Radiation Safety Information Computational Center



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We can't take a slipshod and easygoing attitude toward education in our country. And by "we" I don't mean "somebody else," but I mean me and I mean you. It is the future of our country--yours and mine--which is at stake.—Henry Ford II

CHANGES TO THE RSICC CODE AND DATA COLLECTION	1
ATR NSUF has a New Look and a New Website!	2
ANS News	3
Sjoden Book Published	3
CONFERENCES, COURSES, SYMPOSIA	3
CALENDAR	12

CHANGES TO THE RSICC CODE AND DATA COLLECTION

CCC-684/NRCDose 2.3.13

Chesapeake Nuclear Services, Inc., Annapolis, Maryland, contributed an updated version of this user-friendly, 32-bit PC-based, software interface for the LADTAP II, GASPAR II, and XOQDOQ. This release operates under all Microsoft WindowsTM platforms. In the NRCDose 2.3.13 release, LADTAP and XOQDOQ were modified:

- LADTAP Made corrections to irrigated food pathway handling to ensure correct ordering of the Vegetable, Leafy Vegetables, Milk, and Meat pathways.
- XOQDOQ Corrected sorting methodology in Wind Speed Values dialog's Wind Speed list to ensure that the list is displayed as loaded and stored accordingly.

NRCDose was tested on Pentium computers under Windows XP and Windows Vista. The distributed executables were created with the Microsoft Fortran PowerStation Version 4.0 and Microsoft Visual Basic 6.0. Source files are not included, so this code system can be run only on PCs under Windows. The package is transmitted on CD in Windows format. References: User's Guide," (May 2006); NUREG/CR 4653; PNL 5907 (March 1987); NUREG/CR 1276; ORNL/NUREG/TDMC 1 (March 17, 1980); NUREG/CR 2919;PNL 4380 (September 1982). Fortran and Visual Basic; Pentium (C000684PC58610).

DLC-239/POINT2009

International Atomic Energy Agency, Vienna, Austria, contributed this new temperature-dependent, linearly interpolable, tabulated cross section library based on the recently released ENDF/B-VII.0. As distributed, the ENDF/B-VII.0 data includes cross sections represented in the form of a combination of resonance parameters and/or tabulated energy dependent cross sections, nominally at 0 Kelvin temperature. For POINT2009, the ENDF/B-VII.0 library has been processed using PREPRO2009 into cross sections at eight neutron reactor-like temperatures, between 0 and 2100 Kelvin, in steps of 300 Kelvin. It has also been processed to five astrophysics-like temperatures, 1, 10, 100 eV, 1 and 10 keV. At each temperature the cross sections are tabulated and linearly interpolable in energy. POINT2009 contains all of the evaluations in the ENDF/B-VII.0 general purpose library. A table in the appendix summarizes the contents of the ENDF/B-VII.0 general purpose library. This library contains evaluations for 393 materials (isotopes or naturally occurring elemental mixtures of isotopes). This library **does not** contain data from special purpose ENDF/B-VII libraries. Each evaluation is stored as a separate file. The entire library is in the computer independent ENDF-6 character format, which allows the data to be easily transported between computers. In its present form, approximately 11.5 gigabyte of storage is required for the entire library. Reference: POINT2009 Report (June 2009). ASCII data; PC or workstation (D00239/MNYCP/00).

MIS-005/JDL-IMPORTANCE MIS-006/JDL-REACTOR-KINETICS MIS-007/JDL-THERMODYNAMICS

Magdalene College, Cambridge, UK, through OECD Nuclear Energy Agency Data Bank, Issy-les-Moulineaux, France, contributed these electronic books by Dr. Jeffery D. Lewins. Adobe Acrobat Reader can be used to access the files in Portable Data Format (.pdf). Additional details can be found on the RSICC or NEADB websites.

JDL-IMPORTANCE: Adjoint Function: Physical Basis of Variational & Perturbation Theory in Transport & Diffusion Problems.

JDL-REACTOR-KINETICS: Nuclear Reactor Kinetics and Control.

