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# Radiation Safety Information Computational Center

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*Mistakes are costly and somebody must pay. The time to correct a mistake is before it is made. The causes of mistakes are, first, "I didn't know"; second, "I didn't think"; third, "I didn't care."—Henry H. Buckley*

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Changes to the Computer Code and Data Collection .....	1
ANS News .....	2
CONFERENCES, COURSES, SYMPOSIA .....	3
CALENDAR .....	13

## Changes to the Computer Code and Data Collection

### [PSR-338/DWBA07/DWBB07](#)

The Service de Physique Theorique, CEN Saclay, France, through the OECD NEA Data Bank, Issy-les-Moulineaux, France, contributed newly frozen versions of these codes to calculate elastic and inelastic nuclear scattering described by a two-body interaction which can depend on the nuclear density. DWBB07 can compute any observable for any non zero-spin target, combining the results obtained by DWBA07 for different spin transfers. The distorted wave Born approximation is used to describe the inelastic scattering on a zero-spin target to a state known by its particle-hole description. Besides the optical model, DWBA07 includes a fully microscopic non-local optical model obtained with the description of the target by its occupation numbers and with the two-body interaction for the initial and final distorted waves.

DWBA07/DWBB07 runs on personal computers under Linux or in a DOS window under Windows XP. The package does not include executables, so a Fortran compiler is required on all computers. The codes were tested under Linux Red Hat CentOS release 4.2 with the Lahey/Fujitsu Fortran 95 Compiler Release L6.20a. The Windows version was tested using Intel Visual Fortran Professional Edition Version 9. The package is transmitted on a CD which contains documentation, source codes, sample problem input/output, and data files. References: Notes (November 1999) and Workshop Proceedings (September 2005). Fortran, Linux-based PC, Windows PC (P00338MNYCP01).

### [PSR-545/NUCHART](#)

The Physics Section, International Atomic Energy Agency, Vienna, Austria, through the OECD Nuclear Energy Agency, Issy-les-Moulineaux, France, contributed this database that displays nuclear

decay data, including a search routine for assigning gamma-ray energies to radionuclides. NUCHAR displays nuclear decay data graphically on a PC screen. The numerical data included in NUCHAR were taken from the online database, NUDAT Version of March 1994. The following information is presented: (1) nuclide information, (2) decay radiations, (3) adopted gammas, (4) search gamma energies, and (5) a search mode by specific nuclide is also available. NUCHAR runs on Windows PCs and consumes approximately 10Mb of disk space. The package is transmitted on one CD in a compressed Windows file which contains brief documentation and the database. Reference: IAEA-NDS-161 (June 1995). PC; Visual Basic (P00545IBMPC00).

### [PSR-547/SMAFS](#)

The Nuclear Development Division, OECD Nuclear Energy Agency, Issy-les-Moulineaux, France through the OECD NEA Data Bank, contributed this steady-state analysis model for advanced fuel cycle schemes. SMAFS was designed to efficiently calculate nuclear fuel cycle scheme cost analyses. It is simple, transparent and offers users the capability to track down cost analysis results. All the fuel cycle schemes considered in the model are represented in a graphic format and all values related to a fuel cycle step are shown in the graphic interface, i.e., there are no hidden values embedded in the calculations. All data on the fuel cycle schemes considered in the study including mass flows, waste generation, cost data, and other data such as activities, decay heat and neutron sources of spent fuel and high-level waste along time are included in the model and can be displayed. The user can easily modify values of mass flows and/or cost parameters and see corresponding changes in the results. The model calculates front-end fuel cycle mass flows such as requirements of enrichment and conversion services and natural uranium; mass of waste based on the waste generation parameters and the mass flow; and all costs. SMAFS runs on Windows PCs and requires Microsoft Excel 2000 or later. The package is transmitted on one CD in a compressed Windows file which contains the .xls file and documentation. Reference: NEA-1767/01 (May 2006). Microsoft Excel 2000 or later; PC (P00547PC58600).

## **ANS News**

### **ANS Announces Bradley Retirement and Begins Search for New Director**

After eleven years of service, Harry Bradley has announced his retirement effective October 1, 2008. Harry has led the Society during exciting times, with the nuclear energy renaissance, and advancements in nuclear science and technology. He has spearheaded the ANS Strategic Plan to ensure the Society remains a credible voice that moves nuclear technology forward for the benefit of all mankind. Under Harry's tenure, the Society has remained strong and financially sound. We thank Harry for his dedication and efforts. We wish him and his family well in his retirement.

