AMERICAN NUCLEAR SOCIETY
MATHEMATICS AND COMPUTATION DIVISION

Message from the Chair

Dear M&C Members:

At the close of the June meeting in Anaheim my term as Chair will expire. I would like to give thanks to my predecessor, Bill Martin, for preparing me for the job and also to the other officers, members of the executive committee, and members of the standing committees for their excellent work on behalf of the Division. My successor will be Jasmina Vujic, who for the past year has served as vice chair. I wish her well in the coming year. I would also like to congratulate our newly elected officers and executive committee members. Todd Palmer will be our next chair/chair-elect, Hatice Akkurt our next Secretary and Arzu Alpan our next Treasurer. The new members of the executive committee are Aaron Watson, Jeremy Sweezy, Imre Pazit and Kevin Clarno.

At each June and November ANS meeting, five of the Society's 20 divisions and technical groups present a status report to the Board of Directors. Last November it was our turn. In putting together the presentation, I realized what a diverse and strong group we are. We currently have 1068 members, meaning nearly 10% of all ANS members have joined our division. We also have a budget surplus of over $18k, and that does not yet include the income from the very successful Monterey topical meeting. If you would like to see the presentation, it is on the Professional Divisions Committee web page on the ANS web site (http://www.ans.org/about/committees/pdc/bodpres.html).

Two important topical meetings are coming up in the next year. Our colleagues in the Reactor Physics Division are involved in organizing PHYSOR'08 in Interlaken, Switzerland Sept. 14-19, 2008. Then, May 3-7, 2009 our own M&C 2009 conference will take place in Saratoga Springs, NY. The call for papers is reproduced in this newsletter. The meeting of the M&C 2009 International Technical Program Committee (ITPC) will take place at the Anaheim ANS meeting in June. If you are a member of the ITPC or would like to become one please attend. It is scheduled for Monday, June 9 at 1:30 immediately preceding the M&C Roundtable discussion in the same room.

I would like to close by encouraging everyone to actively participate in the activities of the division. Please consider attending our Program and Executive Committee meetings at each national ANS meeting, joining the division's TPC and/or joining the ITPC for the 2009 topical meeting

I hope to see you in Anaheim in June.

Tom
Chair, M&C Division

Sleeping Beauty's Castle at Disneyland in Anaheim, California

Mathematics and Computation Division Sessions: (Parenthesis indicates co-sponsorship)

SUNDAY, 8 June 2008 11:00 a.m. – 1:00 p.m.

Computational Medical Physics Working Group: Adventure B

SUNDAY, 8 June 2008 11:00 a.m. – 1:00 p.m.
MCD-RPSD Joint Benchmark Meeting: Adventure B

SUNDAY, 8 June 2008 1:00 p.m. - 2:00 p.m.
Program Committee Meeting: Dreams A

SUNDAY, 8 June 2008 2:00 p.m. - 4:00 p.m.
Executive Committee Meeting: Dream A

MONDAY, 9 June 2008 p.m.

Current Issues in Computational Methods – Roundtable

TUESDAY, 10 June 2008 a.m.

Transport Methods: General I

(Reactor Analysis Methods)

TUESDAY, 10 June 2008 p.m.

Computational and Mathematical Modeling for Radiation Detection and Measurement - I

(Advancements in Multi-Physics Reactor Simulation)

WEDNESDAY, 11 June 2008 a.m.

Computational Methods: General

WEDNESDAY, 11 June 2008 a.m.

Computational and Mathematical Modeling for Radiation Detection and Measurement – II

Program Committee

2008 PHYSOR – International Conference on the Physics of Reactors

The 2008 PHYSOR meeting is taking place at the Kursaal Conference Center, Interlaken, Switzerland September 14–19, 2008. The early registration deadline is 14 June 2008. Please see the conference website for more details (http://www.physor2008.ch/index.shtml)

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 Multi-physics
- Experimental Facilities for Safety Research
- Biomedical and Other Non-Power Applications

Workshops include:
- Monte Carlo: Advances and Challenges
- Reactors for Actinide Management

2009 Mathematics and Computational Topical Meeting

The 2009 International Conference on Mathematics, Computational Methods and Reactor Physics will be held May 3-7, 2009 in **Saratoga Springs, New York** . It is being organized by the Northeast New York local section, and will be held at the Saratoga Hotel (formerly known as the Saratoga Hotel and Conference Center). A 1500-word summary must be submitted electronically no later than September 30, 2008.

