Radiation Safety Information Computational Center

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It is not so important to be serious as it is to be serious about the important things.—Robert Maynard Hutchins

NEA Data Bank-RSICC To Exchange Software

Early in its development as a specialized information analysis center, one of RSICC's missions was to promote the exchange of codes/data between the U.S. and the international shielding community. This has been accomplished through international exchange agreements. RSICC is pleased to announce that the new arrangement between the OECD Nuclear Energy Agency and the Department of Energy signed in 2006 is ready for implementation. Under terms of the exchange agreement between RSICC and the NEA DB, software sent to the NEA DB and to RSICC may be exchanged and redistributed to their respective audiences.

NEA Data Bank-RSICC To Exchange Software 1
Bhuiyan Appointed New BAEC Chairman 1
Dr. Tomonori Hyodo, Professor Emeritus of Kyoto University (KU), Dies at 84 2
"U.S., Russia sign nuclear accord" 3
ANS News 3
Change to the Computer Code and Data Collection 4
CONFERENCES, COURSES, SYMPOSIA 6
CALENDAR 14

Bhuiyan Appointed New BAEC Chairman

Shafiqul Islam Bhuiyan has accepted the chairmanship of the Bangladesh Atomic Energy Commission (BAEC). He will conduct Commission business in addition to his responsibilities as head of the Physical Sciences Department of the organization. Dr. Bhuiyan first joined the BAEC in 1977. In 1980 he was offered an opportunity to work at RSIC (now RSICC) at Oak Ridge National Laboratory (ORNL) to continue post-graduate study with sponsorship from the U.S. National Academy of Sciences and the International Atomic Energy Agency (IAEA). He conducted his research work under Dr. R.W. Roussin, then director of RSIC, and Dr. D.E. Bartine, section head of Reactor Analysis and Shielding, Engineering Physics Division. While with RSICC, Shafiqul worked on code development for neutron and gamma radiation transport and radiation shielding and was the lead author of ORNL/TM-8629,

Development of Simplified Methods and Data Bases for Radiation Shielding Calculations for Concrete. One of his thesis papers was nominated for the "Best Paper Award" at the 1982 meeting of the American Nuclear Society.

When the assignment with RSICC ended, Dr. Bhuiyan returned to the BAEC and continued work on his Ph.D., which was awarded by the University of Dhaka in 1986. He subsequently carried out post-doctoral research work at ORNL in the U.S. and with the Nuclear Data Section, International Atomic Energy Agency (IAEA) in Austria, where he served as the National Counterpart and Chief Investigator of a number of Technical Cooperation and Coordinated Research Projects sponsored by IAEA. He established a center for reactor analysis and shielding in the Institute of Nuclear Science & Technology, at Atomic Energy Research Establishment, Savar, Dhaka. He also undertook an IAEA expert mission in the field of reactor calculations, basic nuclear data processing, and in-core fuel management. In November 2000 he joined the faculty of the King Abdulaziz University, Kingdom of Saudi Arabia.

Since his return to the BAEC, Dr. Bhuiyan has been serving as a member of Physical Sciences of BAEC. In addition, he also serves as the National Representative of the Regional Co-Operation Agreement (RCA) Projects of Bangladesh, National Coordinator of the "Forum for Nuclear Cooperation in Asia" (FNCA) and as National Counterpart of the Comprehensive Nuclear Test Ban Treaty (CTBT). He has more than 100 nuclear technology related publications in national and international journals.

RSICC wishes Dr. Bhuiyan continued success in his career with the BAEC. There are several of us in RSICC, both as active and retired members, who remember Shafiqul with great fondness.

A note from Betty Maskewitz: "The 45 years of RSICC's existence have been enriched by bright young engineers and scientists, and we are proud to include Shafiqul Bhuiyan among them. He brought to us an eagerness to embrace the local culture and acquaint us with the culture of his own nation, Bangladesh. He also impressed us by his talents, his work ethic, and his eagerness to make a difference in the international scientific community. We have followed his career with pride. We congratulate him as head of the Bangladesh Atomic Energy Commission and wish him well as he pursues its mission on behalf of his nation."

Dr. Tomonori Hyodo, Professor Emeritus of Kyoto University (KU), Dies at 84

Author, educator, and research scientist, Dr. Hyodo, died of pneumonia on February 1, 2007, in Manazuru-machi, Kanagawa-Ken, Japan. Dr. Hyodo was a leader in the Atomic Energy Society of Japan and a Fellow of the American Nuclear Society (1980). His textbook, *Introduction to Radiation Shielding*, was a standard text in Japanese universities. He was a leading authority on neutron and gamma-ray measurements and was especially well known for his measurements and reviews of gamma-ray backscattering. A full professor in Kyoto University (KU), he held the Nuclear Energy Department chair for Nuclear Material, with specialties in radiation physics, shielding, and detection.

Dr. Hyodo was an early supporter of the Radiation Shielding Information Center (RSIC) and its mission to promote international exchange of shielding information, nuclear data, and computing technology as a mechanism for advancing the state of the art in shielding and related technologies. Following RSIC participation in the Seventh International CODATA Conference (1980) in Kyoto, Professor Hyodo hosted RSIC orientation visits to Japanese nuclear research institutes and universities, and assisted in arranging discussions with the Japan Nuclear Codes and Reactor Physics Committees and with fusion neutronics specialists.

The Radiation Safety Information Computational Center (RSICC, née RSIC) owes much to its Japanese scientific research supporters, i.e., Hyodo, Ishikawa, Asaoka, Asai, Sumita, Harima, Nakamura, and many other scientists and engineers who follow.

