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# Radiation Safety Information Computational Center

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*Education is the process by which the individual relates himself to the universe, gives himself citizenship in the changing world, shares the race's mind and enfranchises his own soul.—*

*Dr. John H. Finley*

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## SCALE Summer Institute

The SCALE development and support team at Oak Ridge National Laboratory (ORNL) has scheduled a one-week course focusing on reactor physics analyses with SCALE for university professors and senior level graduate students for August 6–10, 2007, at ORNL. There is no charge for this course; however attendees must pay their travel expenses. The purpose of the course is to equip nuclear engineering departments to integrate software used by industry with nuclear engineering theory currently being taught. The course content will be presented with lectures in the morning followed with hands-on problem sessions in the afternoon. Attendees must be registered SCALE 5.1 users. Register by email at [scalehelp@ornl.gov](mailto:scalehelp@ornl.gov). The deadline for registration is **July 6**.

The course content includes:

- Resonance self-shielding of multigroup cross sections (lecture & problem session)
- NEWT 2-D reactor physics module (lecture & problem session)
- TRITON/NEWT 2-D reactor fuel depletion (lecture & problem session)
- TRITON/KENO 3-D reactor fuel depletion (lecture & problem session)
- ORIGEN-ARP depletion/decay/source terms module (lecture & problem session)

# Change to the Computer Code and Data Collection

## CCC-112/SAND-II

Experimental and Mathematical Physics Consultants, Gaithersburg, Maryland, contributed a new PC version of SAND-II which runs under WindowsXP. This update replaces the previous PC executables which generate stack fault errors under WindowsXP. The SAND-II code system determines neutron energy spectra by analysis of experimental activation detector data. An iterative perturbation method is used to obtain a “best fit” neutron flux spectrum for a given input set of infinitely dilute foil activities. The basic physics and operation of the SAND-II code are unchanged from the 1970s.

Lahey Fortran 95 version 5.5d and Lahey Fortran 90 version 4.5 compilers were used to create the new executables that were tested on 32-bit PC's under Windows XP and Windows Vista. The package is transmitted on a CD in a WinZIP file, which includes Windows executables, Fortran source codes, a reaction cross-section library, and test cases. Reference: AFWL-TR 67 41 (September 1967). Fortran; CDC 6600/7600, IBM 360, and IBM PC (RSICC ID: C00112/MNYPC/03).

## PSR-351/PREPRO2007

The Nuclear Data Center at the International Atomic Energy Agency, Vienna, Austria, contributed a newly frozen version of the pre-processing code system for data in ENDF/B format. PREPRO2007 is a modular set of computer codes, each of which reads evaluated nuclear data in the ENDF/B format, processes the data and outputs it in the ENDF/B format. Each code performs one or more independent operations on the data. The codes are named “the pre-processing” codes, because they are designed to pre process ENDF/B data, for later, further processing for use in applications. These codes are designed to operate on virtually any type of computer with the included capability of optimization on any given computer. They can process datasets in any ENDF/B format, ENDF/B-I through ENDF/B-VII. Additional information is available on the PREPRO website: <http://www-nds.iaea.org/ndspub/ndf/prepro/>.

Each of the PREPRO2007 modules performs a different function on ENDF/B data files. A brief description of how the codes are used is listed below:

Linear	Linearize cross sections
Recent	Reconstruct cross sections from resonance parameters
Sigma1	Doppler broaden cross sections
Activate	generate activation cross sections (MF=10) from MF=3 and 9 data
Legend	Calculate/correct angular distributions
Sixpak	Convert double differential data to single differential
Fixup	Correct format and cross sections, define by summation
Dictin	Create reaction dictionary (MF=1, MT=451)
Merger	Retrieve and/or Merge evaluated data
Groupie	Calculate group averages and multi-band parameters
Complot	Plot comparisons of cross sections (MF=3, 23), Comhard for hardcopy
Evalplot	Plot evaluated data (MF=3, 4, 5, 23, 27), Evalhard for hardcopy
Mixer	Calculate mixtures of cross sections
Virgin	Calculate transmitted uncollided (virgin) flux and reactions
Convert	Convert codes for computer/precision/compiler
Relabel	Relabel and sequence programs

