Radiation Safety Information Computational Center

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The prudent, penniless beginner in the world labors for wages for a while, saves a surplus with which to buy tools or land for himself another while, and at length hires another new beginner to help him. This is the just, and generous and prosperous system which opens the way to all, gives hope, to all, and consequently energy, and progress, and improvement of conditions to all.—Abraham Lincoln

RSICC funding codes have changed and all registrations must be updated.

CHANGES TO THE RSICC CODE AND DATA COLLECTION

CCC-737/GENII 2.09

Pacific Northwest National Laboratory, Richland, Washington, contributed a new version of this environmental radiation dosimetry software system. FRAMES 1.701/GENII 2.09 is an update to GENII 2.06. The GENII system includes capabilities for calculating radiation doses following chronic and acute releases. Radionuclide transport via air, water, or biological activity may be considered. Air transport options include both puff and plume models—each allow use of an effective stack height or calculation of plume rise from buoyant or momentum effects (or both). Building wake effects can be included in acute atmospheric release scenarios. The code provides risk estimates for health effects to individuals or populations; these can be obtained using the code by applying appropriate risk factors to the effective dose equivalent or organ dose. In addition, GENII Version 2 uses cancer risk factors from Federal Guidance Report 13 to estimate risk to specific organs or tissues. Although the codes were initially developed at Hanford, they were designed with the flexibility to accommodate input parameters for a wide variety of generic sites.

The code system also provides interfaces through the Framework for Risk Analysis in Multimedia Environmental Systems (FRAMES) for external calculations of atmospheric dispersion, geohydrology, biotic transport, and surface water transport. Target populations are identified by direction and distance (radial or square grids for Version 2) for individuals, populations, and for intruders into contained sources. GENII 2.09 added significant new functionality over GENII 2.06.

GENII V.2 runs on Pentium computers under Windows. Executables included in this package were tested under Windows XP and Windows 2000. They have also been installed and a few problems have been run under the new Windows Vista and 7 operating systems. The GENII developer created these executables under Windows using Visual Basic 6 for the interfaces and Digital Visual Fortran for GENII modules. Source codes are not included in this distribution. References: PNNL-14583, Rev. 3 (December 2009) and PNNL-14584, Rev. 3 (December 2009). Pentium running Windows; Fortran and Visual Basic (C00737PCX8601).

CCC-759/TITAN 1.19

TITAN 1.19 is a three-dimensional deterministic radiation transport code system contributed by the University of Florida, Gainesville. TITAN is a time-independent deterministic radiation transport simulation code in 3-D Cartesian geometry. The hybrid approach in the TITAN code allows different transport solvers (Sn or ray-tracing) to be applied in different regions. TITAN solves both the k-effective and fixed-source forward/adjoint problems. It has been benchmarked on a number of OECD/NEA benchmark problems.

The extra sweep with fictitious quadrature technique enables TITAN to simulate the SPECT (Single Photon Emission Computed Tomography) projection images which are generally performed by Monte Carlo codes. A benchmark using the TITAN code on a torso phantom has been established. In the TITAN SPECT simulation, collimators are not explicitly simulated. Instead, a technique called circular ordinate splitting is used to simulate the collimator blurring effects.

TITAN numerically solves the time-independent first order transport equation (linear Boltzmann equation) using a hybrid discrete ordinate (Sn) and ray-tracing method. Two transport solvers, an Sn solver and a ray-tracing solver, are integrated in the TITAN code. Both solvers work on the coarse mesh level in Cartesian geometry. Generally, a TITAN problem model contains more than one coarse mesh. This allows users to apply different solvers to different coarse mesh. This feature can be useful for problems containing a large region of low scattering medium. In such regions the Sn method requires finer angular and spatial meshing and becomes less efficient. The transport equation in such regions is solved more efficiently by the TITAN ray-tracing solver, which is essentially a 3-D method of characteristics solver that applies to an individual coarse mesh, instead of the whole spatial domain. Currently the ray-tracing-solver applies only on coarse mesh with one material region and the total cross-section of the material should be close to zero to qualify as ‘low scattering’ medium. For a multi-region regular coarse mesh the Sn solver should be used. TITAN uses the object oriented programming paradigm with a layered and modular structure.

