Radiation Safety Information Computational Center

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

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UT-Battelle, LLC
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phone 865-574-6176 fax 865-241-4046
email PDC@ORNL.GOV
www http://rsicc.ornl.gov/

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It is less important to redistribute wealth than it is to redistribute opportunity. —Arthur H. Vanderberg

RSICC staff will be participating in the ANS/ENS International Meeting and Nuclear Technology Expo, November 11–15, 2007, in Washington, DC. Requests submitted during that time will be processed the following week.

OBITUARIES

Edward McGaffigan, the longest serving commissioner in the history of the U.S. Nuclear Regulatory Commission, died Sept. 2. The following is a statement from the Nuclear Energy Institute's president and chief executive officer, Frank L. "Skip" Bowman.

> "Ed McGaffigan was a giant among public servants, a commissioner who brought great passion and competency to the Nuclear Regulatory Commission.
>
> Commissioner McGaffigan was a voice of reason determined to assure public health and safety by advocating regulation that is rooted in sound science and engineering. He always voted his conscience, and he earned the respect of his colleagues and staff at the NRC, government leaders, the public and executives in the nuclear energy industry."

The Nuclear Energy Institute and the American Nuclear Society in May presented McGaffigan with the Henry DeWolf Smyth Nuclear Statesman Award in May 2007. The award is given in recognition of statesmanlike contributions to the many aspects of nuclear technology.

Nuclear Energy Institute Sept. 3, 2007, press release

Dr. Glen J. Schoessow passed away on October 10, 2007, at the age of 97. He was born in Chaffee, North Dakota, on March 17, 1910. His university career began at North Dakota State University. Babcock & Wilcox hired him to lead the company's effort on the installation of its water turbines at the Hoover

Dam project, rated one the world's greatest civil engineering projects. He became the company's Chief Engineer, responsible for B&W's Power efforts, including the Navy Nuclear Project. While at B&W, Dr. Schoessow received a Master's Degree from Purdue University in 1933. He was commissioned a first Lieutenant in the Army in 1936. However, the national importance of his work kept him at B&W. Dr. Schoessow was the originator of many patents dealing with both steam and nuclear power, both at B&W and the University of Florida. Dr. Schoessow worked closely with Admiral Rickover in the fabrication of the power conversion components for the Navy nuclear submarines and he headed a review of the Liquid Metal Fast Reactor Concept with Brookhaven National Laboratory in 1955. In 1957, Dr. Schoessow came to the University of Florida as a Professor to assist with the construction and operation of the University of Florida Training Reactor. He worked closely with the National Aeronautics and Space Administration (NASA) on space power, and made the first measurement of the triple point of graphite up to 1000 atmospheres, important research for NASA. He was made a Fellow of the American Mechanical Engineering Society in 1985 in recognition of his outstanding mechanical engineering achievements. In 1986 he was awarded a Special Achievement Award of the American Nuclear Society in recognition of his contributions to reactor operator training by his development of the See Thru Reactor. In 1988, he was awarded an honorary doctorate by North Dakota State University to recognize his outstanding career. Dr. Schoessow was a strong supporter of the University of Florida Department of Nuclear & Radiological Engineering, where he established the Glen Schoessow Scholarship. He will be greatly missed at the University and by all who knew and loved him.

Sources—-*Gainesville Sun* and Dr. Alireza Haghighat

Changes to the Computer Code and Data Collection

CCC-684/NRCDose 2.3.9

Chesapeake Nuclear Services, Inc., Annapolis, Maryland, contributed a corrected version of this suite of NRC's computer codes, which are used for evaluating routine radioactive effluents from nuclear power plants. In this release of NRCDose 2.3.9, direction labels on the Wind Speed Values dialog were corrected in XOQDOQ. NRCDose includes LADTAP II, GASPAR II, and XOQDOQ with a WINDOWS interface to facilitate ease of use.

NRCDose runs on Pentium computers under Windows XP. The distributed executables were created with the Microsoft Fortran PowerStation Version 4.0 and Microsoft Visual Basic 6.0. Source files are not included, so this code system can be run only on PCs under Windows. The package is transmitted on CD in Windows format. References: “User’s Guide,” (May 2006); NUREG/CR 4653, PNL 5907 (March 1987); NUREG/CR 1276, ORNL/NUREG/TDMC 1 (March 17, 1980); NUREG/CR 2919 (PNL 4380) (September 1982). Fortran and Visual Basic; Pentium (C000684PC58607).

