



# AMERICAN NUCLEAR SOCIETY MATHEMATICS AND COMPUTATION DIVISION

Nov., 2003

<http://www.mcd.ans.org/newsletters>

## *Message from the Chair*

First, let me thank all of the committee chairs (listed at the end of this newsletter) for their leadership in the division. It is the committees that perform the division's work. In particular, thanks to Ali Haghghat thanks for his work as Assistant Program Committee Chair during the last year (not to mention for his earlier years of service as Program Chair), on the turnover to our new Program Chair, Anil Prinja. The Program Committee's work places substantial demands on the chair, and, thanks to Ali and Anil, this transition has been quite smooth. To strengthen continuity, we have instituted the practice of appointing a new Assistant Chair for the second and final year of each Chair's two-year term, after which the Assistant will become Program Chair. Todd Palmer has agreed to this role, so after the June 2004 ANS meeting, he will assume the Program Committee Chairmanship, and Anil will take on a one-year term as his assistant. Todd has been chairing the publicity committee, doing great work as newsletter editor and MCD webmaster. Avneet Sood has taken over the newsletter, and Todd has agreed to keep on maintaining the MCD web site.

I urge all of our members to volunteer for committee assignments, either as chair or member. Do not be deterred by youth or inexperience (nor long experience, for that matter): we will provide mentoring as needed. Please contact the committee chairs to find out more.

The MCD Roundtable at the New Orleans ANS meeting will be Wednesday morning immediately following the MCD session on Mathematical Modelling. Jess Gehin (ORNL) will discuss Linux clusters and their use in nuclear simulations. Given the ubiquity of these systems, this topic should be of use to many of us.

As you may recall, ANS has instituted measures of effectiveness for its professional division, which in our case show MCD to be quite healthy. As a response to these measures, I will be submitting a revised combined five-year strategic plan and one-year operation plan for MCD Executive Committee approval at our meeting in New Orleans. With the help of the Division's officers and committee chairs, the plan includes the good things MCD does year-in and year-out (e.g., student support), as well as items for particular attention during the next 12 months. I borrowed liberally from the previous plan, approved around 1995. The draft plan is posted at the MCD web site at [http://www.mcd.ans.org/ANS\\_MCD\\_OpPlan2003d.pdf](http://www.mcd.ans.org/ANS_MCD_OpPlan2003d.pdf), and I encourage you to review it and send me your comments so we can incorporate them in the draft to be approved, or in subsequent year's plans.

Finally, MCD is in strong financial condition, thanks to strong fiscal performance by MCD topical meetings that RPD has co-sponsored and RPD topical meetings that MCD has co-sponsored. We need to think about what level of reserves is right and how to best use our resources. As is customary, the Executive Committee will be briefed on the upcoming ANS Student Conference at the University of Wisconsin at Madison, for which we have budgeted \$1000. MCD also routinely support student travel costs at \$500 per ANS meeting. This might be a good time to revisit these amounts, and to consider additional funding for the awards and scholarships we sponsor.

Roger Blomquist, Chair

## *Membership Reminders*

Please remember to send in your National Dues early so that we can have you "counted" toward the MCD roster! If all MCD members returned their dues statement earlier, we would be able to get a more realistic count from ANS headquarters, and not have to pester folks who show up in the "DROPPED" list. Also, please remember to check off the Mathematics and Computations Division as one of your free division memberships, or include it as a paid division beyond the 2 free division memberships with your ANS National Annual Dues statements. Thanks for your prompt action in responding to ANS dues renewals!

**[Provided by Madeline Feltus, Membership Committee Chair]**

## *2004 MCD Election Slate*

The work of the Nominating Committee for the upcoming 2004 MCD election slate is finished. After receiving suggestions from the MCD membership, two nominees for the Vice Chair/Chair Elect, one nominee each for Treasurer and Secretary, and five nominees for three Executive Committee positions were slated. Pending commitment to serve by the nominees, the current MCD Executive Committee will approve the election slate at the ANS Meeting in New Orleans.