What’s new in Version 1.19:

1. directional fixed source support,
2. boundary surface source support,
3. fixed source calculation with fissionable materials, and
4. various bug fixes and improvements.

Titan 1.19 was tested on X86 computers under Windows 7 and Linux platforms. The package is transmitted on CD in Windows format and includes an installation procedure, executables, sample input and output and documentation. Fortran; X86 (RSICC ID: C00759PCX8601).

CCC-768/NRCDose72 1.1.8

Chesapeake Nuclear Services, Inc., Annapolis, Maryland, contributed an updated version of NRCDose72, a Code System for Evaluating Routine Radioactive Effluents from Nuclear Power Plants with Windows Interface. NRCDose72 is a software program developed as a user interface for the Fortran programs LADTAP II, GASPAR II, and XOQDOQ and provides a user-friendly interface for running the codes on a PC. These codes provide an accepted regulatory basis for assessing doses to the public as required for the licensing assessments for both license renewal and new build nuclear plants. Chesapeake Nuclear Services undertook an effort to update the dose conversion factors (DCFs) used in NRCDose72 to the factors reported in ICRP-72, naming the new program NRCDose72. The original NRCDose72 program is equipped to perform calculations with up to 169 radionuclides, seven organs (bone, liver, total body, thyroid, kidney, lung, and GI-LLI) and four age ranges (infant, child, teenager, and adult). The ICRP-72 methodology contains additional parameters, including dose factors for 25 discrete organs, plus a remainder organ and effective DCF. Also, there are a total of six different age ranges (newborn, 1-yr. old, 5-yr. old, 10-yr. old, 15-yr. old, and adult). Finally, ICRP-72 contains DCFs for a variety of chemical forms (for example, H-3 as vapor or organically bound tritium) or inhalation classes (F, M or S for nearly all radionuclides).

Recent modifications in NRCDose72 include:

1. updates to the CR51 ingestion dose factors, ground exposure and water immersion dose factors, and noble gas total body and skin dose factors (v1.1.6),
2. updates to the LADTAP72 module—corrections to irrigated food pathway handling to ensure correct ordering of the Vegetable, Leafy Vegetables, Milk, and Meat pathways [The size of the report viewing dialog was also increased to display the entire report (v1.1.7)], and
3. LADTAP72—corrected irrigated food pathway handling when modifying an existing pathway (v1.1.8).

NRCDose72 was tested on Pentium computers under Windows XP and Windows 7. 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 and includes an installation procedure, PC executables, data files and documentation. Fortran and Visual Basic; Pentium (RSICC ID: C00768PCX8600).

ANS News

2010 ANS Election Results

The results of the 2010 ANS national election have been announced.

Vice-President / President-Elect

Eric P. Loewen

US At-Large Board of Directors

Carol L. Berrigan
Sama Bilbao y Leon
Jack S. Brenizer, Jr.
Donald R. Hoffman

Non-US At-Large Board of Director

Daniel A. Meneley

Awards

Murray Gell-Mann, Robert Andrews Millikan Professor Emeritus at the California Institute of Technology, was awarded the *2010 National Award of Nuclear Science and History* by the National Museum of Nuclear Science and History Foundation. It was presented to him on March 20 in Albuquerque, New Mexico, “for his impact on nuclear issues through his numerous accomplishments, including the discovery of quarks.” Dr. Gell-Mann is a distinguished fellow at the Santa Fe Institute and a 1969 Nobel laureate for his work on the theory of elementary particles.

Obituaries

John O. Bradfute, 84, died February 15. He was a veteran of the U.S. Army Air Corps, having served during WWII. He earned his bachelor's and master's degrees at Ohio State University in chemical engineering. He worked for several companies, including Aerojet where he evaluated nuclear rocket tests. He joined the U.S. Nuclear Regulatory Commission in 1985 and remained until he retired in 1993.

Richard A. Hartfield, 78, died March 13. He earned a bachelor's degree in engineering from Renssaelaer Polytechnic Institute. He retired from the NRC after 33 years of service.

Gerald St. Leger-Barter, 79, died February 8. He earned a bachelor's degree in electrical engineering at the University of Cincinnati. He served in the U.S. Army and worked with General Electric. He joined the Lawrence Livermore National Laboratory where he monitored underground tests.

