AMERICAN NUCLEAR SOCIETY
MATHEMATICS AND COMPUTATION DIVISION

May., 2004
http://www.mcd.ans.org/newsletters

Message from the Chair

Congratulations and thanks in advance are in order for our members who have been elected this year as MCD leaders. Bernadette Kirk will take the Chair at the end of the ANS Annual Meeting in Pittsburgh next month. Ali Haghigahat (University of Florida) has been elected Vice-Chair/Chair-Elect, Ron Pevey (University of Tennessee) will be Secretary, and Abderrafi Ougouag (INEEL) will take over as Treasurer. In addition, the three new Executive Committee members will be Horia-Nicolae M. Gheorghiu (Studsvik-Scandpower), Robert C. Sincgleterry, Jr. (NASA), and Avneet Sood (LANL). Thanks also to Bill Martin (University of Michigan) for his hard work as Treasurer, Michael Scott McKinley (LLNL) for serving as Secretary, and our three outgoing Executive Committee members, Barry Ganapol (University of Arizona), Nam Zin Cho (KAIST), and John Wagner (ORNL). An additional transition is the leadership of the Program Committee, in which the current chair, Anil Prinja (University of New Mexico), will swap jobs with the assistant chair, Todd Palmer (Oregon State University). Anil will be remaining as Assistant Program Chair for the next year. If you are interested in becoming assistant program chair/chair-select beginning in June 2005, please contact Todd, Anil, or me.

Part of our effort in the last year has been to strengthen MCD governance, particularly in the area of succession planning. This is an important aspect in most groups, but especially so in ANS divisions where the effort required of its volunteers is somewhat sporadic and the terms of office are short. Although many of us participate in the Program Committee, membership is in practice whoever shows up at any particular moment. To add more continuity, we'd like to identify three MCD members (in addition to the chair and assistant chair) as core members of this committee. Among other tasks, they would help organize the paper reviews and stimulate special sessions. If you are interested, please contact Todd, Anil, or me.

One of the strengths of MCD is its full technical program. In addition to the regular sessions at ANS meetings (Transport Methods, Mathematical Modeling, Computational Methods), our members organize special sessions on a variety of topics. For the Pittsburgh meeting, Bernadette Kirk organized the MCD Roundtable on Current Issues in Computational Methods (JAVA Pros and Cons) and Barry Ganapol organized two special sessions on Nontraditional Applications of Transport Methods. We encourage everyone to organize a special session on an MCD topic. Please contact Todd Palmer for details. The ANS National Program Committee has posted its *Manual for National Meeting Session Organizers* at http://www.ans.org/meetings/session/docs/somanual.pdf where the (relatively simple procedures are laid out.

ANS is now faced with fiscal challenges, with slowly declining membership foremost among the root causes. Each of us should look around our institutions for colleagues working in M&C areas, including those technologies beyond our traditional core of reactor physics and shielding methods to identify and encourage new members. The ANS provides good technical forums for all of us, but of equal or greater importance are its efforts in public information. The ANS is a respected organization that is attempting to provide a realistic perspective to the general public and to movers and shakers in government, industry, and to NGOs that have an anti-nuclear tradition. I believe that it is our duty and our opportunity to support these efforts through membership in ANS. Not to do so is to be a "free rider". Please help.

Congratulations to the MCD members who were selected as ANS Fellows during the last year:: Farzad Rahnema, Anil Prinja, Joseph Naser, Ren-Tai Chiang, and Tunc Aldemir.

Roger Blomquist, Chair

MC2005: Topical meeting of the M & C Division

International Topical Meeting on Mathematics and Computation, Supercomputing, Reactor Physics and Nuclear and Biological Applications,

will be held in Avignon, France, on September 12-15, 2005. The meeting is organized on a 3 and 1/2 days basis with plenary, technical and poster sessions. Workshops and reception are planned for Sunday, September 11, 2005. Technical tours will be offered on Thursday afternoon and Friday. Please check the official web site of the conference:

http://mcavignon2005.cea.fr/ ,

for more details about the meeting organization. You may download the first announcement and the call from papers from this website. For this meeting, we will review extended summaries instead of full papers. The deadline for uploading summaries to the website is January 15th, 2005.

   MC2005 at Avignon will be the occasion for our community to discuss and present the latest developments on the applications of mathematics and computations to reactor physics and related applications of the nuclear industry. A list of technical session topics is given in the web, as well as (at the present time) 11 invited technical sessions. The meeting will offer an international forum to discuss your ideas and interests with members of the international scientific community. Please, consider coming to the meeting and presenting your work. If you have never visited Southern France and if you can afford the time , my advice is to spend at least one or two days visiting the area. For details on the area and what to do, please see the web pages.

   The meeting will take place in the prestigious Palace of the Popes in the heart of Avignon. I'm looking forward to welcome you there. Until then I say to you 'à bientôt, mes amis.'

Monte Carlo2005: Joint topical meeting of the M & C Division

Monte Carlo 2005

Preparations for Monte Carlo 2005, a joint topical of Radiation Protection and Shielding Division and Mathematics and Computation Division, are progressing.   The conference will highlight the accomplishments in Methods, Nuclear Data, Applications, and Mathematical & Computational Advances. Plans include plenary session topics on High Energy Transport, Neutral Particle Transport, and Heavy Ion Transport.