CCC-719/MCB-1C

Royal Institute of Technology, Stockholm, Sweden, through the Nuclear Energy Agency Data Bank, Issy-les-Moulineaux, France, contributed this Monte Carlo continuous energy burnup code system for a general-purpose use to calculate a nuclide density time evolution with burnup or decay. It can be used in eigenvalue calculations of critical and subcritical systems as well as neutron transport calculations in fixed source mode or k-code mode to obtain reaction rates and energy deposition that are necessary for burnup calculations. The MCB-1C package consists of a patch for MCNP4C and the following libraries.

- The burnup library - BPLIB (included in NEA-1643/01 package)
- ENDFB6.8 cross section library (NEA-1669/01 and NEA-1669/02 packages)
- JEF2.2 cross section library (NEA-1667/01 package)
- JENDL3.2 cross section library (NEA-1670/01, /02 and /03 packages)

- Transport libraries DLC200 (DLC-200/04 package)
- Dosimetry cross sections library EAF99 (NEA-1668/01 package)

Installation of MCB requires MCNP4C source code, PRPR and other utility programs, which are not included in this MCB distribution. They were provided in the now obsolete CCC-700/MCNP-4C package. These codes have not been updated for use on current compilers and will certainly require modifications to build. Neither LANL nor RSICC support MCNP4C in any fashion. MCB-1C is being made available through RSICC at the request of several people who have recently expressed interest in it. MCB-1C is transmitted on DVD which includes the User Manual and compressed Unix tar files which contain the MCB 1C patch, an install script and data libraries. Reference: MCB-1C User Manual. Linux-based PC or Unix workstations; Fortran 77 and ANSI C (C00719MNYCPWS).

PSR-227/ECIS-06

CEA/CEN Service de Physique Theorique, Saclay, France, through the OECD Nuclear Energy Agency Data Bank, Issy-les-Moulineaux, France, contributed this code system to solve coupled, differential equations arising in nuclear model calculations. The ECIS code has been developed over a period of more than fifteen years, and several earlier versions exist. The statistical model is based on ANLECIS, developed by P. Moldauer.

ECIS06 is primarily ECIS03 modified for the use of a different relativistic 'reduced mass' in front of 'scalar' potentials, differing from the one used in front of Coulomb potentials. It is the application to coupled equations of the principles described in 'DWBA05' announced in the Workshop “Perspectives on Nuclear Data in the Next Decade,” on September 26-28, 2005 at Bruyeres-le-Chatel, France. Some generalizations have been introduced, in particular for the dispersion relation. ECIS06 contains the following features:

- The Fortran source was updated to be compatible with current compilers.
- The LOG tables description has been updated.
- The re-start of a search parameter calculation by a different job was not possible. This new version fixes this problem.
- Automatic self-protecting features have been updated: in uninteresting situations, stop for low energy and external potential have been suppressed.

The code runs on PC’s under Windows or Linux. The package includes Fortran and C source files plus a Windows executable created with Intel Visual Fortran Compiler Professional Edition Version 9 and a Linux executable created with Lahey/Fujitsu Fortran 95 Compiler Release 5.50h. It is transmitted on a CD, written in tar format, which contains the source program, PC executables for Linux and Windows users, and sample problems input and output. References: CEA-N-2772 (September 1994) and informal reports. Fortran 77 and 95; PCs running Linux or Windows (P00227/MNYCP/01).

DLC-224/ALBEDO-DATA

Kansas State University, Manhattan, Kansas, contributed this library of differential neutron dose albedo functions, based on modern cross section and response function data. Newly evaluated parameters are tabulated for several empirical differential dose albedo formulas. Albedo data are provided for four materials: concrete, iron, lead, and water. Unlike previous compilations of albedo data, modern dosimetric units have been employed. Data are presented for (1) the ambient dose equivalent H*(10mm) and (2) the effective dose equivalent for anteroposterior (AP) illumination of the ICRP anthropomorphic phantom. The data are transmitted on a CD in a WinZIP file that includes ASCII data files, ALBEDOS code and documentation. Reference: KSU Report 301 (Sept. 2005, revised March 2006). Fortran; Many computers (D00224MNYCP00).

ANS News

Nominating Committee Selects 2008 Candidates

Vice President / President-Elect Candidates

The ANS Nominating Committee has selected as the candidates for Vice President / President-Elect: Yoon I. Chang (ANL) and Dana C. Christensen (ORNL).

Board of Directors Candidates

The ANS Board of Directors each serve a three year term that begins and ends during an ANS Annual Meeting. The ANS Bylaws and Rules require that U.S. and non U.S. members be proportionately represented; therefore, in the 2008 election, there are four U.S. Director At-Large, and one non-U.S. Director At-Large positions to be filled.