JDL-THERMODYNAMICS: Thermodynamics: Frontiers and Foundations

The packages are transmitted in a WinZIP file which contains the book cited above in PDF format. (M00005MNYCP00, M00006MNYCP00, M00007MNYCP00).

ATR NSUF has a New Look and a New Website!

The new Advanced Test Reactor National Scientific User Facility (ATR NSUF) website, located at <u>http://atrnsuf.inl.gov</u>, differs from the old site in both look and navigation. The new site offers a great deal more information on the ATR NSUF, its capabilities, partners, and even a list of current experiments.

The site contains links for "Faculty and Students" with information on internships, scholarships, faculty research teams, and current calls for proposals. The "Users" links include information on the proposal process, current calls for proposals and "Users Week." The "Media" links contain news releases, videos of colloquium presentations that have occurred throughout the year, and even the "User Week" 2009 presentations. There is a feedback link for your suggestions. The new website offers the presentations from the 2009 Users Week. All presentations are in powerpoint or PDF format for ease of opening. Coming soon to the website will be the taped presentations from the Workshop and Fuels and Materials Course.

Mary Catherine Thelen on behalf of ATR National Scientific User Facility

ANS News

Funding for Female Students to Attend ANS Winter Meeting

The Professional Women in ANS (PWANS) Committee is offering funding for two female students, up to \$550 each, to attend the ANS Winter Meeting in Washington, DC, November 15–19. The deadline for applications is September 14, 2009. Applications are available at http://www.ans.org/goto/nad.cgi?id= 1246942800-12.

Sjoden Book Published

Prof. Glenn Sjoden of the University of Florida has published a new book entitled *Foundations in Applied Nuclear Engineering Analysis*, which can be purchased directly from World Scientific in hardcover (\$74) or softcover (\$41). The book covers important mathematical concepts with relevant nuclear engineering examples; it is appropriate for undergraduate students in Nuclear Engineering, or new graduate students. The link is http://www.worldscibooks.com/ engineering/7143.html and contains a description of the book.

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 <u>riceaf@ornl.gov</u> with "conferences" in the subject line by the 20th of each month. Please include the announcement in its native format as an attachment to the message. If the meeting is on a website, please include the url.

Every attempt is made to ensure that the links provided in the Conference and Calendar sections of this newsletter are correct and live. However, the very nature of the web creates the possibility that the links may become unavailable. In that case, please call or mail the contact provided.

TRAINING

Date 2009	Class	Location
October 26–30	Introduction to MCNP using the MCNP/MCNPX Visual Editor	Reno, NV
November 2–6	Advanced Visual Editor	Las Vegas, NV

Introductory and Advanced MCNP Visual Editor Training

Classes are taught using the most recent (beta) version of the Visual Editor Code. All class attendees must have a valid MCNP/MCNPX RSICC license. Bring proof of receipt (letter or email) 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.

MCNPX Training

The MCNPX team at Los Alamos National Laboratory offers interactive workshops for training users in the capabilities of MCNPX. Three levels are offered: introductory (for users with 0-1 year of experience), intermediate (for users with 1-3 years of experience), and advanced (for users with more than 3 years of experience). The list of workshops below is somewhat tentative, as workshops may be added, removed, or modified throughout the year, depending on user interests.

2009 Classes			
October 12–16	Inter/Threat	Portugal	
	Reduction	*	
*Contact NEA Computer Program Service for			

*Contact <u>NEA Computer Program Service</u> for additional information.

date are subject to cancellation or rescheduling.

Cost of the U.S. workshops is \$2,300 US with an early registration discount of \$300 (i.e., if paid 30 days before the scheduled workshop). This fee includes applicable Gross Receipt taxes. Workshops with fewer than 15 registrants on the early registration

In order to process non-US citizens by the class date, non-US citizens shall register at least 6 weeks prior to the start of the training class. All non-US citizens who reside in countries listed in the U.S. Code of Federal Regulations, Title 10, Part 810.8, are required to register at least 8 weeks prior to the start of the training class. These participants must be processed by the DOE and should not make travel arrangements until approval from DOE has been obtained.