The subject categories include:

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

 The conference website is available at http://local.ans.org/ne-ny/topical_2009_neny.html. Please see the full call for papers reproduced at the end of this newsletter.

IMPORTANT DATES:

• 1500-Word Summary Deadline: September 30, 2008
• Notification to Authors: November 30, 2008
• Full Paper Submission: January 31, 2009

Membership Committee

Greetings MCD members!

The Mathematics and Computation Division is one of the smaller ANS divisions but our membership numbers have been growing. MCD has 1123 members as of April 2008 but approximately 136 are unpaid. Our membership is approximately the same as last year (1128 members) as compared to April 2007. Our student membership has dropped slightly from 238 in April 2007 to 231 in April 2008. We are still about 10% of the total ANS membership.

Please remember to renew your ANS National Membership dues and be sure to check off M&C as one of your divisions. You can have more than the two free divisions, for a small fee. ANS members who do not immediately renew will get three mailings, a monthly email reminder, and may get a telemarketing call. If the 2008 dues are not paid before July 2007, they are dropped from national and M&C membership. It is imperative to have folks pay their national dues by June.

2008 ANS-10 Standards

The M&C Division sponsors the ANS-10 Standards Subcommittee. ANS-10 currently has two Standards under development or revision.

ANSI/ANS-10.4-1987;R1988 **Guidelines for the Verification and Validation of Scientific and Engineering Computer Programs in the Nuclear Industry** is currently being revised. The new draft, titled **Verification and Validation of Non-Safety Related Scientific and Engineering Computer Programs for the Nuclear Industry** will provide criteria for the verification and validation of research and other non-safety-related software. The ANS-10.4 Working Group is currently resolving comments from the ANS N-17 Consensus Committee. Resolution of these comments is the last step before this draft becomes a Standard.

A new draft standard ANS-10.7, **Non-Real Time, High Integrity Software for the Nuclear Industr**y is being developed. This standard will address high integrity, non-real time safety analysis, design, simulation software includes calculations or simulations that can have critical consequences if errors are not detected, but that are so complex that typical peer reviews are not likely to identify errors. Because of the potential consequences of errors and the difficulty of timely detection and correction of errors in such software, this standard will need to go beyond verification and validation to include quality provisions not currently found in ANS 10.4.

The ANS-10.7 Working Group will meet on Thursday, June 12 at 7:00 a.m. in the Disneyland Hotel Dreams E room during the ANS Annual Meeting. All interested parties are invited to attend.

2008 MCD Election Report

Division Officers and Executive Committee Elected:

Chair	Treasurer
Jasmina L. Vujic	F. Arzu Alpan
Vice Chair/Chair-Elect	**Executive Committee – 3 year term**
Todd S. Palmer	Kevin T. Clarno, Imre Pazsit
Secretary	Jeremy E. Sweezy, Aaron M. Watson
Hatice Akkurt	

Welcome aboard!

2008-2009 ANS MATHEMATICS AND COMPUTATIONS DIVISION OFFICERS[1]

Chair: Jasmina L. Vujic (Univ. of California – Berkeley, 510/643-8085, vujic@nuc.berkeley.edu)
Vice-Chair/Chair Elect: Todd S. Palmer (Oregon State University, 541/737-7064, palmerts@engr.orst.edu)
Secretary: Hattice Akkurt (Oak Ridge National Laboratory, 865/576-3513, akkurth@ornl.gov)
Treasurer: F. Arzu Alpan (Westinghouse Electric Company, 724/722-6134, alpanfa@westinghouse.com)

