Radiation Safety Information Computational Center

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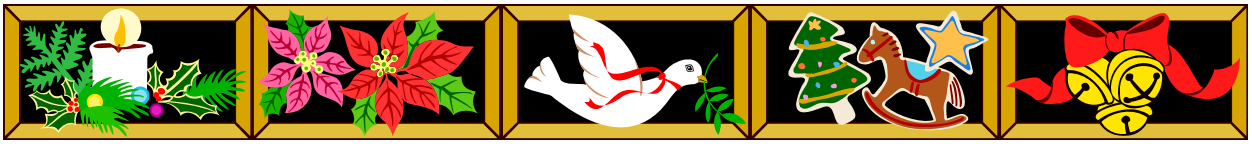
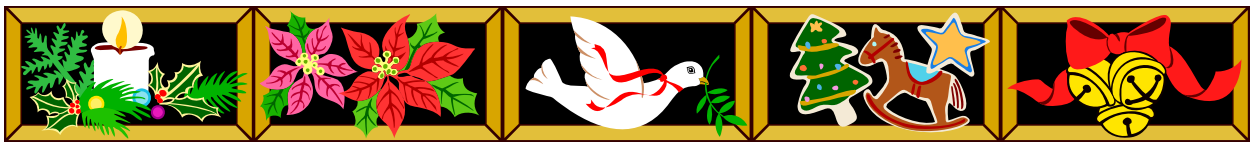
Good humor is one of the best articles of dress one can wear in society.—Thackeray



RSICC will observe the holiday season beginning December 22, 2007, through January 2, 2008. We will respond to your requests upon our return.

Merry Christmas and Happy Holidays!
The RSICC Staff



NUCLEAR TECHNOLOGY IN CHINA FOR THE NEW CENTURY

The government and the scientific community of China are organizing efforts to find answers to the nation's problems in air pollution, urbanization, clean water, and increasing energy needs. Full and free discussions on these and other related subjects were held with China's nuclear scientists and engineers and a technical delegation led by past ANS president Alan Waltar in a People to People Ambassador Program October 12-22, 2007. The American led delegation included 52 professionals. I was pleased to participate in the exchange as a way to revisit Chinese friends from RSICC orientation visits to China in the 1980s and early 1990s. I found many changes in modernization and much progress in research related to solving China's need for energy.

The Chinese Nuclear Society hosted the delegation via its chapters in Beijing and Shanghai. Visits in the Beijing area were made to the Institute of Nuclear and New Energy Technology (INET) of Tsinghua University and the China Institute of Atomic Energy (CIAE) of the China National Nuclear Corporation (CNNC). The Shanghai Nuclear Society hosted visits to CNNC's Shanghai Nuclear Energy Research and Design Institute (SNERDI) and the China Nuclear Power Design Company (CNPDC), a newly organized umbrella for oversight and support of the future surge in developing nuclear power plants in China. A visit to the Qinshan Nuclear Power Plant Complex in Hangzhou Bay, Zhejiang Province, with discussions held at the CANDU site and a luncheon with its leaders concluded the technical program.

The overview presentations cited China's current resources and need for energy in support of growing urbanization and industrialization, its efforts to combat pollution, and increasing modernization that require government and scientific efforts to meet its needs. Much reliance is placed on increasing use of the nuclear option along with oil, coal, and renewable energy sources. An ambitious program is planned for the future.

This short summary cites the currently operating nuclear power plants and the plans and construction underway for the power plants of the future.

China's Nuclear Power Plants in operation include the following four sites.

- QINSHAN Nuclear Power Plants: First Stage 300-mw PWR designed, constructed, operated and managed by China (1985-incorporated into grids 1991; operation 1994; 2nd Stage put into business operation 2002; 3rd Stage adopts nuclear power technologies from Canada, put into operation 2003).
- GUANGDONG DAYAWAN Nuclear Power Plant: Operation 1987; first commercial nuclear power plant in China introducing foreign capital, equipment and technologies.
- TIAWAN Nuclear Power Plant: In operation 2004 and 2005 using technologies from Russia.
- LING'AO Nuclear Power Plant: Owns 2 gw-level PWR nuclear power generating units; in operation 2003; Second Stage is under construction now.