U.S. Director At-Large Position Candidates–-Nominated to run for the U.S. Director At-Large positions are: Yousry Y. Azmy (Penn State), Marvin S. Fertel (NEI), Garry A. Harris (HTS Enterprise, LLC), Bernadette L. Kirk (ORNL), Charles R. Martin (Defense Nuclear Facilities Safety Board), John R. McGaha (Entergy Operations Inc.), Jasmina L. Vujic (University of CA / Berkeley), Loyd A. Wright (Southern California Edison).

Non-U.S. Director At-Large Position Candidates–-Nominated to run for the Non-U.S. Director At-Large - Europe / Africa - position are: Oum Keltoum Bouhelal (National School of Mineral Industry), Dominique Greneche (AREVA NP Inc).

Directors whose terms will end in June 2008 are: Frank O. Carre, Kathryn A. McCarthy, Harold F. McFarlane, Christa E. Reed, F. Mark Reinhart, Michael B. Sellman.

In addition to Chair Harold F. McFarlane, members of this year's Nominating Committee included: Professional Divisions Chair Donald R. Hoffman and Local Sections Committee Chair J. Stephen Herring, Donald E. Carlson, Mark D. DeHart, William R. Martin, Thomas F. Plunkett, Dana A. Powers.

Nominating by Petition–-Members have the option to Nominate by Petition. Candidates, other than individuals on the Nominating Committee's slate, may be nominated by petition for Officer and Director vacancies.

Voting

Ballots for the 2008-2009 election will be mailed on February 26, 2008. As ratified by the ANS membership in June 1997, there will no longer be balloting at the Annual Meeting. Therefore, the mail ballots for the Board of Directors election must be returned and received no later than 12 noon on Tuesday, April 8, 2008.

Explore the Public Information Web Page

The Public Information page of the ANS web site is a great resource for members–-and a great place to refer others for information about nuclear topics. Recent news, resources such as brochures, and links to other materials are all found at: http://www.ans.org/goto/nad.cgi?id=1191560400-17.

ANS Scholarships

Several ANS Scholarship Applications for the 2008–2009 academic school year have just been posted online at http://ans.org/honors/scholarships/.

Two New Standards Published

ANSI/ANS-8.23-2007: "Nuclear Criticality Accident Emergency Planning and Response" provides criteria for minimizing risks to personnel during emergency response to a nuclear criticality accident outside reactors. This standard applies to those facilities for which a criticality accident alarm system, as specified in American National Standard Criticality Accident Alarm System, ANSI/ANS-8.3 1997 (R2003), is in use. This standard does not apply to nuclear power plant sites or to licensed research reactor facilities, which are addressed by other standards.

ANSI/ANS-8.26-2007: "Criticality Safety Engineer Training and Qualification Program" presents the fundamental content elements of a training and qualification program for individuals with responsibilities for performing the various technical aspects of criticality safety engineering. The standard presents a flexible array of competencies for use by management to develop tailored training and qualification programs applicable to site-specific job functions, facilities, and operations.

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
November 5–9, 2007	Introduction to MCNP using the MCNP/MCNPX Visual Editor	Richland, WA
March 24–28, 2008	Introduction to MCNP using the MCNP/MCNPX Visual Editor	Richland, WA
July 21–25, 2008	Introduction to the Visual Editor for Advanced MCNP/MCNPX Users.	Richland, WA
September 8–12, 2008	Introduction to MCNP using the MCNP/MCNPX Visual Editor	Richland, WA
November 3–7, 2008	Introduction to MCNP using the MCNP/MCNPX Visual Editor	Richland, WA

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

January 7–11, 2008	MCNPX Intermediate Workshop	UNLV, Las Vegas, NV
February 4–8, 2008	Advanced MCNP5	Los Alamos National Laboratory
April 7–10, 2008	Criticality Calculations with MCNP5	Los Alamos National Laboratory
May 12–16, 2008	MCNPX Intermediate Workshop	ITN, Lisbon, Portugal
June 16–20, 2008	Introduction to MCNP5 and MCNPX	Los Alamos National Laboratory

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.

