Dear M&C Members:

It is a great pleasure for me to be writing to you as the Chair of the Mathematics and Computation Division. My one-year term started on July 1. I would like to give thanks to my predecessors, Tom Sutton and Bill Martin, and to welcome newly elected Division officers: Vice Chair/Chair-Elect Todd Palmer, Secretary Hatice Akkurt, and Treasurer F. Azru Alpan. I would also like to congratulate our newly elected members of the executive committee Aaron Watson, Jeremy Sweezy, Imre Pazit and Kevin Clarno. In addition, it is a great pleasure to announce that I have been elected as the member of the Board of Directors of ANS (a three-year term), thanks to Bill Martin who nominated me, and all of you who voted for me. Thank you!

By the time you receive this letter, we will know who the new U.S. President will be, and what most likely be the direction of long-overdue nuclear renaissance in this country. The rapidly changing landscape regarding such pressing issues as global warming, need for affordable and safe nuclear energy, long-term solution for high-level radioactive waste, national and international security and threat reduction will provide new and unique challenges and opportunities for current future nuclear scientists and nuclear engineers.

Several Nuclear Engineering Departments celebrated their 50th anniversary this year, including University of California - Berkeley, University of Michigan –Ann Arbor, and MIT. Congratulations!

Please note all the activities of the M&C discussed in this newsletter. At the ANS June meeting in Anaheim, I organized the roundtable on “Current Issues in Computational Methods” that had a large audience. We had three excellent speakers: Dr. Nam Dinh from INL, who talked about “Avenues and Challenges in Computational Nuclear Power Safety,” Dr. Glen Hansen, INL, who talked about “Vision for a Next Generation Fuel Performance Simulation Capability,” and Dr. David Nowak, INL, who presented a talk on “Advanced Modeling and Simulations in Nuclear Energy – Future Directions.” I would like to thank the speakers and all of you that attended the roundtable. Todd Palmer is organizing the M&C Roundtable at the ANS Reno meeting, that will be held on Monday from 2:30 to 4:00 pm. You are invited to attend a talk by Frank Graziani from LLNL, who will be talking about the Computational Methods Workshop that he has been hosting in Lake Tahoe, CA, for the past six years.

Our colleagues from the Reactor Physics Division organized very successful PHYSOR '08 conference in beautiful Interlaken, Switzerland, from September 14-19, 2008. Many of you attended this conference that had a record number of submitted papers – 668! Thanks to the hard work of all of you, over 300 summaries have been submitted for the M&C 2009 conference that will be held on May 3-7, 2009, in Saratoga Springs, New York. I know that you are busy reviewing summaries!

Our M&C Division membership has increased slightly from 1,142 in 2007 to 1,147 in 2008, and represents about 10 % of the total ANS National membership. The student membership is 241 of the 1,147 total, or about 21% for the M&C division, which is one of the highest student involvements in the ANS. This year, we supported financially the 2008 Student Conference, which was hosted by Texas A&M, the Student Travel Reimbursement Program, and ten students will be sponsored to attend the ANS Winter Meeting President’s Reception in Reno.

I would like to encourage all of you to continue with your active participation in the M&C activities, and invite all of you to attend our Program and Executive Committee meetings at each national ANS meeting.

See you in Reno!

Jasmina Vujic
Chair, M&C Division
2008 ANS Winter Meeting and Nuclear Technology Expo, November 9-13 Reno, Nevada

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

SUNDAY, 9 November 2008 11:00 a.m. – 1:00 p.m.
Computational Medical Physics Working Group: Room 151

SUNDAY, 9 November 11:00 a.m. – 1:00 p.m.
MCD-RPSD-RPD Joint Benchmark Meeting: Sierra 1

SUNDAY, 9 November 2008 1:00 p.m. - 2:00 p.m.
Program Committee Meeting: Room 151

SUNDAY, 9 November 2008 2:00 p.m. - 4:00 p.m.
Executive Committee Meeting: Room 151

MCD-RPSD-RPD Joint Benchmark Meeting: Sierra 1

MONDAY, 10 November 2008 p.m.
Current Issues in Computational Methods – Roundtable

TUESDAY, 11 November 2008 a.m.
Transport Methods: General

TUESDAY, 11 November 2008 p.m.
Transport Methods: General

WEDNESDAY, 12 November 2008 a.m.
Advances and Issues in Computational Phantom Modeling

Program Committee

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). While the original deadline for 1500-word summaries has passed, any summaries received before October 31 will be guaranteed a place in the paper review. We will do our best to accommodate summaries received after October 31, but can make no guarantees. The conference registration portion of the website will become active in January.

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
Greetings MCD members!

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ANS-10 Standards Subcommittee Report

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

The Working Group for ANS-10.4 has finished all work on the revision and final ANSI approve of the draft as an American National Standard is expected the week of October 18. This revision, titled Verification and Validation of Non-Safety Related Scientific and Engineering Computer Programs for the Nuclear Industry, provides criteria for the verification and validation of research and other non-safety-related software.

A new draft standard, ANS-10.7 Non-Real Time, High Integrity Software for the Nuclear Industry, is also 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 go beyond verification and validation to include quality provisions not found in ANS 10.4.

The ANS-10.7 Working Group will meet on Tuesday, November 11 at 7:00 a.m. in the Teton room during the ANS Winter Meeting to continue work on the draft. All interested parties are invited to attend.

Andy Smetana
Chair ANS-10

2008 Joint Benchmark Committee

The Joint Benchmark Committee (JBC) will meet on Sunday Nov 9 from 11 to 1 in the Sierra 1 room in Reno. The JBC is struggling with its identity as a committee. The Committee has really never reached its potential as the benchmarking organ of the ANS. I urge you to participate now if you have ideas and an interest in ANS benchmarking activities. After many years as a member and chair of M&C benchmarking activities, I will soon step down as M&C, JBC Chair. This comes after publishing my book, Analytical benchmarks in Nuclear Engineering” (available free from OECD/NEA Data Bank) and the realization that M&C needs new, more far reaching and relevant, benchmarking activities.

B. Ganapol
M&C, JBC Chair
2008-2009 ANS MATHEMATICS AND COMPUTATIONS DIVISION OFFICERS

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Treasurer: F. Arzu Alpan (Westinghouse Electric Company, 724/722-6134, alpanfa@westinghouse.com)

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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.