



AMERICAN NUCLEAR SOCIETY MATHEMATICS AND COMPUTATION DIVISION

June, 2007
<http://www.mcd.ans.org/newsletters>

Message from the Chair

Dear M&C Members:

It is time for a leadership change! My term will end after the Executive Committee meeting in Boston and Tom Sutton will assume the Chair position for the M&C Division for 2007-08. It has been a good year for the Division, with membership continuing to increase and our finances continuing to be strong. The M&C Topical in Monterey was an unqualified success and this is due in large part to the outstanding work by Jasmina Vujic and Brian Wirth, who I am sure are happy the conference is over! I suspect our finances will be in even better shape when the final reconciliation is made for the Monterey conference.

I again encourage you to participate in M&C functions, including our Executive Committee and Program Committee meetings at the national meetings which are open to the membership. I also encourage you to take the next step and consider running for one of the officer or executive committee positions in the next election.

It has been a pleasure to work with M&C members, officers, Executive Committee members, and ANS staff on various issues that have arisen during the year. I particularly enjoyed the awards process and seeing good friends and colleagues recognized for their achievements at the Monterey topical. A separate item in this newsletter reports on the M&C awards that were conferred at the Monterey topical.

I hope you enjoy your summer and I look forward to seeing you in Boston!

With my regards,

Bill Martin
Chair, M&C Division

2007 ANS Summer meeting: Mathematics and Computation Sessions

(Parenthesis indicates co-sponsorship)

SUNDAY, 24 June 2007 11:00 a.m. – 1:00 p.m.
MCD-RPSD Joint Benchmark Meeting: Brandeis

SUNDAY, 24 June 2007 1:00 p.m. - 2:00 p.m..
Program Committee Meeting: Boston University

SUNDAY, 24 June 2007 2:00 p.m. - 4:00 p.m.
Executive Committee Meeting: Boston University

MONDAY, 25 June 2007 P.M.
Current Issues in Computational Methods – Roundtable*
(Uncertainty Treatment in Nuclear Science and Engineering)

TUESDAY, 26 June 2007 A.M.
Transport Methods: General
(Computational Challenges in Medical Physics)

TUESDAY, 26 June 2007 P.M.
Sensitivity, Uncertainty, and Parameter Estimation
Methodologies in Nuclear System Modeling - I
(Reactor Analysis Methods)

WEDNESDAY, 27 June 2007 A.M.
Computational Methods: General
(Computational Medical Physics Radiation Modeling)
(Computational Thermal Hydraulics – I)

WEDNESDAY, 27 June 2007 P.M.
Sensitivity, Uncertainty, and Parameter Estimation
Methodologies in Nuclear System Modeling – II
(Computational Resources for Radiation Modeling)

THURSDAY, 28 June 2007A.M.
Mathematical Modeling: General
(Computational Thermal Hydraulics – II)

THURSDAY, 28 June 2007 P.M.
Computational Methods for Fuel Cycle Simulations

*M&C Roundtable for Annual Meeting in Boston

We plan on trying something different for the M&C roundtable session at the June meeting in Boston. Anyone interested is invited to give a short presentation on any M&C topic they want. Each presenter will be given an amount of time equal to the total time allotted to the session divided by the number of presenters. To guarantee each speaker a minimum of ten minutes, however, we may have to limit the number of presenters. Presenters will be scheduled in the order in which they inform Tom Sutton that they are interested. Prior to June 21, inform him of your desire to participate by contacting him at sutton@kapl.gov or at (518) 395-7047. Late additions to the agenda will be made just prior to the roundtable session. This is meant to be fast-paced, informal, and fun.