John Joseph Manning, age 84, passed away April 28, 2010. He served honorably as a Seaman, First Class in the U.S. Navy during World War II, receiving the Victory Medal, American Theatre Medal, Asiatic-Pacific Medal and the Philippine Operations Medal. After the war, he earned a Bachelor of Science degree in Education at Austin Peay University and the University of Tennessee and a Master of Science in Water Resources Management from the University of Tennessee. He worked as an analytical chemist, senior reactor operator, and shift supervisor during his employment at Oak Ridge National Laboratory.

Thomas H. Pigford, 87, died February 28. He was an ANS Fellow and a charter member. He served in the U.S. Navy during WWII. He earned his bachelor's degree in chemical engineering at Georgia Tech and a doctorate at MIT. He joined MIT where he helped establish the graduate program in nuclear engineering. He was a founding staff member of General Atomics and became a senior scientist at Lawrence Berkeley National laboratory, as well as professor and chair of the Department of Nuclear Engineering at the University of California at Berkeley. During his terms as department chair he led the effort to construct the school's research reactor. He served on the President's Commission on the Accident at Three Mile Island and co wrote *Nuclear Chemical Engineering* with Manson Benedict.

CONFERENCES, COURSES, SYMPOSIA

RSICC attempts to keep its users and contributors advised of conferences, courses, and symposia in the field of radiation protection, transport, and shielding through this section of the newsletter. Should you be involved in the planning/organization of such events, feel free to send your announcements and calls for papers via email to riceaf@ornl.gov with "conferences" in the subject line by the 20th of each month. Please include the announcement in its native format as an attachment to the message. If the meeting is on a website, please include the url.

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

TRAINING

Introductory MCNP, Advanced MCNP, and 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.

Date 2010	Class	Location
June 28–30	CAD to MCNP	Seattle, WA
July 12–16	Introduction to MCNP using the MCNPX Visual Editor	Anaheim, CA
July 29–23	Intermediate MCNP Visual Editor	Las Vegas, NV
August 2–4	Visualization of MCNP Data	Seattle, WA
September 13–17	Introduction to MCNP using the MCNPX Visual Editor	Myrtle Beach, SC
November 15–19	Introduction to MCNP using the MCNPX Visual Editor	Las Vegas, NV

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

2010 Classes		
Date	**Class**	**Location**
August 16–20	Intermediate MCNPX	Seattle, WA
September 20–24	Intermediate MCNPX	Virginia Beach, VA
October 25–29	Intermediate MCNP5/MCNPX	Barcelona

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 is tentative, as workshops may be added, removed, or modified throughout the year, depending on user interests.

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). Workshops with fewer than 15 registrants on the early registration date are subject to cancellation or rescheduling.

In order to process non-U.S. citizens by the class date, non-U.S. citizens must register at least 6 weeks prior to the start of the training class. All non-U.S. 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, http://mcnpx.lanl.gov/. To register send an email to Randy Schwarz, indicating the workshop of interest to you.

NEA PENELOPE-2008 Course and Workshop

Training course on Electron-Photon Transport Modeling with PENELOPE-2008, Physics, Code Structure and Operation, 5–8 July 2010, Universitat de Barcelona, Barcelona, Spain. The 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 2008 version 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. 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. The syllabus, registration, and other information can be found at http://www.nea.fr/dbprog/courses/PENELOPE-syllabus2010.html.

ORAU Offers Health Physics and Radiation Safety Training

ORAU is pleased to offer the following courses. If you wish to discuss having a customized course delivered at your site, please contact Paul Frame at 865-576-3388 or Paul.Frame@orau.org.

Course	Dates
Radiation Safety Officer Training	June 21–25, 2010
NEW—MARSAME	August 31–September 3, 2010
Applied Health Physics	September 13–October 15, 2010
Air Sampling for Radioactive Materials	October 18–22, 2010
Radiation Medicine for Safety Professionals	November 1–5, 2010
Introduction to Radiation Safety	November 8–12, 2010
MARSSIM	November 29–December 3, 2010
Gamma Spectroscopy	December 6–10, 2010
MARSSIM	January 10–14, 2011
Site Characterization in Support of Decommissioning: Planning, Implementation, and Evaluation	January 24–28, 2011
Applied Health Physics	February 28–April 1, 2011
CHP Part I Review	April 5–7, 2011
Gamma Spectroscopy	April 11–15, 2011