Professor Hyodo retired from Kyoto University in 1986 and became president of Okayama Vocational Training College (1986-1990).

contributed by Betty F. Maskewitz

"U.S., Russia sign nuclear accord"[1]

Energy Secretary Samuel Bodman and Russian Federal Atomic Energy Agency (Rosatom) Director Sergey Kiriyenko last week submitted to President Bush and Russian President Putin a joint work plan meant to provide a framework for further bilateral cooperation in the development of nuclear energy technology and deployment, DOE said Tuesday. The plan was signed under an agreement between the two countries at the G8 Summit in St. Petersburg, Russia, in July. "The safe expansion of emissions-free nuclear energy provides a wealth of possibilities to developed and developing countries alike," Secretary Bodman said. "This agreement between our two nations will help further nuclear technology, but also the path to more securely expand the use of nuclear energy around the world." Principal areas of cooperation outlined in the report include the development of exportable small-and-medium power reactors; fast reactors; new nuclear fuels for fast reactors and processes for their fabrication; advanced methods for the recycling of spent nuclear fuel and transmutation; and methods for providing international nuclear fuel cycle services. DOE Assistant Secretary for Nuclear Energy Dennis Spurgeon and Rosatom Deputy Director Nikolay Spasskiy head a working group responsible for the plan. The group will be supplemented by technical specialists from DOE and national laboratories participating in the Bush administration's Global Nuclear Energy Partnership and representatives of Russian organizations engaged in Putin's Fuel Cycle Initiative.

ANS News

NUCLEAR'S HUMAN ELEMENT

The ANS Special Committee on Federal Investment in Nuclear Education released its report, "Nuclear's Human Element: Defining the Federal Government's Role in Sustaining a Vibrant U.S. University-Based Nuclear Science and Engineering Education System for the 21st Century," in January 2007. In this report, the committee—drawn from leaders in industry, national laboratories, and universities—addresses the debate surrounding federal involvement in the funding support of research, faculty, students, and infrastructure in the nation's university nuclear engineering departments and research reactors. The report may be viewed at http://www.ans.org/goto/nad.cgi?id=1170396000-3.

NEW STANDARD AVAILABLE

ANSI/ANS-6.4.2-2006: *Specification for Radiation Shielding Materials*, ANS Order #: 240263, Current Standard, Revision of ANSI/ANS-6.4.2-1985;R1997;R2004, Price: $60.00. This standard sets forth physical and nuclear properties that shall be reported by the supplier as appropriate for a particular application in order to form the basis for the selection of radiation shielding materials. You may go to http://www.ans.org/store/vi-240263 to purchase the standard.

ANS JOURNAL ABSTRACTS

View the most recent tables of contents and abstracts from the three journals published by ANS—*Fusion Science and Technology*, *Nuclear Science and Engineering*, and *Nuclear Technology*—at http://www.ans.org/goto/nad.cgi?id=1168408800-7. For access to full text, as well as archived papers from 1998 to the present, members may subscribe online at http://www.ans.org/goto/nad.cgi?id=1168408800-8 or call Member Services at 708-579-8266.

[1] Reproduced from *Inside EnergyEXTRA* (Tuesday, December 19, 2006) with the permission of Platts Inside Energy.

2007 SCHOLARSHIP APPLICATIONS ONLINE

Scholarship applications for 2007 are now posted. Descriptions and application forms are located at http://www.ans.org/goto/nad.cgi?id=1168408800-9.

ANS POWERPOINT SLIDE LIBRARY

Need a presentation or slide for speaking events, educational talks or outreach events? Perhaps you would like to share your presentations with other ANS members. Obtain or submit PowerPoint slides or presentations to the ANS PowerPoint Slide Library at http://www.ans.org/goto/nad.cgi?id=1168408800-10.

SIGN UP FOR FREE ANS MEMBER BENEFITS

Sign up to receive free via e-mail "Nuclear Headlines" (from 25,000 news sources around the world), "Nuclear News Late News," and "DC Connection." Log in to the Members Only section of the ANS Web site. Your username is your ANS ID number; your password is your last name in all lower case letters (unless you have customized your password). On the left, click on "Nuclear Headlines," "Nuclear News Late News," or "DC Connection" to connect to the latest issues. On these pages, a box in the upper right corner says "Email subscription" and "Change settings." Click on "Change settings" and provide your email address to receive the subscriptions you select. Note that you must subscribe separately to each. For your convenience the link is http://www.ans.org/goto/nad.cgi?id=1170396000-5.

SPECIAL AWARD

The ANS Special Award was established in 1962 to recognize an individual or individuals for especially meritorious contributions in research on and/or developing understanding in important areas of current activity. A different topic is determined annually by the ANS Board of Directors based on recommendations from the Honors and Awards Committee. The topic is selected based on the importance of the issue with regard to the peaceful application of nuclear technology to all mankind. This year's topic is "Forwarding and Implementing the Nuclear Renaissance." The deadline for submitting nominations is April 1. Forms can be found at http://www.ans.org/goto/nad.cgi?id=1170396000-12.

