
Radiation Safety Information Computational Center



Oak Ridge National Laboratory
Post Office Box 2008
Oak Ridge, Tennessee 37831-6003
Managed by
UT-Battelle, LLC
for the U.S. Department of Energy
under contract DE-AC05-00OR22725

phone 865-574-6176 fax 865-241-4046
email PDC@ORNL.GOV
www <http://rsicc.ornl.gov/>

Timothy E. Valentine, Ph.D. - RSICC Director

No. 631

December 2017

*" May your walls know joy, may every room hold laughter,
and every window open to great possibility.*

–Mary Ann Radmacher

TABLE of CONTENTS

TABLE of CONTENTS	1
CHANGES TO THE RSICC CODE AND DATA COLLECTION	2
PSR-614/COBRA-SFS, Cycle 4a.....	2
END USE STATEMENT	2
REGISTRATION REQUIREMENTS.....	3
SINGLE-USER LICENSE AGREEMENT REVISED	3
SCIENCE EDUCATION PROGRAMS AT OAK RIDGE NATIONAL LABORATORY	3
CONFERENCES, TRAINING COURSES, SYMPOSIA.....	4
CONFERENCES.....	4
PHYSOR 2018.....	4
BEPU 2018	5
ESARDA Workshop on Numerical Modelling	5
PHYTRA4	6
American Nuclear Society & Health Physics Society Joint Topical	6
NURER 2018.....	7
TRAINING COURSES.....	8
LANL MCNP6 Class Schedule.....	8

MCNP6 Training	10
Beginning/Advanced Visual Editor Training	10
SYMPOSIA	12
2018 CALENDAR.....	12
2019 CALENDAR.....	12

CHANGES TO THE RSICC CODE AND DATA COLLECTION

There is one update to the RSICC catalog for those individuals that may be interested.

PSR-614/COBRA-SFS, Cycle 4a

Pacific Northwest Laboratory, Richland, Washington has contributed COBRA-SFS (Spent Fuel Storage), a code for thermal-hydraulic analysis of multi-assembly spent fuel storage and transportation systems. It uses a lumped-parameter, finite-difference approach to predict flow and temperature distributions in spent fuel storage systems and fuel assemblies, under forced and natural convection heat transfer conditions, in both steady-state and transients. Derived from the COBRA family of codes, which have been extensively evaluated against in-pile and out-of-pile data, COBRA-SFS retains all the important features of the COBRA codes for single-phase analysis and extends the range of application to problems with two-dimensional radiative and three-dimensional conductive heat transfer. With these added capabilities, COBRA-SFS has been used to analyze various single- and multi-assembly spent fuel storage systems containing unconsolidated and consolidated fuel, with a variety of fill media.

The package is transmitted as a tar file on one CD. The distribution files contain source files, information file, test case input and output. Reference: PNNL-24841 (October 2017). Fortran; Linux, MacOS and Windows (P00614MNYCP01).

END USE STATEMENT

Customers are strongly encouraged to provide full and complete information regarding the intended end use of the software being requested. End use statements that specify that the code is for research, training or educational activities are not sufficient. RSICC's regulators need to know explicitly for what purpose you intend to use the codes and detail needs to be provided. Requests that lack sufficient detail will be rejected.

REGISTRATION REQUIREMENTS

RSICC does not permit individuals to “pre-register” or “pre-order” software for use at a temporary or alternate location. The single user license and export control agreements are specific to the individual’s end use and the location at which the software will be used. During the registration process, individuals are required to provide the name of the institution at which they will use the software, an institutional mailing address and an institutional e-mail address. As an example, students that work at a location other than their university are required to update their registration with RSICC and submit a new request for any software that they intend to use after they have begun work at the new location.

SINGLE-USER LICENSE AGREEMENT REVISED

The single-user license agreement has been revised to address concerns regarding changes in end-use and employment changes of individuals that have received packages from RSICC. In some instances, individuals obtain approvals from our Federal regulators for use of software packages for very specific purposes or while employed or associated with specific organizations. To address this concern, the single-user license agreement has been modified to indicate that the license is only valid for the end-use as stated in the Licensee's request and only while associated with the organization under which the request is being made. After February 1, 2015, the individual's single-user license would no longer be valid if they change their end-use or are no longer associated with the organization for which they obtained the original license. In these cases, the individual would need to submit a new request to RSICC for the package for the new end-use or the new affiliation.