2008 HPS Midyear Meeting "Radiation-Generating Devices"

The *2008 Midyear Health Physics Society* meeting "Radiation-Generating Devices" (http://hpschapters.org/2008midyear/) will be held at Oakland Marriott Convention Center in California, January 27-30, 2008. It is sponsored by the Northern California Chapter of HPS and the HPS Accelerator Section. The meeting will present the opportunity and a forum to exchange technical information and ideas in a wide range of topics from radiation protection of accelerators, lasers and radioisotopic source devices in research, medical, industrial and homeland security applications, as well as detection instrumentation, calibration, dosimetry, biological effects of radiation to regulatory and legal concerns. The technical program will be led by experts in the field. There will be oral and postal presentations, Technical Exhibition, and a 3-day Professional Development School titled "Topics in Accelerator Health Physics" (http://hps.org/pds2008/index.html) following the meeting at the same place. The meeting topics include:

- The Health Physics Challenges of New Accelerator Initiatives
- Medical Therapy and Imaging (PET, Linacs, X-rays, etc.)
- Research Accelerators and Lasers
- Radiation-Generating Devices in Industry (radiography, ion implantation, neutron generators, food irradiation, well logging, etc.)

- Homeland Security Considerations (cargo and human imaging, active neutron interrogation, etc.)
- The Evolution of Health Physics for Radiation-Generating Devices (accelerator, medical, industrial)
- General Health Physics Topics of Radiation-Generating Devices (detection instrumentation, calibration, dosimetry, shielding, interlocks, radiation damage and activation, biological effects, field and environmental monitoring, regulatory, etc.)

Complete and updated information can be found at http://hpschapters.org/2008midyear/.

WM2008

The theme for the WM2008 is "*Phoenix Rising: Moving Forward in Waste Management.*" The conference will be held in Phoenix, Arizona, February 24–28, 2008. Papers describing research, development and operational experience over the complete spectrum of nuclear waste activities will be presented. Topics are categorized into general tracks which are listed in the Call for Papers. Check the website for updates to conference information often. Technical program questions may be directed to WM08 Program Advisory Committee Chairman Gary Benda at +1-803-345-2170 or email gbenda@wmarizona.org. For non-technical questions related to the Program, authors and speakers may contact: WM Administration at +1-520-696-0399 or papers@wmarizona.org, or WM Technical Program Coordinator Michelle Rehmann - michelle_rehmann@wmarizona.org.

International Workshop on Monte Carlo Codes

A two-day workshop devoted to some popular Monte Carlo and deterministic radiation transport codes (KENO, MCBEND, Attila and MCNP-Vised) will be held at the Birchwood Conference Centre, Risley, Warrington, Cheshire, UK, March 3–4, 2008. Presentations describing features and capabilities of each code, as well as demonstrations of real applications, will be given by key developers of the code. There will also be introductory lectures on general Monte Carlo techniques for novice users that are applicable to all radiation transport codes. An open-house session will also be held enabling delegates to demonstrate their own applications and problems (either on a laptop or poster). Questions may be directed to Paul Hulse (Paul.Hulse@sellafieldsites.com, phone +44 (0)1925 833073, or fax +44 (0)1925 833930) or Andrew Cooper (Andrew.J.Cooper@sellafieldsites.com, phone +44 (0)1925 833164 or fax +44 (0)1925 833930). Further information is available at http://www.mcneg.org.uk/

14th UK Monte Carlo User Group Meeting (MCNEG 2008)

The 14th UK Monte Carlo User Group Meeting (MCNEG 2008) will be held at the Birchwood Conference Centre, Risley, Warrington, Cheshire, UK, March 5–6, 2008. Aimed at users of all radiation transport codes, the MCNEG 2008 meeting provides delegates with the opportunity to present and discuss their applications and recent developments of Monte Carlo in radiotherapy, radiation protection, radioactivity, the nuclear and other industries. Questions may be directed to Paul Hulse (Paul.Hulse@sellafieldsites.com, phone +44 (0)1925 833073, or fax +44 (0)1925 833930) or Andrew Cooper (Andrew.J.Cooper@sellafieldsites.com, phone +44 (0)1925 833164 or fax +44 (0)1925 833930). Further information is available at http://www.mcneg.org.uk/

ICRS-11 and RPSD-2008

The theme for this collaboration of the 11th International Conference on Radiation Shielding (ICRS-11) and the 15th Topical Meeting of the Radiation Protection and Shielding Division (RPSD-2008) of the American Nuclear Society is *Finding Your Way through the Shielding Maze!* The conference will be held

April 13–18, 2008, at Callaway Gardens in Pine Mountain, Georgia, USA. This conference explores the scientific, technological and engineering issues associated with particle and ionizing radiation shielding in its broadest context, including nuclear energy systems, accelerator facilities, space and other radiation environments. It is one of the premier international radiation shielding events, regularly drawing hundreds of the world's top scientists and engineers. The technical program will include plenary sessions, parallel oral technical sessions and poster sessions.