China's Nuclear Power Plants under construction, include the following seven Sites.

- GUANGDONG YANGJIANG Nuclear Power Plant: Construction began in 2006. With an investment of $8-billion and 6 gw-level units, this will be the largest nuclear power project in China.
- ZHEJIANG SANMEN Nuclear Power Plant: Construction began in 2004. Planned capacity of six gw-level generating units; 1st Stage, two gw-level PWR generating units. To be completed in 2010 with installed capacity of 12 gw, surpassing that of the Three Gorges Hydropower Station.
- LIAONING HONGYANHE Nuclear Power Plant: Started in August 2007; expected completion 2012 with six gw-level generating units.
- JIANGXI PROVINCE: a nuclear power plant is expected to start in 2008 in Pengze County on the south bank of the Yangtze with investment of $5.33-billion and capacity of 4 gw.
- CHONGQING: China Power Investment Corp. is planning a nuclear power plant with investment of $2.67-billion and installed capacity of 1.8 gw. The 1st generating unit will be put into operation in 2013.
- HUNAN PROVINCE: Planning is underway to build a nuclear power project with total installed capacity of 6 gw, of which 2 gw will be completed in the 1st Stage. The feasibility study will be finished in 2008 and a project proposal will be submitted.
- WEIHAI, SHANDONG PROVINCE: Planning is ongoing to establish a 195-mw gas-cooled-reactor nuclear power plant; the first pebble-bed nuclear reactor in commercial use in the world. China Huaneng Group, the country's largest power company, takes the lead for construction of this project.

China's Parliament was meeting during the visit of the American delegation. We were told that the nation, science, government, and the people were united in supporting these ambitious plans to alleviate China's environmental problems and supply energy for the new century.

Betty F. Maskewitz

Obituaries

Enzo Menapace–-RSICC has learned through the *IAEA Nuclear Data Newsletter*[1] that our friend of many years died on June 23. "Enzo contributed to the international cooperation efforts on nuclear data, particularly as the Italian representative and chairman of the International Nuclear Data Committee and as a member of the Atomic and Molecular Subcommittee of the International Fusion Research Council and the Atomic Data Centres Network…."

Feliks Evgen-evich Chukreev–-The same issue of the *IAEA Nuclear Data Newsletter*[1] announced the death of Chukreev on June 29. He "contributed so much to the worldwide nuclear physics/nuclear data communities for forty years. Working at the Center for Nuclear Structure and Reaction Data, Kurchatov Institute of Atomic Energy, Moscow, Feliks was involved in the extension of the EXFOR library to charged particle data in the 1970s, and continued to contribute to this database on a regular basis. His expertise in this field and his nuclear structure activities were well recognized by his many colleagues and friends."

Denwood F. Ross, Jr., died September 18. Ross was educated at the Texas Western University, Southern Methodist University, Texas Christian University, Catholic University and the University of Maryland. Over the course of his career he served as operations manager of three test reactors at General

[1] Issue No. 44, September 2007

Dynamics (1957–1967); a manager in the licensing office of the Nuclear Regulatory Commission; served as deputy director of NRC'S Office of Nuclear Regulatory Research (1981–1990); also as deputy director of the NRC's Analysis and Evaluation of Operation Data Office (1990–1997). In 2007 he was awarded the ANS Reactor Technology Award. At the time of his death he was working as director of nuclear services at Jupiter Corporation and as a consultant with Gamma Engineering. He was also serving as Adjunct nuclear engineering professor at the University of Maryland.[2]

Wolfgang K. H. Panofsky died September 24 in Los Altos, California. He came to the U.S. from Berlin in 1934, graduated from Princeton University in 1938 and earned his doctorate in physics from the California Institute of Technology in 1942. He was a consultant on the Manhattan Project and in 1945 began working at the Radiation Laboratory at the University of California at Berkeley. As a full professor at Stanford University, he directed the High Energy Physics Laboratory and he led the construction of the Stanford Linear Accelerator Center and became its first director, a position he held until retiring in 1984. He worked as an advocate of nuclear arms control in several capacities including as chairman of the National Academy of Sciences' Committee on International Security and Arms Control from 1985 to 1993.[2]