PREPRO2007 is written in standard Fortran. All systems require X11 for graphics capability. For use on PCs running Windows or Linux and on PowerMAC, the distribution includes ready-to-use executables. All other systems require a Fortran compiler. PREPRO2007 was tested at RSICC on the following machines:

Pentium 4 under WindowsXP, Service Pack 2 with Intel 9 Fortran compiler

AMD Opteron running RedHat Enterprise Linux with GNU Fortran (GCC) 3.4.6  
IBM RS/6000 Model 590 running AIX 5.1 with XL Fortran 08.01.0000.0003  
SunOS 5.9 with Sun WorkShop 6 update 1 Fortran 77 5.2  
DEC Alpha OSF1 Tru64 V5.1A HP Fortran Compiler V5.5A-3548-48D88

The package is transmitted on a CD which contains the referenced document in electronic form and 5 machine-dependent compressed files. The extracted directories contain Fortran 77 source files, executables for PC and MAC, sample input and output, and information files. Reference: IAEA NDS 39, Rev. 13 (March 17, 2007). Fortran 77 on IBM PC and PowerMAC, DEC Alpha, Sun, IBM RS/6000 and Vax (P00351/MNYCP/05).

### [DLC-227/POINT2007](#)

Lawrence Livermore National Laboratory, Livermore, California, contributed this temperature-dependent, linearly interpolable, tabulated cross section library based on the recently released ENDF/B-VII.0, which is the first release of ENDF/B-VII.

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 use in our applications the ENDF/B-VII.0 library has been processed 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. For reference purposes, 300 Kelvin is approximately 1/40 eV, so that 1 eV is approximately 12,000 Kelvin. At each temperature the cross sections are tabulated and linearly interpolable in energy.

POINT2007 contains all of the evaluations in the ENDF/B-VII.0 general purpose library, which is summarized in a table in the appendix. 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.

The PSR-351/PREPRO2007 code system was used to process the ENDF/B data. Any codes which treat the ENDF/B-VI format can be used as data retrieval programs.

In this library 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, the library requires approximately 8.6 gigabyte of storage. Reference: UCRL-TR-228089 (February 14, 2007). ASCII data; PC or workstation (D00227/MNYCP/00).

## **ANS News**

### **2007–2008 Officers Elected**

Donald C. Hintz, retired president of Entergy Corporation, succeeds Harold F. McFarlane as president of the ANS. The vice-president/president-elect is William E. Burchill. Until his retirement Burchill was the department head of nuclear engineering at Texas A&M. Eric P. Loewen, of General Electric, was elected to a two-year term as treasurer. The four U.S. at-large members of the Board of Directors elected are: Sama Bilbao y Leon (Dominion Resources), Joe F. Colvin (Nuclear Energy Institute, ret.), Alan E. Levin (Areva NP), and Jose N. Reyes, Jr., (Oregon State University). Juan Luis Francois (University of Mexico) was elected as a non-U.S. at-large member of the Board. Rachel Slaybaugh was elected to the Board by the student membership.