Technical session topics include:

- Accelerator Shielding
- Aircraft Dosimetry Issues
- Shielding Benchmarks
- Electron-Photon Data
- Monte Carlo Methods and Applications
- Medical Applications
- Nuclear Data
- Advanced Phantoms for Radiation Dosimetry
- Nuclear Modeling for Heavy Charged Particle Transport
- Activation and Transportation Characterization Calculations
- Radiation Detection and Measurements
- Residual Activity
- Radiation Metrology and Regulations
- Radiation Protection
- Regulations and Reactor Shielding
- Shielding of Spallation Sources and Related Facilities
- Radiation Protection Issues and Methods for Deep Space Exploration
- Transmutation and Storage of Radioactive Materials
- Deterministic Methods
- Hybrid Methods
- Shielding of Synchrotron Light Sources
- Dosimetry Issues

The authors of contributed work presented at the conference will be invited to submit a manuscript for inclusion in special issue(s) of the American Nuclear Society (ANS) journal, *Nuclear Technology*. All submitted papers will be subject to full peer review. Questions regarding the technical program should be addressed to: Technical Program Chair, Michele Sutton Ferenci (email michele.sutton@mindspring.com, phone 1-404 851-7077). Complete details and templates will be posted soon at http://icrs11.me.gatech.edu.

International Symposium on Reactor Dosimetry

The *13th International Symposium on Reactor Dosimetry* will be held the May 25–30, 2008 in the Hotel Akersloot, 6 kilometers south of Alkmaar in the Netherlands. This Symposium has a long history and has been organized approximately every three years alternately in Europe and the United States or Japan. The Symposium theme is dosimetry for the assessment of irradiated reactor materials and reactor experiments, featuring radiation metrology techniques, data bases, and standardization. Presentations will be made on the following topics:

- 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
• Advanced reactors and accelerator neutron sources
• Irradiation processing and testing of electronics
• Experimental techniques, new developments, and optical methods
• Neutron dosimetry for space nuclear power

This Symposium is jointly organized by ASTM Committee E 10 on Nuclear Technology and Applications and the European Working Group on Reactor Dosimetry (EWGRD). The 13th symposium is hosted by The Joint Research Centre, Institute for Energy, Petten. Up-to-date information is available at the website, http://safelife.jrc.nl/ISRD/.

American Nuclear Society: 2008 Annual Meeting

"Nuclear Science and Technology: Now Arriving on Main Street" is the theme for the 2008 American Nuclear Society Annual Meeting which will be held June 8–12, 2008, in Anaheim, California. It will include three embedded topical meetings which are described below. The call for papers has been issued for summaries on the following track themes:

- Nuclear Science and Technology: Now Arriving on Main Street
- Nuclear Power Plant Design, Construction, and Management
- Fuel Cycle and Waste Management Technology
- Nuclear Facility and Criticality Safety
- Environmental Science and Technology
- Nonpower and Medical Applications of Radiation
- Nuclear Science and Engineering
- Advanced Energy Research and Emerging Technologies
- Education, Training, and Communication with the Public
- Nuclear Security and Emergency Response
- Professional Development

Guidelines and templates for papers submitted for the meeting and topicals can be found at http://www.ans.org/meetings/docs/2008/am2008-cfp.pdf.

ICAPP'08

2008 International Congress on Advances in Nuclear Power Plants (ICAPP'08) will be held June 8-12, 2008, in Anaheim, California. This congress will bring together international experts of the nuclear industry involved in the operation, development, building, regulation, and research related to nuclear power plants. The program will cover the full spectrum of nuclear power plant issues from design, deployment and construction of plants to research and development of future designs and advanced systems. Topics include:

- Water-Cooled Reactor Programs and Issues
- High-Temperature Gas-Cooled Reactors
- LMFR & Longer Term Reactor Programs
- Operation, Performance & Reliability Management
- Plant Safety Assessment and Regulatory Issues
- Thermal Hydraulics Analysis and Testing
- Fuel Cycle and Waste Management
- Materials and Structural Issues
- Nuclear Energy and Sustainability

- Near-Term Deployment
- Reactor Physics and Analysis
- Innovative and Space Reactor Systems

Details and up-to-date information can be found by contacting 2008 International Congress on the Advances in Nuclear Power Plants (ICAPP '08), Attn: Lynne Schreiber, PO Box 116502, Gainesville, FL 32611-6502 (phone 1-352-392-9722, fax 1-352-392-8656, email: icapp@ans.org) url www.ans.org/goto/icapp08.