Change to the Computer Code and Data Collection

CCC-723/ALARA 2.7.8

The University of Wisconsin, Madison, contributed this code system for **A**nalytic and **L**aplacian **A**daptive **R**adioactivity **A**nalysis. The primary purpose of ALARA is to calculate the induced activation caused by neutron irradiation throughout a nuclear system (primarily fusion reactors and accelerators). It is a next generation activation code designed for accuracy, speed, and usability and has been validated for use in fusion and accelerator activation calculations. ALARA includes the following features:

- multi-point (3-D) solutions in a variety of geometries
- accurate solution of loops in activation trees
- exact modeling of multi-level pulsing irradiation histories and hierarchical arbitrary irradiation schedules
- user-defined calculation precision/accuracy
- tracking the accumulation of light ions
- straightforward, user-friendly input file creation
- full, easy-to-read activation tree output (not just pathway analysis)
- flexible output options now including the direct calculation of waste disposal rating, clearance indices, contact dose and biological dose
- unlimited number of reaction channels
- reverse calculation mode

ALARA was developed on a Debian-derived linux system with gcc/g++ v 3.3.4. It also runs on a Solaris system using gnu compilers (3.3.4) and has been compiled on a Windows/cygwin system with gnu compilers. Some problems were noted using native Sun compilers (fairly recent versions: C++ v5.6). At RSICC, ALARA was tested on an AMD Opteron under Red Hat Enterprise Linux 4 using gcc (GCC) 3.4.6, on an AMD Athlon running RedHat Linux 7.3 with GNU gcc 2.96, and on Sun OS5 with gcc. The package is transmitted on a CD which contains an online user guide, C++ source code, scripts, data files and test cases in a GNU compressed Unix tar file. Reference: Online user guide. C++; Linux PC, Sun (C00723MNYCP00).

PSR-535/GNASH-FKK Version gn9cp8

Los Alamos National Laboratory, Los Alamos, New Mexico, contributed this pre-equilibrium, statistical nuclear-model code system for calculation of cross sections and emission spectra. GNASH provides a flexible method by which reaction and level cross sections, isomer ratios, and emission spectra (neutron, gamma-ray, and charged-particle) resulting from particle- and photon-induced reactions can be calculated. The present code utilizes the ground-state masses, spins, and parities from the RIPL-2 database at the IAEA in Vienna. In addition to this change, several other enhancements and error corrections were made in the new gn9cp8 release. The major differences between this version and the one released in 1998 are noted in the package abstract.

GNASH-FKK runs on Sun Solaris workstations and on Linux PCs. The developers also ran it on MAC under OS X with the Intel Fortran compiler v.9.1. At RSICC, this release was tested on a Sun Sparc Station20 under Solaris 2.6 using f77 Vers. 4.2. Double precision (-r8) is required with the native Sun compiler. It was also tested on a 64-bit AMD Opteron under Red Hat Enterprise Linux 4 using Intel 9.1 ifort.

The package is transmitted on one DVD containing the Fortran source code, data libraries, sample problem input and output in a GNU-compressed Unix tar file. Reference: “Comprehensive Nuclear Model Calculations: Theory and Use of the GNASH Code,” (unpublished report 1998). Fortran 77; Sun; PC (Linux); MAC (OS X) (P00535MNYCP00)

DLC-225/SINBAD 2007.01

SINBAD is an electronic database developed to store a variety of radiation shielding benchmark data that users can easily retrieve and incorporate into their calculations. An international effort between the OECD Nuclear Energy Agency (NEA) and ORNL Radiation Safety Information Computational Center (RSICC) and invaluable contributions from many international nuclear data experts to the compilation, validation and review of the data combined to create this database. SINBAD is an excellent data source for users who require the quality assurance necessary to develop cross-section libraries or radiation transport codes. The future needs of the scientific community are best served by the electronic database format of SINBAD and its user friendly interface, combined with its data accuracy and integrity. It includes data from nuclear reactor shielding, fusion blankets and accelerator shielding experiments.

SINBAD-2007.01 includes some minor corrections over the previous SINBAD-2006 package in addition to the following new benchmarks:

4 new Reactor Shielding benchmarks:

- Baikal-1 Skyshine Benchmark Experiment
- NAÏADE 1 Graphite Benchmark (60cm)
- NAÏADE 1 Iron Benchmark (60cm)
- NAÏADE 1 Light Water Benchmark (60cm)

2 new Accelerator benchmarks:

- CERF Bonner Sphere Spectrometer Response to Charged Hadrons
- KENS p-500 MeV shielding experiment using 4m Concrete at KEK

The guidelines developed by the Benchmark Problems Group of the American Nuclear Society Standards Committee (ANS-6) on formats for benchmark problem description have been followed by SINBAD. The data include benchmark information on (1) the experimental facility and the source; (2) the benchmark geometry and composition; and (3) the detection system, measured data, and an error analysis. A reference section is included with the data. Relevant graphical information, such as experimental geometry or spectral data, is included. All information that is compiled for inclusion with SINBAD has been verified for accuracy and reviewed by two scientists. The experimental results are distributed in tabular ASCII form that can easily be exported to different computer environments for further use. This release, dated January 2007, incorporates 83 benchmark experiments. Reference: Radiation Protection Dosimetry (2005), Vol.116, No.1-4, pp. 558–561. HTML, PDF and ASCII text files; PC, UNIX Workstations, MAC (D00225MNYCP01).

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.

MCNPX Workshops

2007 Schedule		
April 30–May 4	San Francisco, CA	Intermediate
June 4–8	Santa Fe, NM	Introductory
Sept 17–21	Santa Fe, NM	Advanced
October 22–26	Europe	Intermediate

MCNPX is packed with new and exciting plotting features, including numerous mesh tally options which can be superimposed on your geometry plot and plotted within the MCNPX run, eliminating the need for post-processing and costly additional plotting package(s). You can plot particle flux, tracks, dosage, and energy deposition as well as source points and many others.