Elected chairs of the ANS professional divisions include:

Accelerator Applications  
Aerospace Nuclear Science and Technology  
Biology and Medicine

Eric J. Pitcher  
William J. Carmack  
Rolf L. Zeisler

Decommissioning, Decontamination, and Reutilization  
Education and Training  
Environmental Sciences  
Fuel Cycle and Waste Management  
Fusion Energy  
Human Factors  
Isotopes and Radiation  
Materials Science and Technology  
Mathematics and Computation  
Nuclear Criticality Safety  
Nuclear Installations Safety  
Operations and Power  
Radiation Protection and Shielding  
Reactor Physics  
Robotics and Remote Systems  
Thermal Hydraulics  
Young Members Group

John D. Parkyn  
Kent W. Hamlin  
Peter D. Fledderman  
Robert W. Benedict  
Roger E. Stoller  
John M. O'Hara  
Richard M. Lindstrom  
Travis W. Knight  
Thomas M. Sutton  
Fitz Trumble  
Allen L. Camp  
Gregory T. Gibson  
John C. Wagner  
Farzad Rahnema  
Frank M. Heckendron II  
Shripad T. Revankar  
Kent B. Welter

### **ANS Candidates sought for 2008 election**

Members of the American Nuclear Society are urged to suggest candidates for the Society's elected offices, for terms starting in June 2008. The Nominating Committee is seeking candidates for vice president/president-elect, four at-large U.S.-resident board members, and one at-large non-U.S. resident board member.

Candidates for officers and the Board of Directors must be members, fellows, or emeritus members of the Society in good standing, and they should be broadly representative of the disciplines pertaining to nuclear science and technology, with due consideration to the proportional representation of the voting membership.

Please send nomination suggestions by Friday, August 3, 2007, to Harold F. McFarlane, Nominating Committee Chair, American Nuclear Society, 555 N. Kensington Ave., La Grange Park, IL 60526; [email](#); fax 708/579-8283.

### **ANS Mentor Program**

The ANS Mentor Program pairs up experienced nuclear professionals with students and early-career professionals. Sign up to participate in the ANS Mentor Program at <http://www.ans.org/goto/nad.cgi?id=1180674000-5> (member login required).

## **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.

## MCNPX Workshops

2007 Schedule		
September 3–7	Paris, France	Intermediate
September 17–21	Santa Fe, NM	Advanced

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://mcnp.x.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](mailto:nbutner@lanl.gov) indicating the workshop of interest to you.

### **Short Courses on Monte Carlo Analysis and Nuclear Criticality Safety**

The Department of Nuclear Engineering at the University of Tennessee-Knoxville is offering short courses for radiation transport and criticality safety specialists during Tennessee Industries Week ([TIW-42](#)), August 13–18, 2007.

**Nuclear Criticality Safety**—Engineers, scientists, and technical managers who wish to increase their knowledge and understanding of nuclear criticality safety will be interested in the criticality safety course. The topics covered in the course are based primarily on the experience of the five instructors which totals over 120 years of nuclear criticality safety related experience. Such a wealth of experience needs to be shared with the criticality safety community including both new professionals in the field as well as experienced professionals.

**Monte Carlo Analysis**—Monte Carlo is often the method of choice to solve complex problems in nuclear criticality safety and radiation shielding. To use Monte Carlo effectively, the analyst must understand the theoretical and computational fundamentals of the method, as well as the computational options available in particular computer tools. Also, it is sometimes advantageous to create new special-purpose Monte Carlo programs to solve particular problems rather than use an existing program. The Monte Carlo course runs for 5 days.

The deadline for registration is July 30, 2007. Classes are limited in size and will be filled on a first-come, first-serve basis. For additional information on these and other courses offered during TIW-42, contact Kristin England at the University of Tennessee, phone (865) 974-5048, email [kengland@utk.edu](mailto:kengland@utk.edu), url <http://www.engr.utk.edu/nuclear/TIW.html>.

## Fall 2007 SCALE Training Courses at ORNL

Date	Title	Description
October 15–19	<b>ORIGEN-ARP/TRITON Course</b>	ORIGEN-ARP: Isotopic depletion/decay and source terms using latest version of ORIGEN TRITON: 2-D reactor physics analysis using NEWT
October 22–26	<b>KENO V.a</b>	CSAS/KENO V.a (including <a href="#">KENO3D</a> and GeeWiz)
October 29– November 2	<b>TSUNAMI* Sensitivity/ Uncertainty Tools Course</b>	1-D and 3-D sensitivity/uncertainty analysis using XSDRNPM and KENO V.a
*Experienced KENO users only		

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](http://www.ornl.gov/sci/scale/course_description.htm).

