon, Portugal. Contact: Margarida Goulart de Medeiros (phone +351 21 994 6347, fax +351 21 994 1995), Octávia Monteiro Gil (phone +351 21 994 6344, fax +351 21 994 1995), or Secretariat, Luisa Oliveira (email lowrad2008@itn.pt), Nuclear and Technological Institute Department of Radiological Protection and Nuclear Safety Estrada Nacional 10, 2686 - 953 Sacavém, Portugal. url http://www.lowrad2008.itn.pt/index.html.

April 2009

Advances in Nuclear Fuel Management IV, April 12–15, 2009, Hilton Head, South Carolina. Contact: General Chair John Siphers (phone 919-546-4032, email john.siphers@pgnmail.com), or Technical Program Co-chairs Ivan Maldonado (phone 865-974-7562, email imaldona@utk.edu) and Atul Karve (phone 910-675-5802, email atul.karve@gnf.com) url http://anfm2009.org.

May 2009

2009 International Conference on Advances in Mathematics, Computational Methods, and Reactor Physics, May 3–7, 2009, Saratoga Springs, New York. Contact: Ray Gamino (ray.g.gamino@lmco.com) url http://local.ans.org/ne-ny/topical_2009_neny.html.

June 2009

3rd International Symposium on Radionuclide Therapy and Radiopharmaceutical Dosimetry and Workshop on Alpha-Emitting Radionuclides in Therapy, June 13–17, 2009, Toronto, Canada. Contact: George Sgouros (gsgouros@jhmi.edu) orMichael Lassmann (Lassmann_M@klinik.uni-wuerzburg.de) url www.snm.org.

October 2009

NEUDOS-11, October 12–16, 2009, Capetown, South Africa. Contact: Dr D Jones / Ms N. Haasbroek, iThemba LABS, P O Box 722, Somerset West 7129, South Africa (phone +27 21 843 1259 / 1032, fax +27 21 843 3525, email Neudos11@tlabs.ac.za) url http://www.neudos11.tlabs.ac.za.