Additional information about the courses can be found at the website, <u>http://mcnpx.lanl.gov/</u>. To register send an email to <u>Randy Schwarz</u>, indicating the workshop of interest to you.

MCNP Class Schedule

October 13–16, 2009	Advanced: Criticality Calculations	Los Alamos, NM
October 19–23, 2009	Introduction to MCNP5 and MCNPX	Los Alamos, NM
October 26–29, 2009	Advanced: Variance Reduction	Los Alamos, NM

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.

Intermediate workshops cover the entire spectrum of MCNP/MCNPX at a much faster pace and are more in-depth than introductory classes. These workshops are open to new users; the first day of class is a review of basics. However, the intermediate workshops are targeted toward more experienced users and are more problem solving than lecture classes. Intermediate workshops feature flexible course content, skip topics of least interest to the participants, and provide significantly more depth than introductory classes.

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 <u>http://mcnp-green.lanl.gov/</u> <u>classinformation.html</u>.

Date	Title	Description
October 19-23, 2009	KENO-VI/MAVRIC	KENO-VI: Criticality safety using the generalized geometry version of KENO MAVRIC: 3-D automated variance reduction for deep-penetration and complex shielding problems
October 26-30, 2009	SCALE Lattice Physics and Depletion Course (ORIGEN- ARP/TRITON)	ORIGEN-ARP: Isotopic depletion/decay and source terms using latest version of ORIGEN TRITON: 2-D reactor physics analysis using NEWT
November 3-6, 2009	TSUNAMI Sensitivity/ Uncertainty Tools Course (Experienced KENO users only)	1-D and 3-D sensitivity/uncertainty analysis using XSDRNPM and KENO V.a
November 9-13, 2009	KENO V.a	Criticality safety with the most widely used version of KENO

SCALE Training Courses at ORNL

The registration fee is \$2300 for each course. A discount of \$200 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 6 users. All foreign national visitors must register a minimum of 40 days prior to the start date of the training course they plan to attend. Course descriptions may be found at http://www.ornl.gov/sci/scale/course_description.htm.

OECD-NEA Workshop on Future Criticality Safety Research Needs

The Organisation for Economic Cooperation and Development (OECD) Nuclear Energy Agency (NEA), U.S. DOE Nuclear Criticality Safety Program (NCSP), Idaho National Laboratory (INL), and Idaho State University (ISU) are joining in the sponsorship and organization of the OECD-NEA Workshop on Future Criticality Safety Research Needs which will be held September 21–22, 2009, at Idaho State University, Pocatello, Idaho. The primary purpose of the workshop is to help the international nuclear criticality safety community identify future criticality safety research needs so it will be better prepared to respond to those needs as future nuclear energy systems are developed. All sessions will be conducted by leading international nuclear experts. You may contact Lori Braase, 208-526-7763, lori.braase@inl.gov, for details and visit the website at https://secure.inl.gov/oecdneaws09.

NUCLEAR FUEL CYCLE 2009

An international training event on the nuclear fuel cycle in France will be held October 12–23, 2009, in Saclay, France. Comprehensive information and in-depth knowledge on the industrial operations related to the nuclear fuel cycle in France, from the extraction of the uranium ore to the reprocessing of spent fuel, as well as the management of waste produced during the different stages of the fuel cycle, will be presented through lectures and technical visits. The registration deadline is September 7. For further information or to obtain a registration form, please contact the organizer, Nadia Nowacki at <u>nadia.nowacki@cea.fr</u>. The Technical Officer is Lionel Bion, ENEN – INSTN, CEA/Saclay, F-91191 Gif-sur-Yvette Cedex, FRANCE (email <u>lionel.bion@cea.fr</u>, phone +33 1 69 08 30 92, fax +33 1 69 08 77 82). The url is <u>http://www.enen-assoc.org</u>.

3D S.UN.COP 2009

The University of Pisa (UNIPI), the Royal Institute of Technology (KTH), the University of Zagreb (FER), and the School of Industrial Engineering of Barcelona (ETSEIB) are jointly organizing the Seminar and Training to transfer competence, knowledge and experience in the area of Scaling, Uncertainty and 3D Coupled Code Calculations (3D S.UN.COP 2009).