SCIENCE EDUCATION PROGRAMS AT OAK RIDGE NATIONAL LABORATORY

Looking for an internship or post-graduate opportunity at Oak Ridge National Laboratory? The Science Education Programs at Oak Ridge National Laboratory provide paid opportunities for undergraduates, grad students, recent graduates, and faculty to participate in high-quality research alongside world-class scientists to solve real-world problems. Opportunities are available for internships and co-ops, research appointments, and sabbaticals. You can access all available opportunities through the website at <http://www.ornl.gov>. The Talent and Opportunity System allows you to create a profile, and then answer only 5 or 6 questions for each program or job posting for which you apply. All levels of participants from undergraduates to faculty are encouraged to publish research papers with their mentors. Please browse through the Research Profiles on the different participants and their research experiences at the right-hand side of the bottom of the web site listed above. Also, there is a video of research participants at ORNL sharing their thoughts on how access to world-class research facilities and staff has catapulted their careers in science and technology. You can find it on YouTube at <http://ow.ly/2EQLz>.

CONFERENCES, TRAINING COURSES, SYMPOSIA

RSICC attempts to keep its customers 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 walkersy@ornl.gov with “**Conferences for RSICC Newsletter**” in the subject line by the 15th of each month. Please include the announcement in its native format as an attachment to the message. Please provide a website address for the event if one is available. Every attempt is made to ensure that the links provided in the Conference and Calendar sections of this newsletter are correct; however, if the links become unavailable, please call the point of contact for the event.

CONFERENCES

PHYSOR 2018



The American Nuclear Society Reactor Physics Division Topical Meeting, PHYSOR 2018, will be held at the Marriott Casa Magna Hotel, Cancun, Mexico, on **April 22 - 26, 2018**. PHYSOR 2018 will be a venue focusing on both modeling/simulation and experimental aspects of reactor physics, where common aspects and requirements of these two focus areas will be explored. The meeting will also include plenary discussions, technical tours, workshops, and sessions in other topics relevant to the physics of nuclear reactor systems.

Papers are solicited in the following topics:

1. Reactor Analysis Methods
2. Deterministic Transport Theory
3. Monte Carlo Methods
4. Fuel Cycle and Nuclear Criticality Safety
5. Reactor Physics Experiments and Nuclear Data
6. Reactor Concepts and Designs
7. Reactor Operation and Safety
8. Transient and Safety Analysis
9. Education, Research Reactors and Spallation Sources
10. Radiation Applications and Nuclear Safeguards

For more information about PHYSOR 2018, please visit <http://www.physor2018.mx/>.



BEPU 2018

The Best Estimate Plus Uncertainty International Conference will be held **May 13-19, 2018**, in Lucca, Italy. The objective of the Conference is to provide a forum to exchange experience and views among professionals in the nuclear industry in the development and use of Best Estimate Plus Uncertainty (BEPU) methods in safety analyses and design of nuclear installations. Please see the website for more information www.nineeng.com/bepu.

International Workshop on Numerical Modelling of NDA Instrumentation and Methods for Nuclear Safeguards




ESARDA Workshop on Numerical Modelling

The ESARDA Non-Destructive Assay (NDA) Working Group is organizing an international workshop on the topics of computer simulation applied to the modelling of NDA instrumentation and methods for nuclear safeguards applications. It will be held **May 17-18, 2018** in Luxembourg. The two-day event aims to cover a broad range of topics and present a unique opportunity for the safeguards community interested in recent advances and in lessons learned from practical cases. The information about the event can be found at http://www.nusaset.org/index.php?option=com_content&view=article&id=878&Itemid=470.



PHYTRA4

The Fourth International Conference on Physics and Technology of Reactors and Applications will be held **September 17-19, 2018**, in Marrakech, Morocco. This conference will be organized by the Moroccan Association for Nuclear Engineering and Reactor Technology (GMTR) with the collaboration of the National Centre for Energy, Sciences and Nuclear Techniques (CNESTEN) and the Moroccan Agency for Nuclear and Radiological Safety and Security (AMSSNuR) after the resounding success which the previous editions had met. Please see their website for more information at <http://phytra4.gmtr.ma/>.