Meanwhile, Don Hintz, President of ANS, has selected James Reinsch, former President of ANS, to head an Executive Search Committee to find a new Executive Director. Individuals representing each branch of membership of the Society have been selected to assist in this effort. The Search Committee will report to the President and ANS Corporate Officers. A position description of the duties and responsibilities of the Executive Director is posted at <http://www.ans.org/execdir/docs/execdir.pdf>. Interested individuals who meet or exceed these qualifications may submit a resume for consideration in a sealed envelope, marked Personal and Confidential, by **July 15, 2008** to:

Ms. Connie Cherry  
American Nuclear Society  
555 N. Kensington Avenue  
La Grange Park, IL 60526  
ATTN: Executive Director Search Committee

## **Glenn T. Seaborg Congressional Science and Engineering Fellowship**

The June 1 deadline is quickly approaching for this Fellowship which provides a stipend for the successful candidate to work in a Congressional office (House or Senate) for a year, providing advice on science and engineering matters to a member of Congress and his or her staff. The purpose of the Fellowship is to bring a reasoned and knowledgeable view of nuclear matters to Congress, and to act as a science and engineering resource for Congress.

Any US Citizen is eligible who has been a National member of ANS for at least two years, is not a Federal government employee, and whose academic and work experience includes one of the following or equivalent:

- PhD in a nuclear-related discipline and at least one year of postdoctoral experience in a nuclear field,
- PhD in another science or engineering discipline and at least one year postdoctoral experience in a nuclear field, or
- MS in Engineering with at least three years post-degree experience in a nuclear field.

The term of the Fellowship is one calendar year, beginning in January. The Fellow will be expected to attend a two-week orientation, sponsored by AAAS, in Washington, DC, in September of the year prior to the Fellowship. The Fellow will receive a stipend of \$55,000, plus a small travel allowance. The Fellow is responsible for his or her living expenses in the Washington, DC area. Details can be found at <http://www.ans.org/honors/cfellowship/> and inquiries should be sent to [ANS Congressional Fellowship](#).

## **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](mailto: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.

### **THICKET-2008**

THICKET-2008, sponsored by the Committee on the Safety of Nuclear Installations (CSNI) of the OECD Nuclear Energy Agency (OECD-NEA), will be held at the University of Pisa, Italy, May 5–9, 2008. The purpose of the seminar is to transfer competence, knowledge and experience gained through CSNI activities in the field of thermal-hydraulics. The registration deadline is March 31, 2008. The seminar program and registration can be found on the web-site [www.nea.fr/html/nsd/workshops/thicket-2008](http://www.nea.fr/html/nsd/workshops/thicket-2008).

## Introductory and Advanced MCNP Visual Editor Training

Date	Class	Location
May 19–23, 2008	<a href="#">Introduction to MCNP using the MCNP/MCNPX Visual Editor</a>	Las Vegas, NV
July 21–25, 2008	<a href="#">Introduction to the Visual Editor for Advanced MCNP/MCNPX Users.</a>	Seattle, WA
Sept. 8–12, 2008	<a href="#">Introduction to MCNP using the MCNP/MCNPX Visual Editor</a>	Richland, WA
Nov. 3–7, 2008	<a href="#">Introduction to MCNP using the MCNP/MCNPX Visual Editor</a>	Reno, NV

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

The introductory classes combine teaching on MCNP physics, along with instructions on how to use the Visual Editor. The advanced class assumes the user has experience using MCNP or MCNPX and focuses on Visual Editor topics. Computer demonstrations and exercises will focus on creating and interrogating input files with the Visual Editor. Advanced visualization work using MCNP will also be demonstrated. Both the introductory and advanced classes will be taught on Pentium computers running Windows 2000. Attendees are encouraged to bring their own input files for viewing and modifying in the visual editor. The course description and registration information can be found at <http://www.mcnpvised.com/index.html>.

### MCNP Class Schedule

May 12–16, 2008	<a href="#">MCNPX Intermediate Workshop</a>	ITN, Lisbon, Portugal
June 16–20, 2008	<a href="#">Introduction to MCNP5 and MCNPX</a>	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>.