## **Introductory and Advanced MCNP Visual Editor Training**

Date (Click Date for Info)	Class	Course Content	Location
<a href="#">July 16–20, 2007</a>	Advanced Visual Editor Training for Experienced MCNP/MCNPX Users	<a href="#">Detailed Description</a>	Richland, WA
<a href="#">Sept. 17–21, 2007</a>	Introduction to MCNP using the MCNP/MCNPX Visual Editor	<a href="#">Detailed Description</a>	Richland, WA
<a href="#">Nov. 5–9, 2007</a>	Introduction to MCNP using the MCNP/MCNPX Visual Editor	<a href="#">Detailed Description</a>	Richland, WA

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

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

## 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. 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](mailto: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/>.

## **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>.

## **SCALE TRITON—Multidimensional Transport & Depletion Course**

The OECD NEA Data Bank is offering a SCALE TRITON—Multidimensional Transport & Depletion Course scheduled September 10–14, 2007. This is the first course of this kind organized at the OECD/NEA involving the TRITON sequence of SCALE.

The TRITON sequence in SCALE combines deterministic and Monte Carlo capabilities into a multipurpose transport analysis tool. TRITON can be used to perform cross-section processing for a two-dimensional NEWT transport calculation. NEWT is an arbitrary-geometry, discrete ordinates transport solver that can be used for eigenvalue calculation, critical buckling searches, forward and adjoint flux solutions, cross-section weighting, collapse, and homogenization, and can be used to generate few-group constants for lattice physics calculations. Coupled with ORIGEN-S via TRITON, NEWT is most often used in 2-D depletion calculations. Such calculations can be used to calculate isotopic concentrations as a function of burnup, decay heat, neutron and gamma, source terms, radiotoxicity and dose estimates. Used in lattice physics calculations, TRITON can be used to perform transport branch calculations at each depletion step, and to save lattice physics cross sections and other physics parameters for use in subsequent analysis. NEWT's arbitrary-geometry capability lends it to a wide variety of lattice analyses, including but not limited to PWR, BWR with control blades, VVER, and CANDU and ACR-700 designs. Experienced KENO-VI users will find that NEWT geometry input is based on that of KENO-VI, and exchanging (2-D) models between the two codes is trivial. However, for some inherently three-dimensional configurations, the 2-D solution of NEWT is inadequate; in such cases, the alternative is to use TRITON with KENO V.a or KENO-VI as the transport solver, to accommodate 3-D depletion.

This course will teach attendees how to use NEWT for transport calculations and the use of TRITON for depletion calculations. The course will also instruct users on the use of KENO in place of NEWT for Monte Carlo-based depletion; however, attendees must be familiar with KENO input, as this is not covered within this course.

For more information on the training course, its program, registration form and downloading of a presentation describing the TRITON sequence, please access <http://www.nea.fr/html/dbprog/Newsletter/Triton-2007-registration.html>.

## **Test, Research, and Training Reactors Annual Meeting**

The National Organization of Test, Research, and Training Reactors (TRTR) is holding its 2007 Annual Meeting in Lincoln City, Oregon, September 17–20. A wide range of topics relating to research and test reactor operations, maintenance, security and safety, will be discussed. You are invited to submit abstracts for the 2007 Test, Research and Training Reactor Conference. Conference topics to be considered include:

- Nuclear reactor operations and maintenance, troubleshooting, security and safety
- Research, service, and production activities
- Education, outreach and training programs
- Reactor siting and decontamination and decommissioning activities
- Current regulatory issues for research reactor operators

Abstracts should be 200 to 300 words in length. Deadline for submissions is **June 30, 2007**. Abstracts will be accepted either via e-mail (preferred) or fax (541-737-0480). All accepted authors will receive notification before July 31, 2007. Authors should submit abstracts to [radiation.center@oregonstate.edu](mailto:radiation.center@oregonstate.edu). Information related to the conference can be found at [http://www.trtr.org/Ann\\_Mtg/2007%20meeting/Index.html](http://www.trtr.org/Ann_Mtg/2007%20meeting/Index.html).