UNM Short Courses

The University of New Mexico Department of Chemical and Nuclear Engineering is offering the following short courses:

- Nuclear Critality Safety Manager's Workshop, 13–15 July 2010, http://www-chne.unm.edu/crit/information.htm
- Nuclear Critality Safety Short Course, 19–23 July 2010, http://www-chne.unm.edu/crit/information.htm
- Assessments & Critality Safety Evaluations Workshop, 27–29 July 2010, http://www-chne.unm.edu/crit/information.htm

All courses are held at the Embassy Suites Hotel in Albuquerque, New Mexico. You may contact: Cheryl M. Brozena at cbrozena@unm.edu for details.

CONFERENCES

AFRIRPA 2010

The Eastern Africa Association for Radiation Protection (EAARP) invites you to the 3rd African Regional IRPA Congress (AFRIRPA 2010) in Nairobi, Kenya, September 13–17, 2010. The theme is "Strengthening Radiation Protection Infrastructures in Africa: Towards Establishing Effective and Sustainable Regional Cooperation and Networks." AFRIRPA 2010 is co-sponsored by the International Atomic Energy Agency (IAEA), World Health Organization (WHO), International Radiation Protection Associaton (IRPA), the Government of Kenya, and others. It is organized in collaboration with the Association Marocaine de Radioprotection (AMR), South African Radiation Protection Association (SARPA) and Egyptian Radiation Protection Association (Egypt-IRPA).

AFRIRPA 2010 will attract radiation protection professionals; users and manufacturers of radiation technologies; service providers; regulators; governmental, non-governmental and international organizations; and members of the general public. It will provide a platform to share the latest scientific updates, current developments, and future trends in radiation technology and radiation protection.

For information on registration, as well as sponsorship and exhibition opportunities, contact: Amidu Mustapha (email amustapha@uonbi.ac.ke, info@eaarp.or.ke, or eaarp@yahoo.co.uk). The conference website is http://www.eaarp.or.ke.

SNA & MC 2010

Japan Atomic Energy Agency is organizing the Joint International Conference on Supercomputing in Nuclear Application + Monte Carlo 2010 Tokyo (SNA + MC2010) to be held in Tokyo, October 17–20, 2010, at the Hitotsubashi Memorial Hall. The conference is designed to discuss computational science, technology and applications concerning nuclear research and Monte Carlo simulation from wide viewpoints. The conference is mainly composed of plenary and technical sessions. Submitted papers will be presented in oral or poster sessions. It is planned that papers of high quality will be peer reviewed and published in special issues of *Journal of Nuclear Science and Technology*. Student awards will be given to young students presenting outstanding work. Bookmark the website, http://www.sna-mc-2010.org/, to keep abreast of developments for the meeting. You may also contact CCSE, Japan Atomic Energy Agency 8F, Sumitomo-Ueno Bldg. No.8 , 6-9-3 Higashi-Ueno, Taito-ku, Tokyo 110-0015, Japan (email: info@sna-mc-2010.org or fax: +81-3-5246-2537).

3D S.UN.COP 2010

The Nuclear Research Group of San Piero a Grado (GRNSPG) of University of Pisa (UNIPI), the Institute for Energy (IE) of the Joint Research Center (JRC) of European Commission (EC), 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 2010).

The Seminar will take place from October 18–22, 2010, in Amsterdam, and October 25–November 5, 2010, at the Institute for Energy (IE) of JRC in Petten (The Netherlands). The deadline for registration is June 15, 2010. 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, GEH) Coupling Methodologies and Code Hands-on Training (e.g. RELAP, CATHARE, PARCS, TRACE, Star-CD) and Special

Sessions devoted to Computational Fluid Dynamics, Severe Accident Analysis, WEER and CANDU Technologies and GEN-IV;

3) Advanced User Training, including Code Hands-on Training for Transient Analysis and Foundation of Statistical Methods.

Further details will be available at: http://nrgspg.ing.unipi.it/3dsuncop.