**APPLICABILITY OF
RADIATION-RESPONSE
MODELS TO LOW DOSE
PROTECTION STANDARDS**

**AMERICAN NUCLEAR SOCIETY & HEALTH PHYSICS SOCIETY
JOINT TOPICAL - SEPTEMBER 30 - OCTOBER 3, 2018
TRI-CITIES, WASHINGTON**

American Nuclear Society & Health Physics Society Joint Topical

The American Nuclear Society and Health Physics Society are co-sponsoring a scientific conference on “Radiation Response Models to Low Dose Protection Standards,” in Pasco, Washington, **September 30 - October 3, 2018**. For additional information contact Alan Waltar, conference chair, alan.waltar@gmail.com, or Darrell Fisher, technical program co-chair, at darrell.fisher@versantphysics.com.



NURER 2018

The 6th International Conference on Nuclear and Renewable Energy Resources (NURER2018) will be held **September 30 - October 3, 2018**, in Jeju, Korea. This is recognized as one of the major international conferences for the exchange of information on scientific, engineering, and other technical aspects of innovative nuclear and renewable energy science and technology. For more details on this conference, please visit their website at <http://nurer2018.org>.

TRAINING COURSES



LANL MCNP6 Class Schedule

Website: <https://laws.lanl.gov/vhosts/mcnp.lanl.gov/classes/classinformation.shtml>

Nov 28 - Dec 1, 2017 Los Alamos, NM	Using NJOY to Create MCNP® ACE Files & Visualize Nuclear Data Non-US citizens must register by 2017-09-25 Tues 10:00 - Fri 5:00	\$1500 or \$1200*
Dec 4-8, 2017 Los Alamos, NM	Introduction to MCNP6 *** FULL *** Non-US citizens must register by 2017-10-02 Mon 10:00 - Fri 12:00	\$1800 or \$1500* ** FULL **
Jan 8-12, 2018 Los Alamos, NM	Introduction to MCNP6 Non-US citizens must register by 2017-10-16 Mon 10:00 - Fri 12:00	\$1800 or \$1500*
Feb 26 - Mar 2 Los Alamos, NM	Criticality Calculations with MCNP6 Non-US citizens must register by 2017-12-04 Mon 10:00 - Fri 12:00	\$1800 or \$1500*
Apr 2-6, 2018 Los Alamos, NM	Introduction to MCNP6 Non-US citizens must register by 2018-01-08 Mon 10:00 - Fri 12:00	\$1800 or \$1500*
Apr 10-13, 2018 Los Alamos, NM	Using NJOY to Create MCNP® ACE Files & Visualize Nuclear Data Non-US citizens must register by 2018-01-15 Tues 10:00 - Fri 5:00	\$1500 or \$1200*
Apr 16-20, 2018	TBD	
Apr 30 - May 4, 2018 Los Alamos, NM	Practical MCNP® for the Health Physicist, Medical Physicist, and Radiological Engineer The above link goes to the LANL Radiation Protection website. See the RP website for class information & registration.	\$1800
May 15-18, 2018 Los Alamos, NM	Unstructured Mesh with Attila4MC Non-US citizens must register by 2018-02-19 Tues 12:30 - Fri 4:30	\$1500 or \$1200*

June 4-8, 2018 Los Alamos, NM	Introduction to MCNP6 Non-US citizens must register by 2018-03-12 Mon 10:00 - Fri 12:00	\$1800 or \$1500*
Aug 6-10, 2018 Los Alamos, NM	Criticality Calculations with MCNP6 Non-US citizens must register by 2018-05-14 Mon 10:00 - Fri 12:00	\$1800 or \$1500*
Aug 13-17, 2018	Introduction to MCNP6 Non-US citizens must register by 2018-05-21 Mon 10:00 - Fri 12:00	\$1800 or \$1500*
Aug 20-24, 2018	Variance Reduction with MCNP6 Non-US citizens must register by 2018-05-28 Mon 10:00 - Fri 12:00	\$1800 or \$1500*
Nov 27-30, 2018 Los Alamos, NM	Using NJOY to Create MCNP® ACE Files & Visualize Nuclear Data Non-US citizens must register by 2018-09-03 Tues 10:00 - Fri 5:00	\$1500 or \$1200*
Dec 3-7, 2018 Los Alamos, NM	Introduction to MCNP6 Non-US citizens must register by 2018-09-10 Mon 10:00 - Fri 12:00	\$1800 or \$1500*

MCNP® and Monte Carlo N-Particle® are registered trademarks owned by Los Alamos National Security, LLC, manager and operator of Los Alamos National Laboratory. Any third-party use of such registered marks should be properly attributed to Los Alamos National Security, LLC, including the use of the ® designation as appropriate. Any questions regarding licensing, proper use, and/or proper attribution of Los Alamos National Security, LLC marks should be directed to trademarks@lanl.gov.