Tom Sutton

Program, Honors and Awards Committee

2007 Mathematics and Computational Topical Meeting

The M&C+SNA 2007 Conference was held from 15 - 19 April 2007, and was attended by 282 scientists from 22 countries, including 63 students. The meeting began with a plenary presentation about GNEP and the role of high performance computing within GNEP by Dennis Spurgeon, Assistant Secretary for Nuclear Energy at the US DOE. The technical program consisted of 228 papers that were presented in three plenary sessions, 30 parallel oral sessions and two poster sessions. The conference was sponsored by Lawrence Livermore National Laboratory, Los Alamos National Laboratory, Idaho National Laboratory and the Oak Ridge National Laboratory, in addition to International co-sponsorship by the Nuclear Energy Agency of the Organization for Economic Cooperation and Development and the Computational Science and Engineering division of the Atomic Energy Society of Japan. Five awards of \$500 were given to outstanding student presentations. The award winners are:

Jose Duo, Pennsylvania State University, "Singular Characteristic Tracking Algorithm for Improved Solution Accuracy of the Discrete Ordinates Methods with Isotropic Scattering"

Francois Fevotte, CEA - Saclay, "Advanced Transverse Integration for the Method of Characteristics"

Erin Fichtl, University of New Mexico, "Krylov Iterative Methods and Synthetic Acceleration for Transport in Binary Statistical Media"

Massimiliano Fratoni, University of California, Berkeley, "Determination of the Equilibrium Composition of Cores with Continuous Fuel Feed and Removal using MOCUP"

Brian Boer, Technical University of Delft, "Mechanical Stresses in Fuel Particles and Graphite of High Temperature Reactors"

The Honors and Awards committee selected the following members for awards. Each of the winners received a plaque at the M&C Conference in Monterey, CA in April 2007.

Pomraning Award: Forrest Brown, Los Alamos National Laboratory

Service Award: Enrico Sartori, OECD/NEA Data Bank

Young Member Research Achievement Award: Jeff Favorite, Los Alamos National Laboratory

Congratulations!

2009 Mathematics and Computational Topical Meeting

Saratoga Springs, New York has been chosen as the site of the **2009 M&C Topical Meeting**. It is being organized by the Northeast New York local section, and will be held at the Saratoga Hotel and Conference Center **May 3-7, 2009**. This is the same venue as was used for the very successful 1997 topical meeting. Ray Gamino (KAPL) is the general chairman. As always, help will be needed to review papers. If you would like to volunteer for the Technical Program Committee, contact Bob Grove at grovero@kapl.gov. A preliminary version of the conference website is available at <http://local.ans.org/ne-ny/>.

[Contributions by Brian Wirth, Farzad Rahnema, Tom Sutton]

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 1128 members as of April 2007 but approximately 108 are unpaid. We have increased our membership by about 7.1% (1128/1053) as compared to April 2006. Our student membership has increased from 175 in June 2005 to 216 in June 2006. We are still about 9% of the total ANS membership.

Please remember to renew your ANS National Membership Dues for 2007, 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 2007 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.

[Contributions by Madeline Feltus, Membership Committee Chair]

2007 MCD Election Report

Division Officers and Executive Committee Elected

Chair

Thomas M. Sutton

Vice Chair/Chair-Elect

Jasmina L. Vujic

Secretary

Jeffrey A. Favorite

Treasurer

Scott W. Mosher

Executive Committee – 3 year term

Jim E. Morel

Anil K. Prinja

Glenn E. Sjoden

Welcome aboard!

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 F663, Los Alamos, NM 87545; Tel: (505) 667-2119; email: sooda@lanl.gov.

2006-2007 ANS MATHEMATICS AND COMPUTATIONS DIVISION OFFICERS

Chair: William R. Martin (Univ. of Michigan, 734/764-5534, wrm@umich.edu)
Vice-Chair/Chair Elect: Tom Sutton(KAPL, 518/395-7047, sutton@kapl.gov)
Secretary: Arzu Alpan (Westinghouse Electric Company, 724/722-6134, alpanfa@westinghouse.com)
Treasurer: Scott McKinley (LLNL,925/424-2738, mckinley9@llnl.gov)

EXECUTIVE COMMITTEE

2007 Horia-Nicolae M. Gheorghiu (Studs vik-Scandpower)
2007 Robert C. Singleterry, Jr. (NASA, r.c.singleterry@larc.nasa.gov)
2007 Avneet Sood (LANL, 505/667-2119, sooda@lanl.gov)
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 (tabrunn@sandia.gov, Sandia National Laboratory, 505/844-1253)
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)

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: Alireza Haghighat (University of Florida, (352) 392-1401, haghighat@ufl.edu)
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)