The workshops include hands-on instruction, generally on PC Windows machines. Subject to participant export approval from the MCNPX beta test team, participants will be able to access the Fortran 90 version of MCNPX 2.6, the LA150 (150 MeV) cross-section data libraries for over 40 isotopes for incident neutrons and protons and 12 for photonuclear interactions, and a notebook of viewgraphs.

Follow-up consultation for class participants will be provided.

The classes are taught by experienced MCNPX code developers and instructors. More information on code versions and capabilities is available at the MCNPX Workshops web site http://mcnpx.lanl.gov/. The cost for U.S. workshops is $2,000 (U.S.) with a $300 early registration discount (30 days before the scheduled workshop). Workshops with fewer than 12 registrants on the early registration date are subject to

cancellation or rescheduling. To register send an email to nbutner@lanl.gov indicating the workshop of interest to you.

Spring 2007 SCALE Training Courses at ORNL

Spring 2007 SCALE Training Courses at ORNL		
Date	**Title**	**Description**
March 5–8	**TSUNAMI Sensitivity/ Uncertainty Tools Course** (Experienced KENO users only)	1-D and 3-D sensitivity/uncertainty analysis using XSDRNPM and KENO V.a
March 12–16	**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
March 19–23	**KENO-VI Course**	Criticality safety using the generalized geometry version of KENO

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 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.

M&C + SNA 2007

The Joint International Topical Meeting on Mathematics & Computations and Supercomputing in Nuclear Applications (M&C+SNA) will be held April 15–19, 2007, in Monterey, California. The conference will provide an international forum to review recent research results, and the status and trends in high performance computing, numerical simulation and physical modeling of current and advanced nuclear systems. Topics include:

- Computational Methods Using High Performance Computers
- Computational Reactor Physics and Particle Transport
- Nuclear Reactor Analysis
- Computational Biomedical Applications
- Computational Nuclear Fuel Cycle/Repository Performance
- Computational Plasma Physics/Fusion
- Computational Thermal Hydraulics
- Computational Materials Sciences
- Computational Science
- Planned Special Sessions
  - Domain Representation for Advanced Nuclear Applications
  - Nuclear Methods for Nonproliferation and Homeland Security
  - Analytical Benchmarks
  - Tomographic Phantoms

- Stochastic Considerations in Particle Transport

Program, registration, and other significant information about the conference may be found at the website, http://mc-sna07.nuc.berkeley.edu/. General questions about the conference may be addressed to mcinfo@nuc.berkeley.edu and questions regarding the program should be submitted to vujic@nuc.berkeley.edu.

ND2007

The International Conference on Nuclear Data for Science and Technology will be held April 22–27, 2007, in Nice, France. The conference is organized by the Commissariat à l'Énergie Atomique (CEA) under the auspices of the OECD Nuclear Energy Agency (NEA). The General Chairs are B. Bigot, Haut-commissaire à l'Énergie Atomique and L. Echávarri, NEA Director-General. The technical program includes the following topics:

- Nuclear structure and decay data
- Experimental facilities and detection techniques
- Nuclear data measurements and analysis
- Nuclear theories, models and data evaluation
- Standards
- Evaluated nuclear data libraries and processing
- Validation, benchmarking of evaluated data
- Integral experiments
- Uncertainties quantification
- Data dissemination and international collaboration
- Fission energy applications
- Accelerator-related applications
- Fusion technology applications
- Dosimetry and shielding applications
- Safeguards and security
- Space, cosmic-ray applications, radiation effects on electronics
- Astrophysics and cosmology applications
- Medical and environmental applications

The most current information will be posted on the website at http://www-dapnia.cea.fr/Sphn/nd2007/site_nd2007/ and questions or comments may be addressed to nd2007@cea.fr.

WIN Global 2007

The Women in Nuclear (WIN) Global Conference 2007 will be held in Bali, Indonesia, April 22-27, 2007. Unlike previous meetings, this one will be held over five consecutive days in three different locations: Bali, Yogyakarta and Jakarta. Bookmark http://www.win-ina.org/ and check it often for details of the conference or contact the secretariat, Ms. Renaningsih, Center for Application of Isotope and Radiation Technology, (PATIR - BATAN) Jl. Cinere, Pasar Jumat, PO. Box 7002 JKSKL, Jakarta 12070, Indonesia (phone: +6221 7659375 / +6221 7690709, fax +6221 7691607 / +6221 7513270; or email: setjor@yahoo.com).

Introductory and Advanced MCNP Visual Editor Training

The Introductory class will be held May 7–11 and September 17–21, 2007, in Richland, Washington. It will be 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. Computer demonstrations and exercises will focus on creating and interrogating input files with the Visual Editor. Demonstrations of advanced visualization work using MCNP will also be

made. The advanced class assumes the user has experience using MCNP and focuses on Visual Editor topics.

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/visedtraining/trainvised.html.

McGill Workshop on Monte Carlo Techniques in Radiotherapy Delivery and Verification

"Monte Carlo Techniques in Radiotherapy Delivery and Verification: Third McGill International Workshop" will be held May 29–June 1, 2007, at McGill University in Montreal. This workshop intends to cover recent Monte Carlo code developments, applications to higher level biological models as well as the role of MC simulations in clinical applications related to improved estimations of delivered dose and the verification of delivered dose. In tune with the two previous workshops (2001, 2004) the present workshop setup encourages in-depth discussions on specialized topics. To this end, the number of participants will be limited to around 100. For more information, a preliminary program and instructions for abstract submission, please see the link: http://www.medphys.mcgill.ca/~mcworkshop2007/. The deadline for submissions of abstracts is Friday, February 23 2007.