The Seminar will take place from October 12–30, 2009, Royal Institute of Technology (KTH) in Stockholm, Sweden. The deadline for registration has been extended to August 28, 2009. The seminar is divided into three parts and participants may choose to attend a one-, two- or three-week course depending on their interest in the following topics:

1) Fundamental Theoretical Aspects of the Methodologies;

2) Industrial Applications (e.g. AECL, AREVA, Westinghouse, GE) Coupling Methodologies and Code Hands-on Training (e.g. RELAP, CATHARE, PARCS, TRACE, Star-CD) and Special Sessions devoted to Computational Fluid Dymanics and Severe Accident Analysis; BWR Safety Analysis and, WWER, and CANDU Technologies;

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

Further details are provided will be available soon at: <u>http://dimnp.ing.unipi.it/3dsuncop</u>.

MCTP2009 Second European Workshop on Monte Carlo Treatment Planning

The MCTP2009 Second European Workshop on Monte Carlo Treatment Planning will be held in Cardiff (UK) from October 19–21, 2009. The introduction into clinical practice of more accurate algorithms for patient dose calculation is of paramount importance and algorithms based on the Monte Carlo method are widely regarded as the most accurate available in radiotherapy. MC techniques are also ideal research and development tools increasingly used in emerging areas including, among others, functional imaging, and molecular targeted radiotherapy. The number of publications reporting the use of MC in radiotherapy treatment planning (MCTP) has indeed increased exponentially in the last 25 years. The workshop is supported by the European Work Group on Monte Carlo Treatment Planning, Velindre NHS Trust, Cardiff University, and Cancer Research Wales.

The aim of MCTP2009 is to create a synergistic environment to maximize the integration of research, development and clinical implementation of MC technology in medical radiation physics devoted to the diagnosis and treatment of cancer. Check the workshop website, http://www.mctp2009.org/, often for current information. For information that may not be available on

the website contact Campus Services Division, Cardiff University, Southgate House, PO Box 533, Cardiff CF14 3XZ (phone + 44 (0)29 2087 5508, fax + 44 (0)29 2087 4990, email <u>workshop@mctp2009.org</u>).

Advances in Applications of Burnup Credit for Spent Fuel Storage, Transport, Reprocessing, and Disposition

The Nuclear Safety Council of Spain (CSN) is leading in the organization of an *International* Workshop on Advances in Applications of Burnup Credit for Spent Fuel Storage, Transport, Reprocessing, and Disposition, to be held in Córdoba, Spain, October 27–30, 2009.

The objective of the workshop is to identify the benefits that accrue from recent improvements of the burnup credit analysis methodologies; to discuss and analyze the implications of applying improved burnup credit methodologies, focusing on both the safety-related and operational aspects; and to foster the exchange of international experience in licensing and implementation of burnup credit applications. Details about the workshop and the registration form can be found at <u>http://www.csn.es/</u>.

CONFERENCES

Nuclear Reactions on Nucleons and Nuclei

The International Conference on Nuclear Reactions on Nucleons and Nuclei will be held October 5– 9, 2009, in Messina, Italy. The Conference will focus on the new projects and new lines of research in the field of the nuclear reactions that will be developed in the main laboratories and research centers during the next 10–15 years. Therefore, the conference is open to contributions on various kinds of nuclear reactions (also of astrophysical interest) between nuclei, and between particles and nucleons.

The conference program will consist of invited talks, oral and poster presentations of contributed papers with the main emphasis on the discussion (from experimental and theoretical points of view) of processes leading to heavy- and light-reaction products (with or without compound nucleus formation), synthesis of superheavy nuclei, investigations of baryonic resonances by hadronic or electromagnetic interactions and their decay with the production of scalar and vector mesons. The conference language will be English. Correspondence concerning the Conference should be sent to conf2009@nucleo.unime.it. Information related to the conference will be posted to http://nucleo.unime.it/conf2009.