## **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/>.

## **“CMPWG-II” Computational Medical Physics Working Group Workshop II**

“CMPWG-II” Computational Medical Physics Working Group Workshop II will be hosted by the University of Florida, in Gainesville on September 30–October 3, 2007. This is the Second Computational Medical Physics Working Group Workshop (“CMPWG-II”). The first workshop was held at Oak Ridge National Laboratory in 2005 and was well-attended. Guest speakers from Shands Hospital Oncology and Radiology will discuss the unique challenges ahead for medical physics simulations in therapy and diagnostic applications. The purpose of this meeting is to provide a technical exchange of ideas and a forum for novel approaches to simulating radiation transport and dosimetry for accurate and efficient assessments for the enhancement of dose assessment, treatment planning, image quality evaluations, calibration, etc. Conference registration is \$300/person, \$100/student participants.

Abstracts of 500–1000 words, due by **August 1, 2007**, may be submitted to [sjoden@ufl.edu](mailto:sjoden@ufl.edu). Full papers in MS-Word or PDF format for approved abstracts are due upon arrival at the workshop and will be published as Technical Proceedings. Instructions for accepted papers will be provided at the time of acceptance, on or before 15 August 2007. “Best” quality full papers presented upon registration will be selected and forwarded for further peer review and publication in a special edition of the *Nuclear Technology Journal*, a publication of the American Nuclear Society. A template will be made available for download at <http://cmpwg.ans.org>. The Technical Program Committee will select the best paper submitted by a graduate.

The conference will be held at the Hilton Hotel and Conference Center; reservations may be made directly with the hotel by specifying the rate code to be supplied later. Questions on facilities related to the workshop can be directed to Geri Roberts, 352-392-1401, x306. For information about the conference, contact Dr. Glenn Sjoden, (352) 392-1401, x323, fax: (352) 392-3380, email: [sjoden@ufl.edu](mailto:sjoden@ufl.edu).

## **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 [guald@bologna.enea.it](mailto:guald@bologna.enea.it), phone 39 051-6098350, fax 39 051-6098003). Details and the latest news regarding the workshop can be found at [http://www.eurados.org/conrad/wg6\\_Bologna.htm](http://www.eurados.org/conrad/wg6_Bologna.htm).



## **10<sup>th</sup> 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, in Obninsk. The following topics are included in the technical program:

- 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](mailto: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](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](mailto:mnhcomsan@menanet.net) or [comsanmn@hotmail.com](mailto:comsanmn@hotmail.com)).

## WM2008



The theme for the WM2008 is “*Phoenix Rising: Moving Forward in Waste Management.*” The conference will be held in Phoenix, Arizona, February 24 – 28, 2008.

The organizing committee has issued the call for papers, which can be found at

<http://www.wmsym.org/pdf/WM08Call.pdf>. The website,

[http://www.wmsym.org/html/wm\\_conference.cfm](http://www.wmsym.org/html/wm_conference.cfm), is open for abstract submission. The

deadline to submit an abstract is August 31, 2007. Papers describing research, development and operational experience over the complete spectrum of nuclear waste activities are requested. Topics are categorized into general tracks which are listed in the Call for Papers. Check the website for updates to conference information often. Technical program questions may be directed to WM08 Program Advisory Committee Chairman Gary Benda at +1-803-345-2170 or email [gbenda@wmarizona.org](mailto:gbenda@wmarizona.org). For non-technical questions related to the Program, authors and speakers may contact: WM Administration at +1-520-696-0399 or [papers@wmarizona.org](mailto:papers@wmarizona.org), or WM Technical Program Coordinator Michelle Rehmann - [michelle\\_rehmann@wmarizona.org](mailto:michelle_rehmann@wmarizona.org).