EXECUTIVE COMMITTEE

2008	Piero Ravetto (Polit. De Torino, 39011-564-4443, piero.ravetto@polito.it)
2008	Robert Roy (Ecole Polyt. De Montreal (EPM), 514/340-4262, robert.roy@polymtl.ca)
2008	Richard Sanchez (CEA de Saclay, 33-01-5908-5404, richard.sanchez@cea.fr)
2008	Taro Ueki (Univ. of New Mexico, 505/277-7964, tueki@unm.edu)
2009	Thomas A. Brunner (Sandia National Laboratory, 505/844-1253, tabrunn@sandia.gov)
2009	Sara A. Pozzi (Oak Ridge National Laboratory, 865/576-8380, pozzisa@ornl.gov)
2009	Jean C. Ragusa (Texas A&M Univ., 979/862-2033, jean.ragusa@tamu.edu)
2010	Kevin T. Clarno (Oak Ridge National Laboratory, 865/574-9619, clarnokt@ornl.gov)
2010	Imre Pazsit (Chalmers University of Technology, +46/31 772 30 81, imre@chalmers.se)
2010	Jeremy E. Sweezy (Los Alamos National Laboratory, 505/665-6204, jsweezy@lanl.gov)
2010	Aaron M. Watson (Knolls Atomic Power Laboratory, 518/395-4347, waatsam@kapl.gov)

BOARD LIAISON

Harold McFarlane (INL, 208/533-7106, harold.mcfarlane@inl.gov)

CHAIRS OF STANDING DIVISION COMMITTEES

FINANCE: Arzu Alpan (Westinghouse Electric Company, 724/722-6134, alpanfa@westinghouse.com)
HONORS & AWARDS: Farzad Rahnema (Georgia Instit. Of Tech.., farzad.rahnema@nre.gatech.edu)
MEMBERSHIP: Madeline A. Feltus (USDOE, 202/506-0541, madeline.feltus@hq.doe.gov)
NOMINATING: Tom Sutton (Knolls Atomic Power Laboratory, 518/395-7047, sutton@kapl.gov)
PROGRAM: Dmitriy Anistratov (N.C. State Univ. 919/515-4353, anistratov@ncsu.edu) (Chair)
                     Todd Palmer (Oregon State U., 541/737-7064, palmerts@engr.orst.edu) (Asst. Chair)
PUBLICITY: Avneet Sood (LANL, 505/667-2119, sooda@lanl.gov)
STANDARDS: Andy Smetana (Westinghouse SRC, 803/725-4192, andrew.smetana@srs.gov)
BENCHMARK: Barry Ganapol (U. Arizona, 520/621-4728, cowboy.ganapol@nee.arizona.edu)

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[1] **Editor's Message**: This newsletter will be issued twice a year and can be accessed electronically at http://www.mcd.ans.org/newsletters . Please send your newsletter items and comments to me, Avneet Sood at Los Alamos National Laboratory, P.O. Box 1663 MS A143, Los Alamos, NM 87545; Tel: (505) 667-2119; email: sooda@lanl.gov.

M&C 2009 Saratoga

2009 International Conference on Mathematics, Computational Methods & Reactor Physics

May 3-7, 2009 • The Saratoga Hotel & Conference Center • Saratoga Springs, NY, USA

CALL FOR PAPERS

Saratoga Springs sits at the foothills of the Adirondack Mountains in upstate New York, and is a modern town with a fairytale atmosphere. Best known for thorough-bred and harness track racing, Saratoga also features many great museums. The legendary healing waters of the natural spas and the historical Victorian mansions make it a premier location to simply relax. Over one hundred popular restaurants and nightspots make Saratoga a destination like no other.

Contemporary style meets distinguished tradition at **The Saratoga Hotel and Conference Center**. A fresh addition to the heart of the downtown scene, the Saratoga Hotel is just steps from over 50 restaurants, distinctive shops, sidewalk cafes, and thriving nightlife.