NEUDOS-11

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



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

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

Specific Applications of Research Reactors: Provision of Nuclear Data

The IAEA in collaboration with NEA/OECD is sponsoring a Technical Meeting on Specific Applications of Research Reactors: Provision of Nuclear Data, October 12–16, 2009, in Vienna. Research reactors (RRs) play a key role in the development of the peaceful uses of atomic energy. The main applications of most RRs continue to be radioisotope production, neutron beam applications, silicon doping and material irradiation for nuclear systems, as well as teaching and training for human resource development. On the other hand, the last International Conference on Nuclear Data for Science and Technology, held in Nice (France), April 22–27, 2007, placed special emphasis on atomic and nuclear data needs for basic nuclear physics research, innovative power reactors and fuel cycles (e.g. dedicated reactors for nuclear waste transmutation, accelerator driven systems, Th-U fuel cycle, etc.), as well as efforts to realize fusion reactors (e.g. ITER) and to test materials needed for such facilities, medical applications including radioisotope production, computer simulations of radiation doses to patients and advanced cancer therapies, and analytical techniques adopted for cultural heritage diagnostics and materials composition analysis. RRs occupy an important place in these areas of study and application, along with dedicated accelerator-based neutron sources. For example, some installations like Lohengrin Fission Fragment Separator at Institut Laue-Langevin (ILL) in Grenoble, France, remains a unique place to study fission fragments and their properties from thermal neutron induced fission. Equally, one has to mention the importance of integral measurements performed at RRs to validate evaluated nuclear data libraries used by neutron transport and material evolution codes. In this respect, a new initiative of the NEA Working Party on Evaluation Cooperation has been launched in order to develop methods that combine integral experimental data from RRs and various differential data to examine targeted accuracies for different reactions, isotopes and energy ranges as long as they might affect the integral neutronic parameters used for the design of new nuclear reactors. Finally, some cross-section measurements for short-lived and on-line produced radioactive target nuclei are possible only at RRs because of the high neutron fluxes available. The TM website, http://www-naweb.iaea.org/napc/physics/meetings/ TM38228.html, is the optimal source for information on all aspects of the meeting. You may also contact the Secretariat, Ms. Cecilia Devia Torres, NAPC Physics Section, International Atomic Energy Agency, Office A2307, Wagramer Strasse 5, P.O. Box 100, A1400 Vienna, Austria (email c.deviatorres@iaea.org, phone +43 1 2600-6393, fax +43 1 26007-21754).

1st International Nuclear & Renewable Energy Conference

The 1st International Nuclear & Renewable Energy Conference (INREC'10) will be held March 21–24, 2010, in Amman, Jordan. It is the first in a planned series of biannual meetings focusing on the practical aspects of nuclear energy. The meeting covers the synergetic integration of nuclear engineering with electrical power production, coupling to existing power grids and the design of smart grid systems, to intelligent instrumentation and control, and monitoring of processes relevant to radiation safety and nuclear safeguards. Research work addressing alternate energy forms are also welcome.

The call for papers has been issued for work related to the following main topics:

- Nuclear reactor technology
- Education & training
- Policy studies & issues
- Nuclear radiation and shielding
- Nuclear physics

- Nuclear power in developing countries
- Enabling technologies for nuclear applications
- Renewable energy
- Water, hydrogen and energy storage

Authors should follow the guidelines posted in the symposium website: <u>http://inrec10.inrec-</u> <u>conf.org/default.aspx?id=submission</u>. Submitted papers will be peer-reviewed. Accepted and presented papers will be published in the proceedings of the INREC'10 conference. Further publication in one or more of reputable energy journals of select papers presented at the conference will be considered. A poster session will also be organized to to report latest research/project findings.

You will find the necessary conference information at the website, http://inrec10.inrec-conf.org/.

2010 Topical in Radiation Protection and Shielding (RPSD), Isotopes & Radiation (IRD), and Biology and Medicine (BMD)

The Radiation Protection and Shielding Division, the Isotopes and Radiation Division, and the Biology and Medicine Division of ANS are joining to organize the 2010 Topical in Radiation Protection and Shielding (RPSD), Isotopes & Radiation (IRD), and Biology and Medicine (BMD), April 19–23, 2010, in Las Vegas, Nevada. Extended abstracts may be submitted to the technical program chair at Robert.Hayes@WIPP.ws by October 10, 2009, for topics which fall under the following session tracks:

- Medical Physics Track
- Radiation Detection and Measurement Track
- Radiation Shielding Track
- Radiation Protection Track
- Radiation Transport Calculations Track

Check the conference website, <u>http://local.ans.org/nv/jtm2010.html</u>, often for up-to-date information.