Nuclear Fuels and Structural Materials for the Next Generation Nuclear Reactors

Nuclear Fuels and Structural Materials for the Next Generation Nuclear Reactors, will be held June 8–12, 2008, Anaheim, California. The Generation IV International Forum has selected six advanced systems for consideration: the gas-cooled fast reactor system, lead-cooled fast reactor system, molten salt reactor system, sodium-cooled fast reactor system, supercritical water-cooled reactor system, and very-high-temperature reactor system. This embedded topical will bring together fuels and materials experts in all areas of Generation IV technologies.

Summaries describing work that is new, significant, and relevant to Generation IV fuels and materials development are due January 11, 2008, on the following topics:

- Fuels and Materials for Very High Temperature Reactors (VHTR)
- Fuels and Materials for Gas-cooled Fast Reactors (GFR)
- Fuels and Materials for Supercritical Water-cooled Reactors (SCWR)
- Fuels and Materials for Lead-cooled Fast Reactors (LFR)
- Fuels and Materials for Sodium-cooled Fast Reactors (SFR)
- Fuels and Materials for Molten Salt-cooled Reactors (MSR)
- High-Temperature Design Methodology
- Microstructural Modeling
- Materials for Radiation Service

The ANS will publish accepted summaries in the *Transactions*. The General Chairs for the meeting are Todd Allen, University of Wisconsin, and Lance Snead, Oak Ridge National Laboratory.

Isotopes for Medicine and Industry

Isotopes for Medicine and Industry, will be held June 9–11, 2008, in Anaheim, California. The continuing rapid growth of radioisotopes for both medical and industrial applications is of national and international interest. The expanding applications and associated production issues surrounding the supply of research, diagnostic, therapeutic, environmental, and industrial radioisotopes will be discussed.

Summaries, due by January 11, 2008, are expected to describe work that is new, significant and relevant to the conference topics which are:

- Applications in Nuclear Medicine—Diagnostics
- Reactor Production of Medical Isotopes
- Application of Environmental and Industrial Isotopes
- Applications in Nuclear Medicine—Therapeutics
- Reactor Production of Research and Industrial Isotopes
- Cyclotron Production of Biomedical Tracers
- Radiochemistry
- High Energy Accelerator/Cyclotron Production of Isotopes
- Distribution and Transportation Issues
- Production and Application of Alpha Emitters

- R&D and Standards Needs for Future Applications in Industry
- Manpower and Education

Summaries must be submitted electronically to http://www.ans.org/meetings/epsr/. Accepted summaries will be included in the *Transactions* CD that will be distributed at the ANS Annual Meeting.

The General Chair is Wynn A. Volkert, University of Missouri, Columbia, and the Technical Program Chair is Ralph A. Butler, University of Missouri, Columbia.

NPAE-Kyiv2008

The *Second International Conference on Current Problems in Nuclear Physics and Atomic Energy (NPAE-Kyiv2008)* will be held June 9–15, 2008 in Kyiv, Ukraine.

The first International Conference on Current Problems in Nuclear Physics and Atomic Energy (NPAE-Kyiv2006) was held in Kyiv (Ukraine) in 2006; the proceedings are available at http://www.kinr.kiev.ua/NPAE_Kyiv2006/.

This conference brings together scientists to share knowledge in current problems of nuclear physics and atomic energy. The NPAE-Kyiv2008 conference will cover the following topics:

- collective processes in atomic nuclei,
- nuclear reactions at low and high energies,
- nuclear structure and decay data,
- rare nuclear processes,
- nuclear astrophysics,
- neutron and reactor physics,
- nuclear data and data evaluation,
- problems of atomic energy,
- applied nuclear physics in medicine and industry, and
- experimental facilities and detection techniques.

One-page abstracts are due via email to npae-kyiv2008@kinr.kiev.ua by March 1, 2008. The conference will consist of plenary sessions, parallel sessions, and poster sessions. Plenary sessions are composed of invited talks, and parallel sessions consist of invited talks and oral presentations selected from contributions. The working language of the conference is English.

The NPAE-Kyiv2008 conference is organized by the National Academy of Sciences of Ukraine (NASU, http://www.nas.gov.ua), the Institute for Nuclear Research of NASU, Kyiv (KINR, http://www.kinr.kiev.ua) in collaboration with Taras Shevchenko National University of Kyiv (NTSU, http://www.univ.kiev.ua). The conference chairman is I.M. Vyshnevskyi (KINR) and the scientific secretaries are V.Yu. Denisov (KINR) and O.O.Gritzay (KINR).

The Proceedings of the Conference will be published by the Publishing Department of KINR; selected papers will be also published in *Nuclear Physics and Atomic Energy* (http://jnpae.kinr.kiev.ua).