## 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](mailto:dseagraves@lanl.gov). Technical questions may also be directed to Dick Olsher, 505-667-3364; e-mail: [dick@lanl.gov](mailto: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](#)

## Workshop on Neutron Cross Section Covariances

A Workshop on Neutron Cross Section Covariances will be held from June 24-June 27, 2008, in Port Jefferson, New York. The Workshop is organized by the National Nuclear Data Center which is part of Brookhaven National Laboratory. The Workshop will focus on the following three major topics:

- Covariance evaluation methodology,
- Recent covariance evaluations, and
- User's perspective

All participants must register; the deadline is **April 15, 2008**. Those wishing to make a presentation must submit an abstract at the time of the registration. The abstract should approximately fit in half a page of a single-spaced document, with a size 10 font. The workshop registration fee is \$250. Proceedings will

be published in the December 2008 issue of Nuclear Data Sheets. Details and the registration form are available at <http://www.nndc.bnl.gov/cw2008/index.jsp>.

## **PENELOPE-2008 Training Course/Workshop**

A PENELOPE-2008 Training Course / Workshop will be held June 30–July 3, 2008, at the Universitat de Barcelona in Barcelona. This course is addressed to researchers in Radiation Physics and its applications. The main objective is to provide the participants with a detailed description of the new version 2008 of PENELOPE, with an ample perspective on Monte Carlo methods for simulation of electron/photon transport. The reliability of the interaction models and the accuracy of the numerical methods and approximations implemented in the code will be discussed, and examples of simulation results and benchmark comparisons with experiment will be presented. The course will include practical sessions on the use of the generic main programs, PENCYL (cylindrical geometries) and PENMAIN (quadric geometries), and on the design of the main program for specific applications. Detailed information about the course and the registration form is available at <http://www.nea.fr/html/dbprog/Newsletter/penelope-2008-Announcement.pdf> and <http://www.nea.fr/html/dbprog/Newsletter/penelope2008-reg.html>.

## **FLUKA Training Course**

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

## **WIN Global Annual Meeting 2008**

The next Women in Nuclear (WIN) Global Annual Meeting will be hosted by WIN-France, May 26–30, 2008, in Marseille, France. The main theme will be “Nuclear Revival: Maintaining Key Competencies.” Nuclear revival poses a crucial challenge for key competency replacement:

- extension of work age for senior skilled workforce and transfer of knowledge,
- training for young professionals,
- role of women in competencies replacement, and
- preparation of the know-how transfer.

The meeting will include a conference, Q&A sessions and round table discussions in Marseille. There will be also visits to nuclear installations and other sites. The registration form can be found at <http://www.win-global.org/win-2008.htm>.

## **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.

## 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](mailto:icapp@ans.org)) url [www.ans.org/goto/icapp08](http://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. Additional information may be found at <http://www.ans.org/meetings/index.cgi?c=n>.

## 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. Additional information may be found at <http://www.ans.org/meetings/index.cgi?c=n>.

## 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/](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.

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. Vyshnevskiy (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://jnuae.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](mailto:npae-kyiv2008@kinr.kiev.ua)). Information on the conference may be found at the website <http://www.kinr.kiev.ua/NPAE-Kyiv2008>.

## **LAS/ANS SYMPOSIUM 2008**

The Annual Meeting of the Latin American Section of the American Nuclear Society (LAS-ANS) will be held in Rio de Janeiro from June 16–20, 2008. Abstracts are due **April 15**. Symposium 2008 will cover the following topics:

- Energy matrix in Latin American countries and the contribution of nuclear power
- Status of NPPs under construction in Latin America
- Progress of demonstration and implementation of new-generation NPPs
- Fuel cycle and safeguards systems in Latin American countries
- Progress of technologies for irradiated nuclear fuel repositories
- Technologies and international programs towards nuclear non-proliferation
- Development of non-power nuclear applications in Latin America

Papers will be reviewed for approval by the Technical Committee. Authors are requested to submit their papers to the Chairman of the Technical Committee: Mr. Sergio Mathias, ELETRONUCLEAR - Rua da Candelária, 65, 3º andar - CEP: 20091-020 - Rio de Janeiro – Brazil: (phone 55.21 2588 7312, fax 55.21 2588 7238, email [mathias@eletronuclear.gov.br](mailto:mathias@eletronuclear.gov.br)). Detailed information and updates will be posted at <http://www.las-ans.org.br/>.

## **IRRMA 7**

The 7<sup>th</sup> International Topical Meeting on Industrial Radiation and Radioisotope Measurement Application will take place June 22–27, 2008, in Prague, Czech Republic. It is organized to bring together scientists and engineers from around the world who are interested in radiation and radioisotope measurement applications. The meeting is devoted to current trends and future issues. The scientific sessions will include invited lectures by leading experts in the field, contributed oral papers and poster





presentations of contributed papers. Attendees will have an opportunity to share ideas on industrial uses of radiation and radioisotopes, and also on research and applications in related fields such as medicine, art and cultural heritage, the environment, detection of explosives and contraband, materials testing and new trends in radiation sources and detector development.