## PHYSOR'08

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

Main topic areas include:

- Neutronics Calculations and Experiments
- Reactor Analysis Methods
- Fuel and Core Design
- Fuel Cycle Physics
- Advanced Systems
- Nuclear Power and Sustainable Development
- Reactor Materials Challenges
- Nuclear Safety Analysis and Multiphysics
- Experimental Facilities for Safety Research
- Biomedical and Other Non-Power Applications

August 15, 2007, is the opening date for submission of extended summaries of 1,000–1,500 words. The submission deadline is October 5, 2007. Relevant information may be found at <http://www.physor2008.ch/>.

## CALENDAR

### July 2007

Sixth International Symposium on Physical, Molecular, Cellular, and Medical Aspects of Auger Processes, July 5–7, 2007, Harvard Medical School, Boston, MA. Contact: Amin I. Kassis, PhD, Radiation Biology and Experimental Radionuclide Therapy, Harvard Medical School, 200 Longwood Avenue, Boston MA 02115 ( phone 617-432-7777, fax 617-432-2419, email [amin\\_kassis@hms.harvard.edu](mailto:amin_kassis@hms.harvard.edu) or [Auger6@hms.harvard.edu](mailto:Auger6@hms.harvard.edu)) url <http://medapps.med.harvard.edu/Auger6/>.

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

Advanced Visual Editor for Experienced MCNP/MCNPX Users Training, July 16–20, 2007, Richland, WA. Contact: [randyschwarz@mcnpvised.com](mailto:randyschwarz@mcnpvised.com) or [http://www.mcnpvised.com/visedtraining/2007jul\\_adv/2007jul\\_adv.html](http://www.mcnpvised.com/visedtraining/2007jul_adv/2007jul_adv.html).

AAPM Annual Meeting, July 22–26, 2007, Minneapolis, MN. Contact: Lisa Rose Sullivan (email [rose@aapm.org](mailto:rose@aapm.org)) url <http://aapm.org/meetings/07AM/>.

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](mailto:Nikki.Iwert-Bays@inl.gov)) url: <http://www.iac.isu.edu/accapp07/>.

### **August 2007**

42nd Tennessee Industries Week, Specialized Short Courses for Nuclear and Other Industries, Aug. 13–17, 2007, University of Tennessee Main Campus, Knoxville, TN. Contact: Tennessee Industries Week, University of Tennessee, Nuclear Engineering Department, 207 Pasqua Building, Knoxville, TN 37996-2300 (email [kengland@utk.edu](mailto:kengland@utk.edu)) url <http://www.engr.utk.edu/nuclear/TIW/tiw42reg.html>.

### **September 2007**

ICEM'07, the 11th International Conference on Environmental Remediation and Radioactive Waste Management, Sept. 2–6, 2007, Bruges, Belgium. Contact: Gary Benda, WM'07 Conference Organizer, STUDSVIK/RACE, LLC, (phone +1-803-345-2170, email [GBenda\\_use@hotmail.com](mailto:GBenda_use@hotmail.com)) url <http://www.icemconf.com/>.

MCNPX Intermediate Class, Sept. 3–7, 2007, OECD NEA Data Bank - co-sponsored by ORNL/RSICC, Issy les Moulineaux, France. Contact: Cristina Lebetelle, OECD/Nuclear Energy Agency Data Bank (email [programs@nea.fr](mailto:programs@nea.fr), fax +33 1 45241109).

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>.