MCNP6 Training











For more information, see the website: http://mcnpvised.com/train_mcnp.html

Current Classes (tuition for all US classes is \$2800 with an early payment discount of \$300)			
Date (Click Date for Info)	Class	Course Content	Location
March 26-30, 2018	MCNP6 Intermediate Workshop	To see an outline for the course, Click Here.	Paris, France
October 1-5, 2018	Intermediate MCNP6 Workshop		Seattle, WA

Beginning/Advanced Visual Editor Training

For more information, see the website: <http://mcnpvised.com/train.html>

Date (Click Date for Info)	Workshop (40 Cont. Ed. credits through American Academy of Health Physics. Click here for AAHP Site. Class number is 2008-00-026 for Vised classes and 2011-00-022 for MCNPX Team Workshops)	Level of Difficulty	Workshop Content	Location
<u>December 4-8, 2017</u>	Using Nucwiz for Rapid Geometry Development and Advanced Analysis	LEVEL 	<u>About Nucwiz</u>	Richland, WA
<u>January 8-12, 2018</u>	Beginning Visual Editor.	LEVEL 	<u>Detailed Description</u>	Las Vegas, NV

<u>February 19-23, 2018</u>	Intermediate Visual Editor for Shielding Calculations		<u>Detailed Description</u>	Barcelona, Spain
<u>March 19-23, 2018</u>	Beginning Visual Editor. The NEA handles registration for this workshop.		<u>Detailed Description</u>	Paris, France
<u>April 9-13, 2018</u>	Beginning Visual Editor.		<u>Detailed Description</u>	Las Vegas, NV
April 16-20, 2018	Using Nucwiz for Rapid Geometry Development and Advanced Analysis		<u>About Nucwiz</u>	Las Vegas, NV
<u>April 23-27, 2018</u>	Advanced Visual Editor with Applications in Mesh Tallies and Variance Reduction.		<u>Detailed Description</u>	Las Vegas, NV
June 4-8, 2018	Using Nucwiz for Rapid Geometry Development and Advanced Analysis		<u>About Nucwiz</u>	Prague, Czech Republic
June 11-15, 2018	Advanced Visual Editor with Applications in Mesh Tallies and Variance Reduction.		<u>Detailed Description</u>	Prague, Czech Republic
August 13-17, 2018	Using Nucwiz for Rapid Geometry Development and Advanced Analysis		<u>About Nucwiz</u>	Las Vegas, NV
August 20-24, 2018	Beginning Visual Editor.		<u>Detailed Description</u>	Las Vegas, NV
August 27-31, 2018	Advanced Visual Editor with Applications in Mesh Tallies and Variance Reduction.		<u>Detailed Description</u>	Las Vegas, NV

SYMPOSIA

2018 CALENDAR

March

NRC Regulatory Information Conference (RIC), March 13-15, 2018, North Bethesda, Maryland.
Website: <https://www.nrc.gov/public-involve/conference-symposia/ric/>.

June

2018 American Nuclear Society (ANS) Annual Meeting, June 17-21, 2018, Philadelphia, Pennsylvania. Website: http://www.ans.org/meetings/c_1.

July

HPS 63rd Annual Meeting, July 15-19, 2018, Cleveland, Ohio. Website:
<http://hps.org/meetings/meeting46.html>.

26th International Conference on Nuclear Engineering - ICONE, July 22-26, 2018, London, England. Website: <http://www.asme.org/events/icon>.

August

20th Topical Meeting of the Radiation Protection & Shielding Division of ANS (RPSD-2018), August 26-31, 2018, Santa Fe, New Mexico. Website: <http://rpsd2018.ans.org>.

September

Pacific Basin Nuclear Conference, September 30-October 5, 2018, San Francisco, California. Website: <http://pbnc.ans.org>.

November

IEEE Nuclear Science Symposium, November 11-17, 2018, Sydney, Australia. Website:
<http://www.nssmic.org/2018/>.

2018 American Nuclear Society (ANS) Winter Meeting, November 11-15, 2018, Orlando, Florida.
Website: http://www.ans.org/meetings/c_1.

2019 CALENDAR

June

2019 American Nuclear Society (ANS) Annual Meeting, June 9-13, 2019, Minneapolis, Minnesota.
Website: http://www.ans.org/meetings/c_1.