INES-3

The Third International Symposium on Innovative Nuclear Energy System - Innovative Nuclear Technologies for Low-Carbon Society (INES-3) will be held on October 31–November 3, 2010, at Tokyo Institute of Technology, Tokyo, Japan. The Symposium aims to summarize recent research activities relevant to the development of innovative nuclear reactor systems and innovative separation/ transmutation systems with a broad perspective and flexible ideas for realization of a low-carbon society. The symposium is organized by the Center for Research into Innovative Nuclear Reactors, CRINES and Tokyo Tech. Conference topics include:

1. Innovative reactors
2. Innovative transmutation and separation systems
3. Fuel cycles including HLW disposal and nuclear nonproliferation issues
4. Innovative nuclear energy systems
5. Innovative neutron utilization
6. Materials for innovative nuclear energy systems

Please refer to the conference webpage, http://www.nr.titech.ac.jp/ines3/, for information regarding the submission of abstracts, registration, etc. You may also contact Yukitaka Kato, Associate Professor, CRINES, Tokyo Institute of Technology, 2-12-1-N1-22, Ookayama, Meguro-ku, Tokyo, 152-8550, Japan (phone/fax +81 3 5734 2967, email ines3@nr.titech.ac.jp).

CONTE 2011

The 2011 Conference on Nuclear Training and Education (CONTE 2011) will be held in Jacksonville, Florida, February 6–9, 2011. A call for papers has been issued for summaries on the following topics:

1. Human Performance Improvement
2. Workforce Planning/Recruiting
3. Personnel Training/Qualification/Education
4. Accreditation
5. Developing Educational Partnerships – University/Industry/Government
6. Engineering Education/Distance Learning
7. Leadership Development
8. International Perspectives
9. Training for New Nuclear Power Facilities

Summaries must be submitted using the ANS Template and “Guidelines for Summary Preparation” provided on the ANS Web site, www.ans.org, by **October 29, 2010**. General chair of the meeting is Stephen Kuczynski, Senior VP of Engineering and Technical Services, Exelon Nuclear. For further information, please visit the ANS website, www.ans.org/meetings.

NETS-2011

The Nuclear and Emerging Technologies for Space (NETS-2011) topical meeting will be held February 7-10, 2011, in Albuquerque, NM. The meeting is sponsored by the ANS Aerospace Nuclear Science and Technology Division and the ANS Trinity Section. NETS-2011 will address strategies for implementing advanced power and propulsion technologies, as well as radiation shielding protection, in support of manned and unmanned missions into space. It will provide a communications network and forum for information exchange for the wide cross section of research and management personnel from government, industry, academia, and the national laboratory system that are involved in space nuclear activities. Papers may be submitted by **August 9, 2010**, on the following topics:

Track I: Missions and Architectures
- Space Science Missions
- Exploration Missions
- Spacecraft Concepts
- Lunar and Mars Surface Concepts
- Mission Analysis and Validation Missions
- Space Policy

Track II: Fission Power and Propulsion
- Reactor Design
- Shield Design
- Reactor Simulation
- Power Conversion
- Supporting Technologies (including Heat Rejection and Power Management and Distribution)
- Nuclear Electric Propulsion Systems
- Tools and Modeling
- Testing and Validation
- Materials and Radiation Testing

Track III: Radioisotope Power SYSTEMS
- Isotope Heat Sources
- Stirling Power Conversion
- Thermoelectric Power Conversion
- Advanced Power Conversion
- Mechanical, Thermal, and Electrical Integration
- Tools and Modeling
- Testing and Validation

Track IV: Nuclear Thermal Propulsion
- Fuel Development
- History
- Design Concepts
- System Integration
- Tools and Modeling
- Testing and Validation

Track 5: Advanced Concepts
- Multi-Megawatt Systems
- Fusion

Registration, program, exhibit, and other information may be found on the conference website at http://anstd.ans.org/NETS2011/AboutNETS2011.htm.

PSA 2011

The 2011 Probabilistic Safety Analysis conference (PSA 2011) will be held in Wilmington, North Carolina, March 13–17, 2011. The conference is sponsored by the ANS Nuclear Installations Safety Division (NISD) and the Wilmington Area Local Section of the ANS (WLS). Those who intend to submit a paper should contact Dennis@psa2011.org.