Papers recommended by the standard refereeing process will be published in the conference proceedings, in a special issue of *Applied Radiation and Isotopes*. The Chairman of the Organizing Committee is Ladislav Musílek, Czech Technical University in Prague, Faculty of Nuclear Sciences and Physical Engineering, Břehová 7, 115 19 Praha 1, Czech Republic. The program and details about the conference will be posted at <http://irrna7.fjfi.cvut.cz> and email may be sent to [irrna7@fjfi.cvut.cz](mailto:irrna7@fjfi.cvut.cz).

## CAARI-2008

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

As the Chair for the session “Physics and Modeling for NHS,” I would like to encourage you to attend and present a paper at CAARI-2008 this summer. Note that the CAARI website is open and accepting abstracts for contributed papers. The deadline for abstracts is **April 28, 2008**. More information about the conference can be found at <http://www.caari.com>.

*Sara Pozzi  
Dept. of Nuclear Engineering & Radiological Sciences  
University of Michigan*

## PHYSOR'08

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

## 18th Topical Meeting on the Technology of Fusion Energy

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

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

- IFE driver and chamber technology
- Plasma engineering, heating and control
- IFE target design, fabrication and injection
- Diverters and other high heat flux components
- Tritium breeding, handling and processing
- Nuclear analysis and experiments
- Safety and environment
- Computational tools and validation experiments
- Materials development and modeling
- Fabrication, assembly and maintenance
- Power conversion and conditioning

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

### [IRPA 12](#)

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

Part 1: Epistemological Basis of Radiation Protection

1. Characterisation of Radiation Exposure
2. Biological Effects of Radiation Exposure

Part 2: Radiation Protection Paradigm

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

Part 3: Radiation Protection and Safety in Practice

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

All information regarding registration, technical program, etc., may be found at the website, [www.irpa12.org.ar](http://www.irpa12.org.ar). Questions regarding all aspects of the Congress may be addressed to [secretariat@irpa12.org.ar](mailto:secretariat@irpa12.org.ar).

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

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

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

Workshop topics include:

- Advanced reactor concepts—Generation IV, GNEP,
- Accelerator driven systems
- Advanced fuel cycles
- Measurements
- Evaluations
- Benchmarking, testing and adjustments

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

### LOWRAD 2008

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

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

The deadline for abstract submission is **April 30, 2008**. Submission via the website will be available soon. Contact Margarida Goulart de Medeiros (phone +351 21 994 6347, fax +351 21 994 1995), Octávia Monteiro Gil (phone +351 21 994 6344, fax +351 21 994 1995), or Secretariat, Luisa Oliveira (email [lowrad2008@itn.pt](mailto:lowrad2008@itn.pt)), Nuclear and Technological Institute Department of Radiological Protection and Nuclear Safety Estrada Nacional 10, 2686 - 953 Sacavém, Portugal. Watch the website, <http://www.lowrad2008.itn.pt/index.html>, for abstract submission and up-to-date information.

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

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

technical program will consist of plenary sessions, parallel oral presentation sessions, and poster sessions. There will also be one or more workshops.

The first call for papers has been issued soliciting work in all areas of computational and mathematical methods for analysis of nuclear systems as well as from related disciplines including reactor physics, materials science, shielding, fluid dynamics, medical and biological applications, environmental sciences, fundamental mathematics, and benchmarking. Subject categories include:

- Deterministic Transport Theory Methods
- Monte Carlo Transport Theory Methods
- Hybrid Methods in Particle Transport
- Perturbation and Variational Methods
- Computational Fluid Dynamics
- Computational Environmental Science
- Nuclear Data Methods and Analysis
- Criticality and Safety Analysis
- Computational Materials Science
- High-Performance / Large-Scale Computing
- High-Impact Software Design
- Characteristic and Diffusion Theory Methods
- Nuclear Reactor Analysis
- Reactor Kinetics Methods
- Accelerators and Subcritical Systems
- Computational Plasma Physics
- Radiation Protection and Shielding
- Methods for Advanced Reactor Concepts
- Optimization Methods
- Computer Codes and Benchmarks (Poster Session)
- Multi-Physics Simulation Methods
- Computational Medical Physics
- Verification and Validation Methods

A 1500-word summary must be submitted to the conference electronically no later than **September 30, 2008** in order to ensure that it is included in the review process. Check the conference website [http://local.ans.org/ne-ny/topical\\_2009\\_neny.html](http://local.ans.org/ne-ny/topical_2009_neny.html) for instructions for submitting your work for consideration and for general conference information. General chair of the conference is Ray Gamino ([ray.g.gamino@lmco.com](mailto:ray.g.gamino@lmco.com)).