SCALE TRITON - Multidimensional Transport and Depletion Course, Sept. 10–13, 2007, OECD NEA Data Bank - co-sponsored by ORNL/RSICC, Issy les Moulineaux, France. Contact: Cristina Lebetelle, OECD/Nuclear Energy Agency Data Bank (email [programs@nea.fr](mailto:programs@nea.fr), fax +33 1 45241109).

2007 Decommissioning, Decontamination, and Reutilization Meeting and Expo, Sept. 16–19, 2007, Chattanooga, Tennessee. Contact: Joe Carignan, General Chair (phone 423-875-4555, email [jecarignan@aol.com](mailto:jecarignan@aol.com)) url <http://www.ans.org/meetings/index.cgi?c=t#ddr07>.

TRTR 2007 Annual Meeting, Sept. 17–20, 2007, Lincoln City, Oregon. Contact: Dina Pope, Oregon State University, Radiation Center, Corvallis, OR 97331 (phone 541-737-7052, fax 541-737-0480, [dina.pope@oregonstate.edu](mailto:dina.pope@oregonstate.edu)) or Steve Reese (phone 541-737-2341, fax: 541-737-0480, [steve.reese@oregonstate.edu](mailto:steve.reese@oregonstate.edu)) url [http://www.trtr.org/Ann\\_Mtg/2007%20meeting/Index.html](http://www.trtr.org/Ann_Mtg/2007%20meeting/Index.html).

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](mailto:nbutner@lanl.gov)) url <http://mcnpix.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](mailto:irpa2007@ispb.ro)) url: <http://www.irpa2007romania.com/>.

“CMPWG-II” Computational Medical Physics Working Group Workshop II, Sept. 30–Oct 3, 2007, University of Florida-Gainesville. Contact: Dr. Glenn Sjoden, (352) 392-1401, x323, fax: (352) 392-3380, email: [sjoden@ufl.edu](mailto:sjoden@ufl.edu).

### **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 [guald@bologna.enea.it](mailto:guald@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, Oct. 1–7, 2007, Obninsk, Russia. Contact: Ms. Elena Zinovieva, Obninsk State Techn. Univ. ([zev@iate.obninsk.ru](mailto:zev@iate.obninsk.ru)).

SCALE Training: ORIGEN-ARP/TRITON Course, Oct. 15–19, 2007, Oak Ridge National Laboratory, Oak Ridge, TN. Information and registration can be found at <http://www.ornl.gov/sci/scale/training.htm>.

SCALE Training: KENO-VI Course, Oct. 22–26, 2007, Oak Ridge National Laboratory, Oak Ridge, TN. Information and registration can be found at <http://www.ornl.gov/sci/scale/training.htm>.

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

SCALE Training: TSUNAMI Sensitivity/Uncertainty Tools Course, Oct. 29–Nov. 2, 2007, Oak Ridge National Laboratory, Oak Ridge, TN. Information and registration can be found at <http://www.ornl.gov/sci/scale/training.htm>.

### **November 2007**

NUPPAC '07, Nov. 17–21, 2007, Luxor, Egypt. Contact: Prof. Dr. M.N.H. Comsan, Chairman of NUPPAC' 07, Egyptian Nuclear Physics Association (ENPA), 3 Ahmed Elzomor St., Elzohour District, Nasr City, Cairo, Postal Code 11787, Egypt (phone 202-4021018, fax 202-2876031, email [mnhcomsan@menanet.net](mailto:mnhcomsan@menanet.net) or [comsanmn@hotmail.com](mailto:comsanmn@hotmail.com)) url: [http://www.geocities.com/Athens/Library/7348/NUPPAC\\_07.html](http://www.geocities.com/Athens/Library/7348/NUPPAC_07.html).

### **February 2008**

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

### **April 2008**

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

### **September 2008**

PHYSOR'08, Sept. 14–19, 2008, Interlaken, Switzerland. Contact: [info@physor2008.ch](mailto:info@physor2008.ch), url <http://www.physor2008.ch/>.

### **November 2008**

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