Papers describing significant work may be submitted electronically beginning September 2010 on the following topics:

Accident Analysis Level 2 & 3
Advanced Nuclear Systems
Dynamic PSA
Common Cause Failures
Computer Codes
Configuration Risk Management
Digital I&C
Cyber Security
Environmental Impact
Fire and NFPA 805
Flooding PSA
Fuel Cycle (Proliferation Risk)
Generation Risk (All operating modes)
Human Reliability
Human Factors and Behavioral Sciences
Incorporation of Ageing Aspects
Low Power / Shutdown PSA
Next-Generation Reactors
Non-Light Water Reactor
Mitigating Systems Performance Index (MSPI) Issues
NASA and Space Applications
Natural Hazards and External Events
Non-Reactor, Nuclear Applications
Parameter and Modeling Uncertainty
Passive Systems Safety
Proliferation Risk
PSA Challenges – Manpower
PSA in DOE Facilities (Panel)
PSA Standards Development
Reliability Centered Maintenance
Risk Informed Plant Security

Risk Informed Regulation & Licensing
Risk Perception and Communication
Safety Culture & Organizational Factors
Safety Margins and PSA
Significance Determination Process (SDP) Issues
Seismic PSA
Software Reliability and Data Analysis
Spent Fuel & Rad Waste Issues
Standardized Plant Analysis Risk (SPAR) Models Status
Standards and Peer Reviews
Structural Reliability Methods
PSA Training and Education
Transportation Risks
Waste Management and Decommissioning

Bookmark and check the conference website at http://meetingsandconferences.com/psa2011/ often to remain informed about deadlines and activities.

MTAA 13

Texas A&M will host the 2011 Modern Trends in Activation Analysis (MTAA-13) Conference March 13–18, 2011—fifty years after the first MTAA conference also hosted by the what was then the A&M College of Texas. The scope of the conference will include activation analysis methodology, methodological enhancements, applications of activation analysis to the fields of energy, environment, biology and medicine, geology, archaeology, homeland security, etc. However, this conference will broaden the subject matter somewhat in that it will invite and entertain contributed presentations from all areas of nuclear analytical methods as well as competing technologies.

Conference organizers will provide incentives to selected potential attendees in the form of travel awards. We anticipate making up to twelve awards to students and another twelve to young scientists who submit applications. Awardees will be expected to participate in the meeting by submission of abstracts and manuscripts to the proceedings. While financial need will be considered, recipients will be those considered by the conference organizers to be most likely to provide meaningful participation and future advancement of the science. Details concerning application procedures and criteria for selection will appear in subsequent announcements as well as the conference website.

Make sure you are on the conference contact list by completing the form found at: https://tti.tamu.edu/conferences/mtaa13/registration_interest.htm. Information on the conference will be posted to http://tti.tamu.edu/conferences/mtaa13/. You may also contact William D. (Dennis) James, Center for Chemical Characterization and Analysis, Texas A&M University, 3144 TAMU, College Station, TX 77843-3144 (phone 979 845-7630, email wd-james@tamu.edu).

MC 2011

The 2011 International Conference on Mathematics and Computational Methods applied to Nuclear Science and Engineering (MC 2011) will be held in Rio de Janeiro, May 8–12. The conference will provide an international forum for scientists to present their most recent work and exchange ideas on a powerful class of methodologies extensively used for solving mathematical models of physical phenomena and processes applied to nuclear science and engineering. One of the aims is to promote new research tools and procedures that help link mathematics, applied sciences and technology. Therefore, MC 2011 will offer an opportunity for direct information exchange between participants from both academia and industry. The interdisciplinary technical program will consist of plenary sessions, workshops, parallel oral presentation sessions and poster sessions. Papers may be submitted electronically by **October 31, 2010**, on the following subject categories:

- Accelerator and Subcritical Systems
- Advanced Nuclear Reactor Concepts
- Atmospheric and Ocean Radiative Transfer
- Computational Fluid Dynamics and Thermal Hydraulics
- Deterministic and Stochastic Neutral and Charged Particle Transport Modeling

- High-Fidelity Multiphysics Simulations
- Medical Physics
- Nuclear Chemistry
- Nuclear Criticality Safety
- Nuclear Data Evaluation and Application
- Nuclear Fuel Cycle
- Nuclear Fuels
- Nuclear Geophysics
- Nuclear Materials Sciences
- Nuclear Non-Proliferation and Homeland Security
- Nuclear Production of Hydrogen
- Nuclear Radiation Shielding and Dosimetry
- Nuclear Reactor Analysis
- Optimization, Data Assimilation and Artificial Intelligence
- Plasma Physics/Fusion
- Radiobiology
- Structural Mechanics
- Uncertainty Quantification
- Verification and Validation

General Chair of the meeting is Cassiano de Oliveira (cassiano@unm.edu). Bookmark the conference website, http://www.mc2011.org, to keep abreast of conference information.