Note that the timeframe of this workshop is the week just before the "International Conference on the Use of Computers in Radiation Therapy (ICCR 2007)" in Toronto. Topics covered in the McGill workshop are designed to complement the program of the ICCR 2007 meeting (http://www.iccr2007.org/).

International Conference on Emerging Nuclear Energy Systems (ICENES 2007)

The committee for the 13th International Conference on Emerging Nuclear Energy Systems (ICENES 2007)will be held June 3–8, 2007, at Gazi University in Istanbul.

The main objective of ICENES is to provide a broad review and discussion of various advanced, innovative and non-conventional nuclear energy production systems to scientists, engineers, industry leaders, policy makers, decision makers and young professionals who will shape future energy supply and technology. ICENES 2007 will also open the forum to innovative non-nuclear technologies, such as hydrogen energy, solar energy, deep space exploration, etc. with an emphasis on *unthinkable ideas* with a sound scientific-technical basis. The program will include invited papers, submitted contributions in oral and poster sessions, as well as an industrial exhibition and social tours. Topical areas include:

- Advanced Fission Systems
- Fusion Energy Systems
- Accelerator Driven Systems
- Exotic Nuclear Reactor Concepts
- Transmutation and Fuel Cycle
- Co-Generation and Non-Electricity Production Applications
- Generation IV Reactors
- Space Power and Propulsion
- Deep Space Exploration, general
- Nuclear Hydrogen Production
- Radiation Protection & Shielding
- Hydrogen Energy, general including non-nuclear applications
- Solar Energy
- Other Alternative Energies
- Societal Issues

The official language of the conference will be English. The proceedings will be produced on an interactive CD-ROM with an ISBN registration number. A selection of ICENES 2007 papers will be

published in a special edition of the journal *Energy Conversion & Management*. Scientific and technical inquiries may be directed to Prof. Dr. Sümer Şahin, Gazi University 06500 ANKARA/TURKEY (phone +90 (312) 212 43 04, fax +90 (312) 212 43 04, email sumersahin@icenes2007.org). Updated information will be posted to http://www.icenes2007.org/.

XVth International Conference on the Use of Computers in Radiation Therapy

The XVth International Conference on the Use of Computers in Radiation Therapy (ICCR 2007), will be held in Toronto, Canada, from June 4–7, 2007. This conference offers the opportunity to explore advancements in radiation oncology through investigations in modeling of biological systems, interactive radiation therapy treatment planning, deformation and shape change, schemes for adaptation/feedback, multi-modality image registration and image segmentation, and systems for fully four-dimensional radiotherapy. The early registration deadline is March 1. Registration and program details can be found at http://www.iccr2007.org/. If you require additional information, please contact the Secretariat at iccr@rmp.uhn.on.ca.

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

DATES: June 18–22, 2007
FEE: $1,500 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^{TM} 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^{TM} to solve a variety of practical problems in radiation shielding and dosimetry. The intent is to "jump start" the student toward using MCNPTM 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 MCNPTM 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. 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

ANS Annual Meeting

The 2007 ANS Annual Meeting will be held June 24–28, 2007, in Boston. The theme, "It's all About the People: The Future of Nuclear," is organized around the following tracks:

1. Meeting Theme—It's All About the People: The Future of Nuclear
2. Nuclear Power and New Construction of Nuclear Systems
3. Fuel Cycle, Waste Management, and Decommissioning Technologies
4. Nuclear Facility and Criticality Safety
5. Environmental Science and Technologies
6. Medical and Nonpower Applications of Radiation
7. Nuclear Science and Engineering
8. Advanced Energy Research and Emerging Technologies
9. Education, Training, and Communication with the Public
10. Nuclear Nonproliferation and Security
11. Professional Development

General Co-chairs of the meeting are J. Art Stall of Florida Power & Light and David P. Barry of Shaw Stone and Webster Nuclear Services. Raymond Klann of Argonne National Laboratory is the Technical Program Chair. Information may be found at http://www.ans.org/meetings/index.cgi?c=n.

Space Nuclear Conference 2007 (SNC '07)

The second topical meeting organized by the Aerospace Nuclear Science and Technology (ANST) technical group, Space Nuclear Conference 2007 (SNC '07), will take place June 24–27, 2007, in Boston. NASA funding has been established to develop capabilities for unmanned and manned missions to the moon, Mars, and beyond. Strategies implementing nuclear based power and propulsion technology, as well as radiation shielding protection, will be an integral part of these missions.

The purpose of the meeting is to bring together research and management personnel from government, industry, academia, and the national laboratory system and provide a forum for information exchange for those who are involved in space projects. The meeting will include topics ranging from overviews of current programs and plans to detailed issues related to space travel, such as nuclear-based power and propulsion systems designs, materials, testing, safety, space environmental effects and nuclear power system radiation shielding for humans and electronic components, and human factor strategies for the safe and reliable operation of nuclear power and propulsion plants. Full-length, peer-previewed technical papers will be published on a CD which will be available at the conference. The call for papers and other information relevant to the conference is available at the website, http://www.inspi.ufl.edu/space07/index.html, or contact Lynne Schreiber, Conference Administrator, (phone 352-392-9722, fax 352-392-8656, email space@ans.org).

AccApp'07

The jointly sponsored ANS/IAEA International Conference on Applications and Utilization of Accelerators (AccApp'07) to take place in Pocatello, Idaho, on July 30-August 2, 2007, will be hosted by Idaho State University and the Idaho Accelerator Center. There will be plenary sessions and a separate embedded Accelerator-Driven Subcritical System Experiments Workshop of five sessions. Program topics are listed in the following table. Dr. Denis Beller (University of Nevada, Las Vegas) is the general chair of the meeting. Questions or comments should be directed to the Conference Administrator, Ms.