The 2010 International Conference on Nuclear Data for Science and Technology will be held April 26–30, 2010, at Jeju Island, South Korea. The meeting is organized by the Korean Nuclear Society and Korea Atomic Energy Research Institute under the auspices of the OECD Nuclear Energy Agency. The conference is the 11th in a series held every three years.

The purpose of these conferences is to bring together scientists and engineers involved in the production or use of nuclear data for various applications. The ND2010 conference will cover measurements, theoretical model developments, evaluation, processing, validation and dissemination activities. The scope of the conference includes the following fields of application: fission and fusion energy, accelerator technology, dosimetry and shielding, astrophysics and cosmology, safeguards and security, space, medicine, environment. The corresponding needs for improved nuclear data will be addressed.

A call for papers has been announced for abstracts on 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
- Uncertainty quantification and covariance matrix
- 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 deadline for submitting an abstract is **September 30, 2009**. Additional information about the conference may be obtained from Jonghwa Chang, jhchang@kaeri.re.kr or Young-Ouk Lee, yolee@kaeri.re.kr. The website is <u>http://www.nd2010.org/</u>.

PHYSOR 2010



The PHYSOR 2010 Topical Meeting will be held May 9–14, 2010, in Pittsburgh, Pennsylvania. The conference is sponsored by the American Nuclear Society (ANS) Reactor Physics Division and co-sponsored by the ANS Mathematics and Computation Division and the American Society of Mechanical Engineers (ASME). The conference theme, *Advances in Reactor Physics to Power the Nuclear Renaissance*, will provide a platform for international experts to

exchange ideas and the latest developments in reactor physics, mechanical and material engineering and related nuclear technologies in light of the nuclear renaissance.

Full papers are to be submitted by October 31, 2009, for one of the following tracks:

- Nuclear Data
- Deterministic Transport Theory
- Monte Carlo Methods
- Reactor Analysis and Optimization
- Reactor Design and Operation
- Nuclear Fuel Cycle
- Nuclear Criticality Safety
- Transient and Safety Analysis
- Research Reactors and Spallation Sources
- Integral Experiments and Facilities for Safety Research
- Verification, Validation and Uncertainty Analysis
- Fuel, Materials and Mechanical Analysis
- Radiation Applications and Nuclear Safeguards
- Nuclear Power and Sustainable Development

Bookmark the website, <u>www.physor2010.org</u>, and check it periodically for news and updates. You may also contact the PHYSOR 2010 Technical Program Chair, Mohamed Ouisloumen, Westinghouse Electric Company, 4350 Northern Pike, Monroeville, PA 15146 (phone +1-412-374-2148, fax +1-412-374-4500, email <u>info@physor2010.org</u>).

Current Problems in Nuclear Physics and Atomic Energy

The 3rd International Conference on Current Problems in Nuclear Physics and Atomic Energy (NPAE-Kyiv2010), which will be held June 7–12, 2010, in Kyiv, Ukraine. This conference is the continuation of the conferences held in Kyiv in 2006 and 2008. The NPAE-Kyiv2010 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, <u>http://www.kinr.kiev.ua</u>) in collaboration with Taras Shevchenko National University of Kyiv (NTSU, <u>http://www.univ.kiev.ua</u>).

Authors are invited to submit a one page abstract (300–500 words) by March 1, 2010, via e-mail to <u>npae-kyiv2010@kinr.kiev.ua</u> on the following topics:

- Collective processes in atomic nuclei
- Nuclear reactions
- Nuclear structure and decay processes
- Rare nuclear processes
- Neutron and reactor physics, nuclear data
- Problems of atomic energy
- Applied nuclear physics in medicine and industry
- Experimental facilities and detection techniques

All correspondence concerning scientific program, publication and other questions should be sent to:

Dr. Vitali Yu. Denisov Institute for Nuclear Research, Prospect Nauky, 47 Kyiv, 03680 Ukraine (fax +38 044 525 44 63, email npae-kyiv2010@kinr.kiev.ua)

Information on the Conference can be found at the website: <u>http://www.kinr.kiev.ua/NPAE-Kyiv2010</u>.