## **Radionuclide Therapy and Radiopharmaceutical Dosimetry**

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

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

All announcements and mailings for the symposium will be electronic and by website postings. Those who wish to participate in the symposium must register with SNM to attend the Annual Meeting. Separate symposium registration will not be offered. Registration, housing, local arrangements, transportation, and other logistical arrangements will be handled by SNM. Local arrangement details will be available at a later date on the SNM website at: [www.snm.org](http://www.snm.org). A future announcement will provide

instructions for submitting abstracts. George Sgouros ([gsgouros@jhmi.edu](mailto:gsgouros@jhmi.edu)) is Vice-chair of the organizing Committee and Michael Lassmann ([Lassmann\\_M@klinik.uni-wuerzburg.de](mailto:Lassmann_M@klinik.uni-wuerzburg.de)) is Chair of the Committee.

## CALENDAR

### 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](mailto: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](mailto:VolkertW@health.missouri.edu)).

2<sup>nd</sup> 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](mailto: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](mailto:nbutner@lanl.gov), url <http://mcnpx.lanl.gov/>.

LAS / ANS SYMPOSIUM 2008, June 16–20, 2008, Rio de Janeiro. Contact: Mr. Sergio Mathias, ELETRONUCLEAR - Rua da Candelária, 65, 3º andar - CEP: 20091-020 - Rio de Janeiro – Brazil: (phone 55.21 2588 7312, fax 55.21 2588 7238, email [mathias@eletronuclear.gov.br](mailto:mathias@eletronuclear.gov.br)). Detailed information and updates will be posted at <http://www.las-ans.org.br/>.

7th International Topical Meeting on Industrial Radiation and Radioisotope Measurement Application, June 22–27, 2008, Prague, Czech Republic. Contact: E-mail: [irrma7@jfifi.cvut.cz](mailto:irrma7@jfifi.cvut.cz) (phone only if absolutely necessary 420 224358246, Ms. Niederlová) url <http://irrma7.jfifi.cvut.cz/>.

Practical MCNP for the Health Physicist, Medical Physicist, and Rad Engineer, June 23–27, 2008, University of New Mexico-Los Alamos Campus. Contact: David Seagraves (phone 505-667-4959, fax 505-665-7686, e-mail [dseagraves@lanl.gov](mailto:dseagraves@lanl.gov)) url <http://drambuie.lanl.gov/~esh4/mcnp.htm>.

Workshop on Neutron Cross Section Covariances, June 24–27, 2008, Port Jefferson, New York, organized by the National Nuclear Data Center, Brookhaven National Laboratory. Contact: Pavel Oblozinsky, Head, National Nuclear Data Center, Brookhaven National Laboratory, Bldg. 197D, Upton, NY 11973 (phone 631-344-2814, fax 631-344-2806, email [oblozinsky@bnl.gov](mailto:oblozinsky@bnl.gov)) url <http://www.nndc.bnl.gov/cw2008/index.jsp>.

PENELOPE-2008 Training Course / Workshop, June 30– July 3, 2008, Universitat de Barcelona, Barcelona. Contact: OECD/Nuclear Energy Agency Data Bank (email [programs@nea.fr](mailto:programs@nea.fr), fax +33 1 45241109), url <http://www.nea.fr/html/dbprog/Newsletter/penelope-2008-Announcement.pdf>.

### July 2008

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

## August 2008

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

## September 2008

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

PHYSOR'08, Sept. 14–19, 2008, Interlaken, Switzerland. Contact: [info@physor2008.ch](mailto: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](mailto:latkowski@llnl.gov)) url <http://www.18th-tofe.com/>.

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

## October 2008

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

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

## November 2008

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

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

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

## May 2009

2009 International Conference on Advances in Mathematics, Computational Methods, and Reactor Physics will be held May 3–7, 2009, Saratoga Springs, New York. Contact: Ray Gamino ([ray.g.gamino@lmco.com](mailto:ray.g.gamino@lmco.com)) url [http://local.ans.org/ne-ny/topical\\_2009\\_neny.html](http://local.ans.org/ne-ny/topical_2009_neny.html).

## June 2009

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