Nikki Iwert-Bays of the Idaho National Laboratory (Nikki.Iwert-Bays@inl.gov@inl.gov), who will direct your question to the responsible individual. The website is http://www.iac.isu.edu/accapp07/.

AccApp'07 Subject Areas		
High-power Accelerator Operations: • Operational Experience • Beam Interface Issues • Instrumentation & Controls • Shielding • Remote Handling • Health Physics & Dosimetry • Waste Management **Systems Engineering & Integration:** • Accelerator Driven System (ADS) Simulations • ADS Experiments • Design Optimizations • Reliability Analysis • Cost Estimating & Economics	**Applications:** • Spallation Neutron Sources • Industrial Applications • Accelerator Mass Spectrometry • Medical Imaging and Therapy • Nuclear Waste Transmutation • Energy Production • Environmental Applications • Food Safety • Free Electron Lasers • Portable Accelerators • Radioisotope Production • Inspection Technology for Explosives and Fissile Materials • Radiation Damage and Biological Effects • Imaging and Advances in Detectors	**Other:** • Neutronics Calculations • Codes and Models for Beam Transport and Experiment Validation • Nuclear Data • Photonuclear Cross Sections • Safety and Source Term • Subcritical Assembly Design • Transmutation fuels • Separations Technologies • Target Engineering • Materials for Accelerator Applications • Long-lived Fission Product Transmutation • Accelerator-driven University Neutron Sources • Positron Annihilation Spectroscopy

Global '07

The main focus of Global '07 will be "Advanced Nuclear Fuel Cycles and Systems." The conference, to be held September 9–13, 2007, in Boise, Idaho, is jointly sponsored by the Idaho National Laboratory, American Nuclear Society, Idaho Section of American Nuclear Society, European Nuclear Society and Atomic Energy Society of Japan. Conference topics include:

- Advanced Integrated Fuel Cycle Concepts
- Spent Nuclear Fuel Reprocessing
- Advanced Reprocessing Technology
- Advanced Fuels and Materials
- Advanced Waste Management Technology
- Novel Concepts for Waste Disposal and Repository Development
- Advanced Reactors
- Partitioning and Transmutation
- Hydrogen Production with Nuclear Energy
- Developments in Nuclear Nonproliferation Technology, Policy, and Implementation
- Sustainability and Expanded Global Utilization of Nuclear Energy
- International Cooperation on Nuclear Energy

Conference and registration information is posted to http://nuclear.inel.gov/global07/index.shtml.

Regional Congress for Central and Eastern Europe

The International Radiation Protection Association (IRPA) Regional Congress for Central and Eastern Europe will be held in Brasov, Romania, September 24–28, 2007. Organized by the Romanian Society for Radiological Protection (RSRP), this Regional Congress will present an opportunity to debate subjects which will determine the future of this specialty, ranging from the science of biological radiation effects to the regulation and practice of radiation protection, which includes the control of natural, occupational and medical exposures, the development of the radiological protection system, protection against non-ionizing radiation and the participation of the public. The Congress technical program will be led by renowned experts as invited speakers, with refresher courses and poster sessions, some of which will be selected for oral presentations. There will be an IRPA Associated Societies Forum and a Technical Exhibition, and the Third Workshop of the Regional East European and Central Asian Countries ALARA Network, which is supported by the IAEA, will take place during the same period. Topics include:

- Radiation biology
- Health effects of ionizing radiation
- Radiological protection infrastructure, regulation and policy
- From legal requirements to practical regional aspects
- Dosimetry and instrumentation
- Education and training
- Radiation protection at workplaces
- Radiation protection of patients
- Radiation protection, environment and public
- Waste management and treatment
- Decommissioning and site remediation
- Incidents, accidents and post accident
- Non-ionizing radiations
- Radiation protection and safety in nuclear fuel cycle

Complete and updated information can be found at http://www.irpa2007romania.com/.

CONRAD-WP4

The European Radiation Dosimetry Group (EURADOS) is sponsoring the CONRAD WP4 workshop on "Uncertainty Assessment in Computational Dosimetry: A Comparison of Approaches." The workshop will be held in Bologna, Italy, October 1–3, 2007. The aims of the workshop are to discuss the results of a questionnaire on the expression of uncertainties in dosimetry measurements and calculations and to present contributions of general relevance within the scope of the WP4 action. Summaries of the results will be presented together with oral and poster communications by the participants on the following topics:

Recoil-proton telescope detector
Bonner sphere spectrometer
Sigma simulated workplace neutron field
Photon irradiation facility
Manganese bath
Iron sphere experiments
Energy response characteristics of a RadFET radiation detector
Recoil-proton telescope detector; sensitivity and uncertainty analysis

The workshop chairman is Dr. Gianfranco Gualdrini, ENEA-Instituto di Radioprotezione, 16 Via dei colli, 40136 Bologna (BO) Italy (email gauald@bologna.enea.it. Phone 39 051-6098350, fax 39 051-6098003). Preliminary registration will begin February 15, 2007. Details and the latest news regarding the workshop can be found at http://www.eurados.org/.

10th International Nuclear Power Safety and Nuclear Education Conference

Obninsk State Technical University for Nuclear Power Engineering will host the 10th International Nuclear Power Safety and Nuclear Education Conference, October 1–7, 2007. Abstracts may be submitted until May 15 on the following topics:

- Innovative nuclear systems and fuel cycle
- Nuclear education, training and knowledge preservation
- Safety fundamentals of nuclear technologies
- Advanced fuel cycles and nonproliferation
- Radiological safety and environmental protection
- Reliability, endurance and lifetime resource management

Contact the Conference Secretary, Ms. Elena Zinovieva, Obninsk State Techn. Univ. (zev@iate.obninsk.ru) for details regarding registration and paper submission.