Please address all the mail and questions concerning scientific program, publication, etc. to: Dr. Vitali Yu. Denisov or Dr. Olena O. Gritzay, Institute for Nuclear Research, Prospect Nauky, 47, Kyiv, 03680, Ukraine (email npae-kyiv2008@kinr.kiev.ua). Information on the conference may be found at the website http://www.kinr.kiev.ua/NPAE-Kyiv2008.

Practical MCNP for the Health Physicist, Medical Physicist, and Rad Engineer

DATES: 23 - 27, June 2008
FEE: $1,800 per person
PLACE: The MESA Complex, Room 130, University of New Mexico-Los Alamos Campus

Monte Carlo type calculations are ideally suited to solving a variety of problems in radiation protection and dosimetry. The Los Alamos MCNP™ code is a general and powerful Monte Carlo transport code for photons, neutrons, and electrons, and can be safely described as the "industry standard." This course is aimed at the HP, medical physicist, and rad engineer with no prior experience with Monte Carlo techniques. The focus is almost entirely on the application of MCNP™ to solve a variety of practical problems in radiation shielding and dosimetry. The intent is to "jump start" the student toward using MCNP™ productively. With a little practice and study of the examples, many will find they are able to solve problems that have, in the past, been out of reach.

Course content: Extensive interactive practice sessions are conducted on a personal computer. Topics will include an overview of the MCNP™ code and the Monte Carlo method, input file preparation, geometry, source definition, standard MCNP tallies, interpretation of the output file, exposure and dose rate calculations, radiation shielding, photon skyshine, detector simulation and dosimetry. Students will be provided with a comprehensive class manual and a CD containing all of the practice problems. This course has been granted 32 Continuing Education Credits by the AAHP (2005-00-003), and 4.5 CM points by the American Board of Industrial Hygiene. The course is offered by the Health Physics Measurements Group at the Los Alamos National Laboratory and is co-sponsored by RSICC.

Registration is available online at: http://drambuie.lanl.gov/~esh4/mcnp.htm. Non-US citizens need to register 60 days in advance to allow for necessary visitor approvals. Make checks payable to the University of California (checks must be in U.S. dollars on a U.S. bank) and mail together with name, address, and phone number to David Seagraves, Mail Stop J573, Los Alamos National Laboratory, Group RP-2, MCNP Class, Los Alamos, NM 87545. Inquiries regarding registration and class space availability should be made to David Seagraves, 505-667-4959, fax: 505-665-7686, e-mail: dseagraves@lanl.gov. Technical questions may also be directed to Dick Olsher, 505-667-3364; e-mail: dick@lanl.gov.

Please note that this course is separate from and independent of the courses being offered by the MCNP and MCNPX Teams at LANL.

Dick Olsher

Fourth Annual WNU Summer Institute

The World Nuclear University's fourth annual Summer Institute (WNU-SI) will be held July 5–August 15, 2008, at McMaster University in Ontario, Canada. The WNU is a global partnership aimed at strengthening education and leadership in nuclear science and technology. The WNU partnership includes IAEA, WANO, NEA-OECD, and WNA (the WNU's four "Founding Supporters"), as well as leading institutions of nuclear learning around the world. The Summer Institute, a demanding six-week leadership development program for outstanding young professionals in the nuclear field, is held in a different country each year with 90–100 "WNU Fellows" from over 30 nations participating. WNU Fellows are selected every December from hundreds of applicants. Information about the requirements for consideration and the application form may be found at http://www.world-nuclear-university.org/html/summer_institute/index.htm. The deadline for receipt of applications is November 30, 2007.

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 Scherrer 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.

Main topic areas include:

– neutronics calculations and experiments,
– reactor analysis methods,
– fuel and core design,
– fuel cycle physics,
– advanced systems,
– nuclear power and sustainable development,
– reactor materials challenges,
– nuclear safety analysis and multiphysics,
– experimental facilities for safety research, and
– biomedical and other non-power applications.

Relevant information may be found at http://www.physor2008.ch/.

CALENDAR

November 2007

ANS/ENS International Meeting and Nuclear Technology Expo, "Making the Renaissance Real," Nov. 11–15, 2007, Washington, DC. URL http://www.ans.org/meetings/winter/.