ISRD-14

The 14th International Symposium on Reactor Dosimetry (ISRD-14) will be held May 22–27, 2011, at the Omni Mount Washington Resort, Bretton Woods, New Hampshire. This Symposium is held approximately every three years to provide a forum for the interchange of state-of-the-art techniques, data bases and standardization of radiation metrology. The Symposium will be of value to those involved in reactor dosimetry, including researchers, manufacturers and representatives from industry, utilities and regulatory agencies. The Symposium is jointly sponsored by ASTM International and the European Working Group on Reactor Dosimetry (EWGRD). It is organized by ASTM Committee E10 on Nuclear Technology and Applications.

The Symposium theme is dosimetry for the assessment of irradiated reactor materials and reactor experiments, featuring radiation metrology techniques, data bases and standardization. Under this theme, summaries must be submitted electronically by **September 10, 2010** in the following areas:

- Reactor surveillance and plant-life management
- Data evaluation, uncertainty analysis, and adjustment methods
- Retrospective dosimetry and decommissioning
- Dosimetry for assessment of reactor structural materials
- Neutron and gamma-ray transport calculations
- Dosimetry for core characterization and reactor physics
- Characterization of neutron and gamma-ray environments
- Damage correlation and exposure parameters
- Monitoring of irradiation experiments
- Nuclear data for dosimetry
- Benchmarking, calibrations and standards
- Fusion and high-energy neutrons
- Reactor and accelerator neutron sources
- Irradiation processing and testing of electronics
- Experimental techniques, new developments and optical methods
- Dosimetry for space nuclear power

Papers in these and other areas are expected to cover such applications as fission and fusion energy research and test and research reactor experiments. Health physics papers are outside the scope of this Symposium. The Symposium will be organized into oral and poster presentations, as well as informal round-table workshops. The meeting language will be English. All papers presented at the symposium

will be subject to peer-review before acceptance for publication in the on-line *Journal of ASTM International*. Bookmark the conference website, http://www.reactordosimetry.com/, to remain current with conference information.

CALENDAR

June 2010

Shielding Aspects of Accelerators, Targets and Irradiation Facilities (SATIF-10), June 2–4, 2010, Geneva, Switzerland. Contact: Marco Silari (Marco.Silari@cern.ch) url: http://www.cern.ch/SATIF-10.

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 npae-kyiv2010@kinr.kiev.ua) url: http://www.kinr.kiev.ua/NPAE-Kyiv2010.

Nuclear Power Europe, June 8–10, 2010, Amsterdam. Contact: Denne Johnson (phone +1 918 832 9264, email dennej@pennwell.com) url http://www.nuclearpower-europe.com/index.html.

ANS Annual Meeting, June 13–17, 2010, San Diego, CA. Contact: url http://www.new.ans.org/meetings/file/133.

IRPA 2010 Europe, June 14–18, 2010, Helsinki. Contact: IRPA 2010 Congress Secretariat, CONGREX / Blue & White Conferences Oy, P.O.Box 81, FI-00371 Helsinki, Finland (phone +358 9 5607 500, fax +358 9 5607 5020, email irpa2010europe@congrex.fi) url http://www.irpa2010europe.com/.

Imaging for Treatment Assessment in Radiation Therapy (ITART 2010), June 21–22, 2010, National Harbor, MD. Contact: Corbi Foster (corbi@aapm.org) url: http://www.aapm.org/meetings/2010ITART/.

2010 - LAS-ANS Symposium on "New Technologies for the Nuclear Fuel Cycle," June 21–25, 2010, Rio de Janeiro. Contact: Cláudio Almeida, CNEN – Rua General Severiano 90, 22290-901, Rio de Janeiro – Brazil (phone (+55-21) 2173-2108, fax (+55-21) 2173-2103, email almeida@cnen.gov.br) url http://www.las-ans.org.br/.