Changes to the Computer Code and Data Collection

CCC-647/DRAGON 3.05D

Ecole Polytechnique de Montreal, Canada, contributed a newly frozen version of this lattice cell code system. The computer code DRAGON contains a collection of models that can simulate the neutron behavior of a unit cell or a fuel assembly in a nuclear reactor. It includes all of the functions that characterize a lattice cell code, namely: the interpolation of microscopic cross sections supplied by means of standard libraries; resonance self-shielding calculations in multidimensional geometries; multigroup and multidimensional neutron flux calculations that can take into account neutron leakage; transport-transport or transport-diffusion equivalence calculations as well as editing of condensed and homogenized nuclear properties for reactor calculations; and finally isotopic depletion calculations. DRAGON contains a multigroup flux solver that can use various algorithms to solve the neutron transport equation for the spatial and angular distribution of the flux. Each of these algorithms is presented in the form of a one-group solution procedure where the contributions from other energy groups are considered as sources.

DRAGON runs under Unix, Linux, and MacOS operating systems; it can also be run on Windows-based PCs under Cygwin. At RSICC the system was successfully tested on an IBM RS/6000 under AIX 5.1 with XL Fortran version 8.01 and on an Intel PC under RedHat 9 Linux with the GNU g77 (gcc version 3.2.2) compiler. The package is transmitted on a CD ROM in a GNU compressed Unix tar file which contains installation instructions, documentation, Fortran source, installation scripts, and test input and output for AIX, Linux and MacOS. References: IGE 174 Rev. 6D (March 2007). Fortran 77; Intel Linux, IBM RS/6000, and Sun (C00647/MNYWS/03).

PSR-543/ADEFTA 4.0

ENEA/FPN-FISNUC (Nuclear Data Centre), Bologna, Italy, through the OECD Nuclear Energy Agency Data Bank, Issy-Les Molineaux, France, contributed the Atomic Densities for Transport Analysis script. ADEFTA is a script file for any UNIX/Linux platform that uses only Bourne shell commands and the "awk" UNIX (and Linux) utility in order to calculate the atomic densities related to any compositional model for transport analysis. The output produced by ADEFTA can be useful for applications with many transport codes. However, ADEFTA is particularly addressed to users of both the GIP code, which prepares macroscopic cross-sections for the DORT and TORT deterministic transport codes (CCC-650), and the Monte-Carlo MCNP code (CCC-730). ADEFTA output normally consists of two files: the former

[2] Based on material provided in *Nuclear News*, **50**(12) September 2007**.**

for "general use" since the atomic density (atom/(barn*cm)) for each isotope contained in a material mixture of an input compositional model is reported together with the corresponding atomic fraction in the material or mixture, the latter more directly addressed to MCNP and only containing the atomic fractions. A third output file (optional) can be produced by ADEFTA: this is a partial input file to GIP. It is denoted partial because users must input the array containing the cross sections for all the nuclides of the complete working library (14** data entries).

ADEFTA can be run in the Bourne shell on Unix or Linux operating systems and can also be run under Cygwin on Windows-based personal computers. The package is transmitted on a CD in a Unix tar file which includes the referenced document, the script, data files and test cases. Reference: FPN-P9H6-004 (April 2007). Bourne Shell; Workstation or PC (P00543/MNYCP/00).

DLC-230/ALEPH-LIB-JEFF3.1

SCK•CEN, Mol, Belgium, through the OECD Nuclear Energy Agency Data Bank, Issy-Les Molineaux, France, contributed this ACE format neutron cross section library based on JEFF3.1. ALEPH-LIB-JEFF3.1 was generated with the NJOY-99.112 nuclear data processing system. The library is comprised of 380 materials and is derived from the JEFF-3.1 evaluated nuclear data library. It is a multi-temperature ACE-format neutron library for a wide range of six temperatures depending on application needs: 300, 600, 900, 1200, 1500 and 1800 degrees Kelvin. Unresolved resonance probability tables (ptable) were processed whenever evaluations contained such data. No thermal scattering evaluations are included. This continuous energy neutron library can be used with the MCNP(X) or ALEPH codes. ALEPH is the Monte Carlo burnup code under development at SCK•CEN in collaboration with Ghent University. The package also contains graphs displaying the processed data for each reaction type. ALEPH-LIB-JEFF3.1 has undergone strict QA procedures. The library (at 300 K) was validated on a suite of criticality benchmarks and on a series of pulsed sphere benchmarks.