THE SARATOGA
AN LXR HOTEL

The **2009 International Conference on Mathematics, Computational Methods & Reactor Physics** will provide an international forum to present and discuss recent research in mathematical modeling and computing as applied to nuclear engineering and particle transport. This conference is part of a series of topical meetings organized by the Mathematics and Computation Division of the American Nuclear Society and returns to Saratoga Springs, New York – the site of the 1997 conference in this series. The technical program will consist of plenary sessions, parallel oral presentation sessions, and poster sessions. There will also be one or more workshops.

Important Deadlines

February 2008	First Call for Papers
September 30, 2008	Submission of 1500-Word Summaries
November 30, 2008	Notification of Acceptance to Authors
January 31, 2009	Final Paper Submission
January 2009	Open Registration

Contact Information

Website:
    http://local.ans.org/ne-ny/topical_neny_2009.html
General Information:
    Ray Gamino (ray.g.gamino@lmco.com)
    Thomas Sutton (thomas.m.sutton@lmco.com)
Technical Program:
    Brian Aviles (brian.n.aviles@lmco.com)
    Robert Grove (robert.e.grove@lmco.com)
Corporate Sponsorships:
    Cary Luken (MandC2009corporate@gmail.com)
Workshops:
    Charles Daily (charles.r.daily@lmco.com)

Meeting Organizers

NENY ANS
&
Knolls Atomic Power Laboratory

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Aaron Watson   Alison Stolle
David Griesheimer

Corporate Liaisons
Cary Luken   Hiep Hoang

Workshops
Charles Daily

WEBSITE: http://local.ans.org/ne-ny/topical_2009_neny.html

CALL FOR PAPERS

2009 International Conference on Mathematics, Computational Methods & Reactor Physics

May 3-7, 2009 • The Saratoga Hotel & Conference Center • Saratoga Springs, NY, USA

Papers are solicited in all areas of computational and mathematical methods for analysis of nuclear systems as well as from related disciplines including reactor physics, materials science, shielding, fluid dynamics, medical and biological applications, environmental sciences, fundamental mathematics, and benchmarking.

SUBJECT CATEGORIES INCLUDE:

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

GENERAL GUIDELINES

CONTENT:
The contents of the 1500-word summary must include the objectives of the study / investigation and the methodology used. It should also briefly describe the main findings and their potential applications. Sufficient information should be included for an independent reviewer to determine its suitability for the conference.

DEADLINE:
The 1500-word summary must be submitted electronically no later than September 30, 2008, in order to ensure that it is included in the review process.

AUTHOR'S ORGANIZATIONAL APPROVAL:
- All internal reviews and organizational approvals must be completed prior to submittal.
- It is the responsibility of the author to protect proprietary information.

PAPER ACCEPTANCE CRITERIA:
Papers are expected to contain descriptions of work that is new, significant, and relevant to the conference purposes. Papers will be reviewed prior to acceptance. Submissions should contain new data and investigations in scientific or program areas that are of general interest, address problems of interdisciplinary significance, or include in-depth discussions of scientific and technical issues. Criteria for selection include originality of work, relevance of topic, validity of method, clarity and conciseness of communication, and adherence to the scientific method (if appropriate). Compliance with content and length guidelines is also part of the acceptance requirements. Papers must be submitted electronically through http://local.ans.org/ne-ny/topical_2009_neny.html. Papers may be submitted for oral or poster presentation. Papers may be designated for submission to a refereed journal. All submissions must be in English.

ELECTRONIC SUBMISSIONS:
To submit a paper electronically, please refer to the detailed instructions available on the internet at http://local.ans.org/ne-ny/topical_2009_neny.html.

IMPORTANT DATES:
- 1500-Word Summary Deadline: September 30, 2008
- Notification to Authors: November 30, 2008
- Full Paper Submission: January 31, 2009

ADDITIONAL GUIDANCE:
For additional guidance regarding paper and summary templates, formatting, publication methods and publication requirements please visit the conference website (http://local.ans.org/ne-ny/topical_2009_neny.html).

WEBSITE: http://local.ans.org/ne-ny/topical_2009_neny.html