**[Provided by Richard Sanchez, Nominating Committee Chair]**

## *ANS-10 Standards Committee*

The M&C Division sponsors the ANS-10 Standards Subcommittee. ANS-10 currently maintains four Standards in areas of interests to the M&C membership. These four Standards are:

- \*ANSI/ANS-10.2-2000 Portability of Scientific and Engineering Software
- \*ANSI/ANS-10.3-1995 Documentation of Computer Software
- \*ANSI/ANS-10.4-1987; R1998 Guidelines for the Verification and Validation of Scientific and Engineering Computer Programs in the Nuclear Industry
- \*ANSI/ANS-10.5-1994 Accommodating User Needs in Computer Program Development

ANS-10.4 is currently being rewritten. Dr. Charles Martin is the Chair for this effort He can be reached at [charlesm@dnfsb.gov](mailto:charlesm@dnfsb.gov). Please contact him if you have an interest in contribution to this effort.

In addition to the ANS-10.4 rewrite, ANS-10.2 and ANS-10.3 are in need of maintenance. Please let me know ([andy.smetana@srs.gov](mailto:andy.smetana@srs.gov)) if you are interested in working on these Standards.

Finally, if you have an idea for a new Standard or an interest in serving on the ANS-10 Standards Subcommittee, please let me know.

**[Provided by Andy Smetana, Standards Committee Chair]**

**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](mailto:sooda@lanl.gov).

## *Joint Benchmark Committee*

At the last JBC (Joint Benchmark Committee) meeting, we discussed the possibility of publicizing the JBC activities, I volunteered to inquire about a publishing a short article in Nuclear News. The JBC steering subcommittee sense that our presence in ANS is relatively unknown and therefore some publicity would be appropriate. In addition, the committee discussed several of the RP benchmarks currently under consideration including Russ Mosteller's LWR lattice benchmark adopted at the previous meeting, an isotopic benchmark headed by Steve Baker and the benchmark effort of Professor Unesaki to consider next generation fuels. Ham Hunter indicated there would be a new SINBAD release including shielding and fusion benchmarks. Finally, I outlined an analytical benchmark entry to be submitted to the JBC and asked for a show of interest. I was encouraged to continue my effort.

As I have filled the JBC chairmanship role for M&C for several years now, which I will be relinquishing to a committee member from RPD or RPSD. I would encourage those of you who see value in benchmarking to step up to a leadership position and help continue the effort. My thanks go to those who have supported M&C benchmarking and the benchmarking concept in general over the years.

**[Provided by Barry Ganapol, Joint Benchmark Committee Chair]**

## *Program Committee*

With nearly 40 papers in the regular M&C sessions and two packed special sessions, as well as related papers scattered around in other division sessions and two DOE NEER sessions, the International ANS/ENS Winter Meeting, November 16-20, 2003, New Orleans, LA, is shaping up to be blockbuster for MCD.

It is not too late to consider organizing special sessions, with invited and/or contributed papers, for the 2004 ANS Winter Meeting in Washington D.C. Please email me (prinja@unm.edu) by November 13, 2003, a session title and a brief summary (100 words or less) of the scope of the session, or bring this information to the Program Committee Meeting on Sunday November 16, 2003, at the Conference Hotel in New Orleans.

In other meeting news, the International Committee for the Supercomputing in Nuclear Applications (SNA) series of conferences has proposed that SNA 2007 be held in the US in conjunction with the M&C Topical meeting that year. These two meetings were co-located in 1997 in Saratoga Springs, USA, in a very successful joint endeavor.

Professor Todd Palmer of Oregon State University has been appointed Assistant Chair/Chair Elect of the MCD Program Committee, replacing Professor Ali Haghghat of University of Florida who is stepping down after many years of outstanding service to the Program Committee as Chair and Co-Chair.

**[Provided by Anil Prinja, Program Committee Chair]**

## Upcoming Meetings

*2003 ANS Winter Meeting  
Nuclear Technology: Achieving Global Economic Growth While Safeguarding the Environment  
New Orleans, LA, November 16-20, 2003.*

For more information, see <http://www.ans.org/meetings/pdfs/2003/wm2003-cfp.pdf>

*PHYSOR 2004  
Topical Meeting on Reactor Physics  
Chicago, IL, April 25-29, 2004.*

For more information, see <http://www.ans.org/meetings/physor>.