2010 Joint Symposium on Supercomputing in Nuclear Applications + Monte-Carlo

Planning has begun for the combined Supercomputing in Nuclear Applications (SNA) and Monte-Carlo (MC) 2010 meeting. The Japan Atomic Energy Agency Center for Computational Science and e-systems and Nuclear Science and Engineering Directorate will host the meeting October 18–21, 2010, at the Hitotsubashi Memorial Hall in Tokyo.

Extended abstracts of 1500 words may be submitted by September 2009 on the following topics:

- Computational Applications (Nuclear Reactor Analysis, Nuclear Safety, Thermal Hydraulics, Biomedicine, Nano-Science, Nuclear Fuel Cycle / Repository Performance, Materials, Fluid Dynamics, Plasma Physics / Fusion, Earthquake Proof, Structural Analysis, Shielding, Dosimetry, Radiation Effect, Space and Aviation, etc.)
- Computational Science (Applications, Methodology, Modeling, Code Development, Verification, Basic Data, etc.)
- Computer Science (Visualization, Tools, Hardware, Middleware, etc.)
- Information Technology and its Applications (CAE, Communications, etc.)
- Computational Methods using High Performance Computers (Parallel Computing, Grid Computing, Custom Computing, etc.)
- Theory for Monte Carlo Simulation
- Physics Modeling in Monte Carlo Simulation

Bookmark the website, <u>http://sna2010.jaea.go.jp/</u>, to keep abreast of developments for the meeting. You may also contact <u>sna2010@ml.jaea.go.jp</u>.

CALENDAR

October 2009

- International Conference on Nuclear Reactions on Nucleons and Nuclei, Oct. 5–9, 2009, Messina, Italy. Contact: <u>conf2009@nucleo.unime.it</u>, url, <u>http://nucleo.unime.it/conf2009</u>.
- NEUDOS-11, Oct. 12–16, 2009, Capetown, South Africa. Contact: Dr. D. Jones / Ms. N. Haasbroek, iThemba LABS, P O Box 722, Somerset West 7129, South Africa (phone +27 21 843 1259 / 1032, fax +27 21 843 3525, email <u>Neudos11@tlabs.ac.za</u>) url <u>http://www.neudos11.tlabs.ac.za</u>.
- SIEN 2009, International Symposium on Nuclear Energy, "Nuclear Power–-A New Challenge," Oct. 12– 16, 2009, Bucharest, Romania. Contact: Mihaela Stiopol, AREN SN "Nuclearelectrica" SA, Str. Polona, nr. 65, 010494 Bucuresti, Sector 1, Romania (phone +40 21 203 82 53, fax +40 21 316 94 00, email <u>mstiopol@nuclearelectrica.ro</u>) url <u>www.aren.ro/en_sien_2009.htm</u>.
- Technical Meeting on Specific Applications of Research Reactors: Provision of Nuclear Data, Oct. 12– 16, 2009, in Vienna. Contact: Secretariat, Ms. Cecilia Devia Torres, NAPC Physics Section, International Atomic Energy Agency, Office A2307, Wagramer Strasse 5, P.O. Box 100, A1400 Vienna, Austria (email c.devia-torres@iaea.org, phone +43 1 2600-6393, fax +43 1 26007-21754) url http://www-naweb.iaea.org/napc/physics/meetings/TM38228.html.
- International Conference on Opportunities and Challenges for Water Cooled Reactors in the 21st Century, Oct. 27–30, 2009, Vienna, Austria. Contact: Ms. Irina Orlova (phone +43-1-2600-21314, fax +43-1-2600-7, email <u>I.Orlova@iaea.org</u>) url <u>http://www-pub.iaea.org/MTCD/Meetings/Announcements.</u> asp?ConfID=35251.
- 12th International Group on Research Reactors (IGORR), Oct. 28–30, 2009, CIAE-Beijing, P.R. China. Contact: <u>igorr2009@ciae.ac.cn</u>.