NUPPAC '07, Nov. 17–21, 2007, Luxor, Egypt. Contact: Prof. Dr. M.N.H. Comsan, Chairman of NUPPAC' 07, Egyptian Nuclear Physics Association (ENPA), 3 Ahmed Elzomor St., Elzohour District, Nasr City, Cairo, Postal Code 11787, Egypt (phone 202-4021018, fax 202-2876031, email mnhcomsan@menanet.net or comsanmn@hotmail.com) url: http://www.geocities.com/Athens/Library/7348/NUPPAC_07.html.

January 2008

Intermediate MCNPX, January 7–11, 2008, Las Vegas, NV. Contact: nbutner@lanl.gov, url http://mcnpx.lanl.gov/.

2008 Midyear Health Physics Society meeting "Radiation-Generating Machines," Jan. 27–30, 2008, Oakland, California. Information and registration can be found at http://hpschapters.org/2008midyear.

February 2008

Advanced MCNP5, February 4–8, 2008, Los Alamos National Laboratory, Los Alamos, NM. Contact: nbutner@lanl.gov, url http://mcnpx.lanl.gov/.

WM2008, Feb. 24–28, 2008, Phoenix, AZ. Contact: WM08 Program Advisory Committee Chairman Gary Benda (phone 803-345-2170 or email gbenda@wmarizona.org) url http://www.wmsym.org/html/wm_conference.cfm.

March 2008

International Workshop on Monte Carlo Codes, March 3–4, 2008, Birchwood Conference Centre, Risley, Warrington, Cheshire UK. Contact: Paul Hulse (Paul.Hulse@sellafieldsites.com, phone +44 (0)1925 833073, or fax +44 (0)1925 833930) or Andrew Cooper (Andrew.J.Cooper@sellafieldsites.com, phone +44 (0)1925 833164 or fax +44 (0)1925 833930) url http://www.mcneg.org.uk/.

April 2008

Criticality Calculations with MCNP5, April 7–10, 2008, Los Alamos National Laboratory. Contact: nbutner@lanl.gov, url http://mcnpx.lanl.gov/.

11th International Conference on Radiation Shielding (ICRS-11) and the 15th Topical Meeting of the Radiation Protection and Shielding Division (RPSD-2008) of the American Nuclear Society, April 13–18, 2008, Callaway Gardens, Pine Mountain, Georgia. Contact: General Chair, Nolan Hertel, Georgia Institute of Technology (email nolan.hertel@me.gatech.edu) or General Co-Chair, Pedro Vaz, ITN, Portugal (email pedrovaz@itn.pt) url http://icrs11.me.gatech.edu/index.htm.

May 2008

Intermediate MCNPX, May 12–16, 2008, Lisbon, Portugal. Contact: **nbutner@lanl.gov**, url **http://mcnpx.lanl.gov/**.

June 2008

American Nuclear Society: 2008 Annual Meeting, "Nuclear Science and Technology: Now Arriving on Main Street," June 8–12, 2008, Anaheim, California. The call for papers can be found at http://www.ans.org/meetings/docs/2008/am2008-cfp.pdf.

2008 International Congress on Advances in Nuclear Power Plants (ICAPP'08), June 8–12, 2008, Anaheim, California. Information can be found at http://www.inspi.ufl.edu/icapp08/index.html.

Nuclear Fuels and Structural Materials for the Next Generation Nuclear Reactors, June 8–12, 2008, Anaheim, California. Contact: Todd Allen, University of Wisconsin, 529 Engineering Research Building, 1500 Engineering Dr., Madison, WI 53706 (phone 608-265-4083, email allen@engr.wisc.edu).

Isotopes for Medicine and Industry, June 9–12, 2008, Anaheim, California. Contact: Wynn A. Volkert, University of Missouri, Room 330 Hadley Hall, Columbia, MO 65211 (phone 573-882-6759, email VolkertW@health.missouri.edu).

2nd International Conference on Current Problems in Nuclear Physics and Atomic Energy (NPAE-Kyiv2008), June 9–15, 2008, Kyiv, Ukraine. Contact: Dr. Vitali Yu. Denisov or Dr. Olena O. Gritzay, Institute for Nuclear Research, Prospect Nauky, 47, Kyiv, 03680, Ukraine (email npae-kyiv2008@kinr.kiev.ua) url http://www.kinr.kiev.ua/NPAE-Kyiv2008.

Introduction to MCNP5 and MCNPX, June 16–20, 2008, Los Alamos National Laboratory. Contact: nbutner@lanl.gov, url http://mcnpx.lanl.gov/.

August 2008

World Nuclear University's 4th annual Summer Institute (WNU-SI), July 5–August 15, 2008, at McMaster University in Ontario, Canada. Information is available at http://www.world-nuclear-university.org/html/summer_institute/index.htm.

September 2008

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

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/.