*Monte Carlo 2005  
The conference site is the Chattanooga Marriott and Convention Center. The conference will be hosted by the ANS Oak Ridge/Knoxville Section, with Radiation Protection and Shielding Division (RPSD) as the sponsoring division and Mathematics and Computations (MC) as a co-sponsor. Co-sponsors will include the Radiation Safety Information Computational Center (RSICC) and the Organization for Economic Cooperation and Development (OECD) Nuclear Energy Agency Data Bank (NEADB).  
Chattanooga, TN, April 17-21, 2005.*

For information contact Bernadette Kirk ([kirkbl@ornl.gov](mailto:kirkbl@ornl.gov), 865-574-6176), General Chair or Jeff Johnson ([johnsonjo@ornl.gov](mailto:johnsonjo@ornl.gov), 865-574-5262), Technical Chair. The website is <http://meetingsandconferences.com/MonteCarlo2005>.

*M&C 2005  
International Topical Meeting on Mathematics and Computation, Supercomputing, Reactor Physics, and Nuclear and Biological Applications,  
Avignon, France, Sept. 12-15, 2005.*

[More information about relevant conferences can be found at <http://www-rsicc.ornl.gov/Newsletters/> and <http://www.ans.org/meetings/>]

## **2003-2004 ANS MATHEMATICS AND COMPUTATIONS DIVISION OFFICERS**

Chair: Roger Blomquist (ANL, 630/252-8423, rnbloomquist@anl.gov)  
Vice-Chair/Chair Elect: Bernadette L. Kirk (ORNL, 865/574-6176, blk@ornl.gov)  
Secretary: Michael Scott McKinley (LLNL, 925/424-2738, mckinley9@llnl.gov)  
Treasurer: William R. Martin (Univ. of Michigan, 734/764-5534, wrm@umich.edu)  
Outgoing Chair: Richard Sanchez (CEA de Saclay, 33-01-5908-5404, richard.sanchez@cea.fr)

### **EXECUTIVE COMMITTEE**

2003 Bernadette L. Kirk (ORNL, 865/574-6176, blk@ornl.gov)  
2003 William R. Martin (Univ. of Michigan, 734/764-5534, wrm@umich.edu)  
2003 Richard Sanchez (CEA, 33-01-5908-5404, richard.sanchez@cea.fr)  
2004 Barry Ganapol (U. Arizona, 520/621-4728, cowboy.ganapol@nec.arizona.edu)  
2004 Nam Zin Cho (KAIST, 82-42-869-3819, nzcho@sorak.kaist.ac.kr)  
2004 John Wagner (ORNL, 865/241-3570, wagnerjc@ornl.gov)  
2005 Tom Sutton (KAPL, 518/395-7407, sutton@kapl.gov)  
2005 Cassiano De Oliveira (Georgia Tech, 404/385-4928, cassiano.deoliveira@nre.gatech.edu)  
2005 Madeline Feltus (USDOE, 202/506-0541, madeline.feltus@hq.doe.gov)  
2006 Jeffrey Favorite (LANL, 505/667-7941, fave@lanl.gov)  
2006 Farzhad Rahnema (Georgia Tech, 404/894-3731, farzad.rahnema@nre.gatech.edu)  
2006 Scott Palmtag (Studsvik Scandpower, 208/522-8304, palmtag@soa.com)

### **BOARD LIAISON**

Larry Foulke (Bettis, 412/476-7511, larry.r.foulke@verizon.net)

### **CHAIRS OF STANDING DIVISION COMMITTEES**

FINANCE: William R. Martin (Univ. of Michigan, 734/764-5534, wrm@umich.edu)  
HONORS AND AWARDS: Paul Turinsky (N.C. St. Univ., 919/515-5098, turinsky@eos.ncsu.edu)  
MEMBERSHIP: Madeline A. Feltus (USDOE, 202/506-0541, madeline.feltus@hq.doe.gov)  
NOMINATING: Richard Sanchez (CEA de Saclay, 33-01-5908-5404, richard.sanchez@cea.fr)  
PROGRAM: Anil Prinja (U. New Mexico, 505/277-4600, prinja@unm.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)