November 2009

- 15th BEAMnrc Workshop, Nov. 2–5, 2009, Ottawa, Canada. Contact: Dave Rogers, Physics Department, Carleton University, 1125 Colonel By Drive, Ottawa, Ontario, Canada, K1S 5B6 (phone 613-520-2600x4374, fax 613-520-4061, email <u>BEAM_Workshop@irs.phy.nrc.ca</u>) url http://www.physics.carleton.ca/~drogers/BEAM/course/.
- 2009 ANS Winter Meeting, and Nuclear Technology Expo Nov. 15–19, 2009, Washington, DC. Contact: Carl Rau, Bechtel Nuclear Power, 5275 Westview Dr., Frederick, MD 21703 (phone 301-228-8740, fax 301-698-4776, email tapolloc@bechtel.com) url http://www.new.ans.org/meetings/m_64.
- (YPC2009) 2009 Young Professional Congress, Embedded ANS Topical, Nov. 15–19, 2009, Washington, DC. Contact: Dave Pointer, Argonne National Laboratory, 9700 S. Cass Ave., Argonne, IL 60439 (phone 630-252-1052, email <u>david.pointer@anl.gov</u>) url <u>http://www.ans-ypc.org/</u>.

March 2010

INREC'10, March 21-24, 2010, Amman, Jordan. Bookmark url http://inrec10.inrec-conf.org/.

April 2010

- ANS Student Conference, April 8–11, 2010, Ann Arbor, Michigan. Contact Travis Trahan (<u>tjtrahan@umich.edu</u>) or Michaela Eddy (<u>eddy.michaela@gmail.com</u>) url <u>http://committees.ans.org/students/</u>.
- Pacific Northwest International Conference on Global Nuclear Security-the Decade Ahead, April 11–16, 2010, Portland OR. Contact: Carrie Mathews (phone 509-375-6783, email carrie. <u>mathews@pnl.gov</u>) url <u>http://pnwcgs.pnl.gov/PNIC/PNIC.stm</u>.

- 1st Joint Topical Meeting of the Radiation Protection & Shielding, Isotopes & Radiation, and Biology & Medicine Divisions, April 19–23, 2010, Las Vegas, Nevada. Contact: <u>http://local.ans.org/nv/jtm2010.html</u>.
- 2010 International Conference on Nuclear Data for Science and Technology, April 26–30, 2010, Jeju Island, South Korea. Contact: Jonghwa Chang, jhchang@kaeri.re.kr or Young-Ouk Lee, yolee@kaeri.re.kr. The website is <u>http://www.nd2010.org/</u>.

May 2010

PHYSOR 2010, May 9–14, 2010, Pittsburgh, PA. Contact: Mohamed Ouisloumen, Westinghouse Electric Company, 4350 Northern Pike, Monroeville, PA 15146 (phone +1-412-374-2148, fax +1-412-374-4500, email info@physor2010.org) url: www.physor2010.org.

June 2010

- 3rd International Conference "Current Problems in Nuclear Physics and Atomic Energy," (NPAE-Kyiv2010), June 7 12, 2010, Kyiv, NPAE Ukraine. Contact: Dr. Vitali Yu. Denisov, Institute for Nuclear Research, Prospect Nauky, 47, Kyiv, 03680, Ukraine (fax +38 044 525 44 63, email <u>npae-kyiv2010@kinr.kiev.ua</u>) url <u>http://www.kinr.kiev.ua/NPAE-Kyiv2010</u>.
- ANS Annual Meeting, June 13–17, 2010, San Diego, CA. Contact: url <u>http://www.new.ans.org/meetings/file/133</u>

October 2010

SNA2010 and MC2010, Oct. 18–21, 2010, Tokyo. Contact: <u>sna2010@ml.jaea.go.jp</u>, url <u>http://sna-mc-2010.jaea.go.jp/</u>.