NUPPAC' 07

The 6th Conference on Nuclear and Particle Physics (NUPPAC '07) will be held 17–21 Nov. 2007, in Luxor, Egypt. The conference topics are:

- Nuclear Scattering and Reactions
- Nuclear Models and Spectroscopy
- High Energy and Particle Physics
- Neutron and Reactor Physics
- Plasma and Fusion Physics
- Relativistic and Quantum Physics
- Computer Codes (modeling, simulation, analysis)
- Nuclear Analytical Techniques
- Reactor and Accelerator Utilization
- Detectors and Instrumentation
- Radiation Measurements and Dosimetry
- Applied Nuclear Physics

The registration and instructions for submitting abstracts to the conference can be found at the website, http://www.geocities.com/Athens/Library/7348/NUPPAC_07.html. Correspondence should be addressed to 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).

CALENDAR

March 2007

WIN Region II Conference 2007, March 5–6, 2007, Atlanta, GA. Contact: Equilla Minga at mingabe@inpo.org, url http://www.winus.org/.

SCALE Training: TSUNAMI Sensitivity/Uncertainty Tools Course, March 5–8, 2007, Oak Ridge National Laboratory, Oak Ridge, TN. Information and registration can be found at http://www.ornl.gov/sci/scale/training.htm.

HEART Conference, March 5--9, 2007, San Diego, California. Contact: 2007 HEART Conf., c/o/ ETC Services, Inc., 2254 Emerald Drive, Castle Rock, CO 80104-2703 (phone 720-733-2003, fax 720-733-2046).

SCALE Training: ORIGEN-ARP/TRITON Course, March 12–16, 2007, Oak Ridge National Laboratory, Oak Ridge, TN. Information and registration can be found at http://www.ornl.gov/sci/scale/training.htm.

First International Conference on Physics and Technology of Reactors and Applications (PHYTRA1), March 14–16, 2007, Marrakech City, Morocco. Contact: Pr. A. Jehouani, Faculty of Sciences Semlalia, Dept. of Physics, University Cadi Ayyad- Marrakech, Morocco (email phytra@ucam.ac.ma or jehouani@yahoo.com, fax 212 44 43 74 10) or Pr. L. Erradi, GMTR President, Mohammed V. Agdal University, Faculty of Sciences, Department of Physics, B. P. 1014 Rabat, Morocco (email erradi@fsr.ac.ma or erradi@hotmail.com, fax 212-0-37-77-89-73) url http://www.fst.ac.ma/gmtr/phytra1/phytra1.html.

SCALE Training: KENO-VI Course, March 19–23, 2007, Oak Ridge National Laboratory, Oak Ridge, TN. Information and registration can be found at http://www.ornl.gov/sci/scale/training.htm.

International Workshop on Monte Carlo Codes, March 26–27, 2007, NPL, Teddington, UK. Contact: David Shipley (phone +44 (0) 20 8943 6252, fax +44 (0) 20 8943 6070, email david.shipley@npl.co.uk), Mark Bailey (phone +44 (0) 20 8943 6797, fax +44 (0) 20 8943 6070, email mark.bailey@npl.co.uk) or Alan DuSautoy (phone +44 (0) 20 8943 6563, fax +44 (0) 20 8943 6070, email alan.dusautoy@npl.co.uk) url http://www.npl.co.uk/ionrad/training/montecarlo/.

13th UK Monte Carlo User Group Meeting (MCNEG 2007), March 28–29, 2007, NPL, Teddington, UK. Contact: David Shipley (phone +44 (0) 20 8943 6252, fax +44 (0) 20 8943 6070, email david.shipley@npl.co.uk), Mark Bailey (phone +44 (0) 20 8943 6797, fax +44 (0) 20 8943 6070, email mark.bailey@npl.co.uk) or Alan DuSautoy (phone +44 (0) 20 8943 6563, fax +44 (0) 20 8943 6070, email alan.dusautoy@npl.co.uk) url http://www.npl.co.uk/ionrad/training/montecarlo/.

April 2007

Joint International Topical Meeting on Mathematics & Computations and Supercomputing in Nuclear Applications (M&C+SNA), April 15–19, 2007, in Monterey, California. Contact: general questions (mcinfo@nuc.berkeley.edu); questions regarding the program (vujic@nuc.berkeley.edu) url http://mc-sna07.nuc.berkeley.edu/.

International Conference on Nuclear Data for Science and Technology, April 22–27, 2007, Nice, France. Contact: nd2007@cea.fr, url: http://www-dapnia.cea.fr/Sphn/nd2007/site_nd2007/.

Women in Nuclear (WIN) Global Conference 2007, April 22-27, 2007, Bali, Indonesia. Contact: Ms. Renaningsih, Center for Application of Isotope and Radiation Technology, (PATIR - BATAN) Jl. Cinere, Pasar Jumat, PO. Box 7002 JKSKL, Jakarta 12070, Indonesia (phone: +6221 7659375 / +6221 7690709, fax +6221 7691607 / +6221 7513270; or email: setjor@yahoo.com) url http://www.win-ina.org/.

MCNPX Intermediate Workshop, April 30–May 4, 2007, San Francisco, California. Contact: Nancy Butner, D-5 Nuclear Design and Risk Analysis Group (phone 505-667-8016, email nbutner@lanl.gov) url http://mcnpx.lanl.gov/.