Sponsors: ANS Oak Ridge/Knoxville Local Section **-** ANS Radiation Protection and Shielding Division **-** ANS Mathematics and Computation Division
Co-sponsors: ORNL Radiation Safety Information Computational Center (RSICC) **-** OECD Nuclear Energy Agency Data Bank (NEADB)
Canadian Nuclear Society (CNS) - Korean Nuclear Society (KNS)

2004	Deadlines
June 30	Electronic submission of abstracts
July 23	Author acceptance notification
September 10	Submission of full papers
November 12	Revisions communicated to authors
2005	Deadlines
February 7	Final papers due
March 26	Early registration & Hotel reservation

Contact: Jeff Johnson, Technical Chair, johnsonjo@ornl.gov
> Bernadette Kirk, General Chair, kirkbl@ornl.gov
Web address: http://montecarlo2005.org

[Provided by Bernadette Kirk]

Program Committee

The 50th Anniversary ANS Anual Meeting in Pittsburgh (June 13-17) promises to be another outstanding meeting for M&C members, with two MCD special sessions devoted to the anniversary theme, two general sessions, and a roundtable. It is time to start thinking about preparing summaries for the 2004 Winter meeting in Washington D.C., and we would like to solicit suggestions for at least one more special session for the 2005 Annual Meeting in San Diego.

The "draft" guidelines for reviewers, prominently displayed on the MCD website, have been made permanent and they apply to all National Meeting summaries. Topical meeting organizers can adopt them as they wish. Following recent trends, we would like to get the opinion of M&C membership on how these guidelines should be modified to allow acceptance of review papers and papers whose focus is comparison of algorithms on different architectures. This has become a pressing issue with special sessions increasingly featuring invited talks of nontraditional M&C types.

[Provided by Anil Prinja, Program Committee Chair]

Honors and Awards

Dr. Farzad Rahnema of Georgia Institute of Technology, an MCD member, was inducted as an American Nuclear Society Fellow at the Winter ANS Meeting held in November in New Orleans. His citation reads as follows: "For significant contributions to computational methods in reactor physics, providing for more efficient and accurate analysis of both commercial and research reactor design. He has also made influential contributions in literature, advancing the state of the art in cross-section homogenization, coarse-mesh diffusion and transport theory." If you know of MCD members who are deserving of the membership grade of Fellow, please consider nominating them. Information on the nomination process and forms can be found at the ANS Web site (http://www.ans.org/honors/va-fellow).

MCD sponsors three ANS awards. The **Gerald C. Pomraning Memorial Award** provides recognition to persons who have made outstanding contributions toward the advancement of the fields of mathematics and/or computations in support of advancing understanding of topics of interest to the ANS. The **MCD Distinguished Service Award** provides recognition to persons who have made outstanding contributions towards developing MCD via leadership, governance, standards, benchmarking, program and/or other developmental activities. The **MCD Young Member's Research Achievement Award,** established in 2003, fulfills the following objectives: (1) to identify and reward meritorious contributions in the areas of mathematics and computations by MCD members who are in the earlier stages of their careers, and (2) to stimulate further achievements by younger individuals that will enhance the applications of mathematics and computations in the area of nuclear technology. If you know of a colleague deserving of consideration for one of these awards, please take the time to assemble the nomination package. More information on these awards and the nominations forms can be found on the MCD Web site (http://www.mcd.ans.org/) or by contacting the MCD Honors and Awards Committee chairperson, Paul Turinsky (turinsky@eos.ncsu.edu). These awards will be presented at the upcoming MCD topical meeting to be held in Avignon, France on September 12-15, 2005. The **due date** for receipt of the nomination package for all three awards is **June 1, 2005**.

[Provided by Paul Turinsky, Honors and Awards Committee Chair]

Joint Benchmark Committee

M&C participation in the JBC seems to be dropping off. The JBC steering committee would like to encourage as much particpation as possible. While it is true that most activity is in the reactor physics and shielding areas, there is always a call for methods development benchmarks like we previously have published in the benchmark supplements. If you have interest in participating in the JBC activities, please contact B. Ganapol for further information and plan to attend the Sunday June 13 JBC meeting.

[Provided by Barry Ganapol, Joint Benchmark 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 and ANS-10.5 are currently being revised. Dr. Charles Martin is the Chair for the ANS-10.5 effort. He can be reached at charlesm@dnfsb.gov.
Andy Smetana is the Chair for the ANS-10.5 effort. He can be reached at andy.smetana@srs.gov.

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

[Provided by Andy Smetana, Standards Committee Chair]

2003-2004 OUTGOING ANS MATHEMATICS AND COMPUTATIONS DIVISION OFFICERS

Chair:	Roger Blomquist (ANL, 630/ 252-8423, rnblomquist@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)

2004-2005 INCOMING ANS MATHEMATICS AND COMPUTATIONS DIVISION OFFICERS

Chair:	Bernadette L. Kirk (ORNL, 865/574-6176, blk@ornl.gov)
Vice-Chair/Chair Elect:	Alireza Haghighat (Univ. of Florida, 352/392-1401, haghighat@ufl.edu)
Secretary:	Ronald E. Pevey (Univ. of Tennessee, 423/974-7573, rpevey@utk.edu)
Treasurer:	Abderrafi Ougouag (Bechtel BWXI, INEEL, 208/526-7659, oom@inel.gov)

EXECUTIVE COMMITTEE

2004   Barry Ganapol (U. Arizona, 520/621-4728, cowboy.ganapol@nee.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)
2007   Horia-Nicolae M. Gheorghiu (Studsvik-Scandpower)
2007   Robert C. Singleterry, Jr. (NASA, r.c.singleterry@larc.nasa.gov)
2007   Avneet Sood (LANL, 505/667-2119, sooda@lanl.gov)

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

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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.govT)