July 2010

International Youth Nuclear Congress, IYNC2010, July 12–18, 2010, Cape Town, South Africa. Contact: http://www.iync.org/iync-2010.html.

August 2010

2010 ASME Fluids Engineering Division Summer Meeting Symposium on "Application of Best Estimate and Uncertainty Methods," Aug. 1–4, 2010, Montreal. Contact: http://www.asmeconferences.org/FEDSM2010.

International Course on Thermalhydraulics of Light Water Reactors, Aug.23–Sept 3, 2010, Saclay, France.

September 2010

African Regional IRPA Congress (AFRIRPA 2010), Sept. 13–17, 2010, Nairobi, Kenya. Contact: Amidu Mustapha (email amustapha@uonbi.ac.ke, info@eaarp.or.ke, or eaarp@yahoo.co.uk) url http://www.eaarp.or.ke/ .

October 2010

Supercomputing in Nuclear Application and the 3rd Monte Carlo (SNA + MC2010), Oct. 17–20, 2010, Tokyo. Contact: CCSE, Japan Atomic Energy Agency, 8F, Sumitomo-Ueno Bldg. No.8, 6-9-3 Higashi-Ueno, Taito-ku, Tokyo 110-0015, Japan (email info@sna-mc-2010.org, fax +81-3-5246-2537) url: http://www.sna-mc-2010.org/.

3D S.UN.COP 2010, Oct. 18–22, 2010, Amsterdam, and Oct. 25–Nov. 5, 2010, Petten, The Netherlands. Contact: Alessandro Petruzzi (email: a.petruzzi@ing.unipi.it, fax 0039 050 2210384) url http://nrgspg.ing.unipi.it/3dsuncop.

International Symposium on Innovative Nuclear Energy System (INES-3), Oct. 31–Nov. 3, 2010, Tokyo. Contact:Yukitaka Kato, Associate Professor, CRINES, Tokyo Institute of Technology, 2-12-1-N1-22, Ookayama, Meguro-ku, Tokyo, 152-8550, Japan (phone/fax +81 3 5734 2967, email ines3@nr.titech.ac.jp) url http://www.nr.titech.ac.jp/ines3/.

November 2010

2010 ANS Winter Meeting and Nuclear Technology Expo, Nov. 7–11, 2010, Las Vegas, NV. Url: http://www.new.ans.org/meetings/c_1.

February 2011

Conference on Nuclear Training and Education (CONTE 2011), Feb. 6–9, 2011, Jacksonville, Florida. Contact: Stephen Kuczynski, Senior VP of Engineering and Technical Services, Exelon Nuclear. The website is www.ans.org/meetings.

Nuclear and Emerging Technologies for Space 2011 (NETS 2011), February 7-10, 2011, Albuquerque, NM Url http://www.ans.org/goto/nad.cgi?id=1273294800-1

March 2011

International Topical Meeting on Probabilistic Safety Assessment and Analysis (PSA 2011), March 13-17, 2011, Hilton Wilmington Riverside, Wilmington, NC. Meeting information: http://www.ans.org/goto/nad.cgi?id=1273208400-24

Modern Trends in Activation Analysis (MTAA-13), March 13–18, 2011, College Station, TX. Contact: William D. (Dennis) James, Center for Chemical Characterization and Analysis, Texas A&M University, 3144 TAMU, College Station, TX 77843-3144 (phone 979 845-7630, email wd-james@tamu.edu) url: http://tti.tamu.edu/conferences/mtaa13/.

May 2011

MC 2011, May 8–12, 2011, Rio de Janeiro, Brazil. Meeting information: http://www.mc2011.org/.

International Symposium on Reactor Dosimetry (ISRD-14), May 22–27, 2011, Bretton Woods, New Hampshire. Contact: Dr. David W. Vehar, Sandia National Laboratories (dwvehar@sandia.gov) url http://www.reactordosimetry.com/.

June 2011

ANS Annual Meeting, June 26–30, 2011, Hollywood, FL. Contact: http://www.new.ans.org/meetings.

Industrial Radiation and Radioisotope Measurement Applications (IRRMA-8), June 26–July 1, 2011, Kansas City, MO. Contact: William L. Dunn, Kansas State University (email dunn@k-state.edu) url http://www.dce.k-state.edu/conf/irrma/.