May 2007

ICAPP '07, International Conference on Advances in Nuclear Power Plants, May 14–16, 2007, Nice, France. Contact: Philippe Pradel, general chair, CEA Centre de Saclay, Bat 121, 91191 Gif-sur-Yvette, Cedex, France (phone 33-169-08-6190, fax 33-169-08-6185, email philippe.pradel@cea.fr).

Annual Meeting on Nuclear Technology 2007, May 22–24, 2007, Karlsruhe, Germany. Contact: Congress Office, dbcm GmbH, Kamillenweg 16-18, 53757 Sankt Augustin, Germany (phone 49-0-2241-93897-33, fax 49-0-2241-93897-12, email jk@dbcm.de).

International Conference on Nuclear Criticality Safety (ICNC 2007), May 28–June 1, 2007, St. Petersburg, Russia. Contact: Boris Ryazanov, general chair, State Scientific Center of the Russian Federation, Inst. Of Physics and Power Engineering, Bondarendko Square 1, 249020 Obninsk, Kaluga Region, Russia (email ryazonov@ippe.ru).

McGill Workshop on Monte Carlo Techniques in Radiotherapy Delivery and Verification May 29–June 1, 2007, McGill University in Montreal. Contact: Jan Seuntjens, Medical Physics Unit, McGill University (phone 1 514 934 1934 Ext 44124, email: jseuntjens@medphys.mcgill.ca.

June 2007

ICENES 2007, June 3–8, 2007, Istanbul. Contact: Prof Dr. Sümer Şahin, Gazi University 06500 Ankara, Turkey Contact: Prof Dr. Sümer Şahin, Gazi University 06500 Ankara, Turkey (phone +90 312 212 43 04, fax +90 312 212 43 04, email sumersahin@icenes2007.org) url http://www.icenes2007.org/.

ICCR 2007, June 4–7, 2007, Toronto. Contact: Secretariat (email iccr@rmp.uhn.on.ca) url http://www.iccr2007.org/.

MCNPX Introductory Workshop, June 4–8, 2007, Santa Fe, New Mexico. Contact: Nancy Butner, D-5 Nuclear Design and Risk Analysis Group (phone 505-667-8016, email nbutner@lanl.gov) url http://mcnpx.lanl.gov/.

Practical MCNP for the Health Physicist, Medical Physicist, and Rad Engineer, June 18–22, 2007, University of New Mexico-Los Alamos Campus. Contact: David Seagraves (phone 505-667-4959, fax 505-665-7686, e-mail: dseagraves@lanl.gov) url http://drambuie.lanl.gov/~esh4/mcnp.htm

ANS Annual Meeting, "It's All About the People: The Future of Nuclear," June 24–28, 2007, Boston, Massachusetts. The url is http://www.ans.org/meetings/.

Space Nuclear Conference 2007 (SNC '07), an embedded topical of the ANS Annual Meeting, June 24–27, 2007, Boston. Contact: Lynne Schreiber, Conference Administrator, (phone 352-392-9722, fax 352-392-8656, email space@ans.org) url http://www.inspi.ufl.edu/space07/index.html.

July 2007

U.S. Women in Nuclear Conference 2007, July 15-17, 2007, Anaheim, Calif. URL http://www.winus.org/.

ANS/IAEA International Conference on Applications and Utilization of Accelerators (AccApp'07), July 30-Aug. 2, 2007, Pocatello, Idaho. Contact: Conference Administrator, Ms. Nikki Iwert-Bays (Nikki.Iwert-Bays@inl.gov@inl.gov) url: http://www.iac.isu.edu/accapp07/.

September 2007

Global '07 "Advanced Nuclear Fuel Cycles and Systems" Sept. 9–13, 2007, Boise, Idaho. Information is posted at http://nuclear.inel.gov/global07/contacts.shtml.

MCNPX Advanced Workshop, Sept 17–21, 2007, Santa Fe, New Mexico. Contact: Nancy Butner, D-5 Nuclear Design and Risk Analysis Group (phone 505-667-8016, email nbutner@lanl.gov) url http://mcnpx.lanl.gov/.

International Radiation Protection Association (IRPA) Regional Congress for Central and Eastern Europe, Sept. 24–28, 2007, Brasov, Romania. Contact: Constantin Milu, Institute of Public Health, Str. dr. Leonte No.1-3, RO-050463 Bucharest 35, Romania (phone (40 21) 3141971, fax (40 21) 3183635, email irpa2007@ispb.ro) url: http://www.irpa2007romania.com/.

October 2007

CONRAD WP4 workshop on "Uncertainty Assessment in Computational Dosimetry: A Comparison of Approaches," Oct. 1–3, 2007, Bologna, Italy. Contact: Dr. Gianfranco Gualdrini, ENEA-Instituto di Radioprotezione, 16 Via dei colli, 40136 Bologna (BO) Italy (email gauald@bologna.enea.it, phone 39 051-6098350, fax 39 051-6098003) url: http://www.eurados.org/.

10th International Nuclear Power Safety and Nuclear Education Conference, October 1–7, 2007, Obninsk, Russia. Contact: Ms. Elena Zinovieva, Obninsk State Techn. Univ. (zev@iate.obninsk.ru).

MCNPX Intermediate Workshop, October 22–26, 2007, Europe. Contact: Nancy Butner, D-5 Nuclear Design and Risk Analysis Group (phone 505-667-8016, email nbutner@lanl.gov) url http://mcnpx.lanl.gov/.

November 2007

NUPPAC '07, 17–21 Nov. 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.