The ASCII data libraries, xsdir files, graphs and electronic document are transmitted on one DVD in WinZIP files. Uncompressed ASCII files are about 1.2 GB for each temperature. Reference: SCK-CEN-BLG-1034 Rev. 0 (October 2006). ASCII data; many computers (D00230/MNYCP/00).

ANS News

2008 ENGINEERS WEEK--JUST AROUND THE CORNER!--Plan now for your outreach activities during Engineers Week, February 17–23, 2008. The ANS Outreach Department has printed materials to support your activities. Deadline for requesting materials is **January 25, 200**8. Contact outreach@ans.org for more information.

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 Course for SCALE TSUNAMI

A training course on sensitivity and uncertainty analysis using the SCALE TSUNAMI sequence has been scheduled for February 25–29, 2008, at OECD/NEA Headquarters Issy-les-Moulineaux, France. The course is open to participants from the OECD/NEA member countries, and participants in expert groups for Uncertainty Analysis in Modeling (UAM) and Uncertainty Analysis for Criticality Safety Assessment (UACSA) are especially encouraged to attend. The course will support the first phase of the activity of the UAM concerned with neutronics in reactor cores (http://www.nea.fr/html/science/egrsltb/UAM/) and activities of UACSA.

TSUNAMI (Tools for Sensitivity and Uncertainty Analysis Methodology Implementation) is a suite of computational tools from the SCALE code system developed by Oak Ridge National Laboratory. TSUNAMI was developed primarily for criticality code validation where sensitivity and uncertainty data are used to form correlation coefficients that quantify the applicability of benchmark experiments to design systems using detailed physics-based data.

The main part of the course will be devoted to the SCALE TSUNAMI methodology for criticality safety and hands-on exercises will be carried out using the TSUNAMI codes of SCALE. Additionally, an overview on sensitivity/uncertainty analysis will be given, presenting different methods and codes available and providing perspectives for future developments. NEA staff will give a presentation on the method of the sensitivity/uncertainty code SUSD3D and other ancillary codes for processing cross-section covariance data. The GPT TSUNAMI products that are being developed at ORNL will also be briefly introduced.

Information on registration and conditions for participating are provided in http://www.nea.fr/html/dbprog/Newsletter/Tsunami-2008-registration.html. The syllabus/agenda is provided in http://www.nea.fr/html/dbprog/Newsletter/Tsunami_1.pdf. The deadline for registration is **January 18, 2008**. The number of participants is limited to about 20.

Spring 2008 SCALE Training Courses at ORNL

Date	Title	Description
March 31–April 4, 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
April 7–11, 2008	KENO-VI Criticality Safety Course	Criticality safety using the generalized geometry version of KENO (includes KENO3D and Gee Wiz).

The registration fee is $1800 for each course. A late fee of $300 will be applied for late registrations. 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.

Introductory and Advanced MCNP Visual Editor Training

Date	Class	Location
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
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	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

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.

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 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.

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. 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. 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. 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 mail and questions concerning the 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

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. 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 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 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
- Divertors 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.

CALENDAR

February 2008

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

4th Workshop on "Advanced Reactors with Innovative Fuels" (ARWIF-2008), Feb. 20–22, 2008, Tsuruga & Fukui, Japan. Contact: Dr. Enrico SARTORI, OECD/NEA Data Bank, Le Seine-Saint Germain, 12 boulevard des Iles, F-92130 ISSY-LES-MOULINEAUX, FRANCE (phone +33 1 45 24 10 72 / 78, fax +33 1 45 24 11 10 / 28, email: sartori@nea.fr) url http://www.nea.fr/html/science/meetings/ARWIF2008/index.html.

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/.

September 2008

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/.

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/.