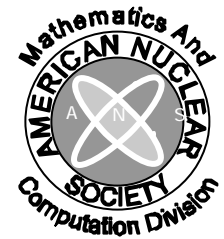


AMERICAN NUCLEAR SOCIETY MATHEMATICS AND COMPUTATION DIVISION



October, 2000

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

Message from the Chair

Hello. I am Andrew Smetana and I assumed the Chair of the Mathematics and Computations Division from Farzad Rahnama in June. I want to take extend my thanks to Farzad for his service to the Division during his term as Chair. You never really know what someone is doing for you until you get the opportunity to do the job yourself.

With each of these "messages", I would like to highlight one area of activity significant to our membership. As a start, I would like to focus on Standards activities.

The American Nuclear Society has a long history of providing outstanding technical information in support the Nuclear Industry. One way ANS provides this technical expertise to industry is by sponsoring the development of national consensus Standards. M&C has supported this effort for many years through the work of the ANS-10 Standards Subcommittee.

ANS-10 currently maintains a set of four Standards:

- ANSI/ANS-10.2 "Recommended Programming Practices to Facilitate Portability of Scientific and Engineering Computer Programs" which is currently being revised;
- ANSI/ANS-10.3 "Documentation of Computer Software";
- ANSI/ANS-10.4 "Verification and Validation of Scientific and Engineering Computer Programs for the Nuclear Industry"; and
- ANSI/ANS-10.5 "Criteria for Accommodating User Needs in Computer Program Development".

These Standards represent the combined efforts of many M&C members along with other individuals both inside and outside of ANS over the years. To remain viable, these Standards, like all American National Standards Institute (ANSI) Standards, require periodic maintenance. As past ANS President Andrew Kadak pointed out at the recent NRC's Regulatory Information Conference, "This process [Standards Development] is becoming very difficult due to the lack of commitment from companies, universities and national laboratories to send qualified people to volunteer their time to support Standards development effort."

As Chair of M&C, I invite all of the Division members to become involved in the Standards effort. Each member brings valuable technical information and expertise to the Standards process. You are needed not just for maintaining the current Standards, but for developing new Standards. The effort does not need to be a strain on your budgets as most work can be done electronically.

As a final thought, Standards really do help you. When you run your browser to look at web pages, you see the graphical images on the page. Why? Because the images adhere to one of several Standard image formats. Without Standards you might just get a blank screen.

Other Items of Interest:

- The M&C 2001 Topical Meeting "International Conference on Mathematical Methods to Nuclear Applications" will be held in Salt Lake City September 9 – 13, 2001. Please encourage your colleagues to participate.
- As of Spring 2000, the M&C Division had 830 members. This was an increase of 12% over 1999. However, this was a decrease from the 928 members M&C had in 1996. If you work with individuals who are not ANS members, please invite them to join. They can join ANS online at <http://www.ans.org>.
- The M&C Division now two Division awards: The Pomraning Award focused on Technical Merit, and The Distinguished Service Award focused on service to the Division.

Information on the Awards and the process for nominating individuals can be obtained from the Honors and Awards Committee chaired by Laural Briggs (llbriggs@anl.gov).

Report

EXECUTIVE COMMITTEE MEETING

SAN DIEGO, CA, JUNE , 2000

Benchmark Committee

A proposal for a Joint Benchmarking Committee was presented. A motion passed to approve the Joint Benchmarking Committee, with Barry Ganapol appointed as Co-Chair.

Finance Committee - Dmitriy Anistratov

The Division is in good financial health. The issue of payment for M&C e-review was resolved with Bob Holloran.

Honors and Awards Committee - Laurel Briggs

The committee is currently exploring the possibility of getting funding to endow a national-level M&C award named for the late Jerry Pomraning. Anil Prinja is currently in discussions with Nelson Byrne of SAIC regarding the funding for the award. The M&C Executive Committee approved a motion to have the following Division awards: the Pomraning Award, focused on Technical Merit, and the Distinguished Service Award, focused on service to the Division. The committee would like to be soliciting nominations from the membership for the next Distinguished Service Award. Criteria for the award are 1) significant, independent technical contributions, 2) demonstrable influence on the work of colleagues and students, and 3) significant service to the Division's program and/or governance. Contact Laurel with nominations. A supporting letter would be helpful. Mike Westfall is continuing to work on identifying M&C candidates for ANS Fellow or Laurel is trying to identify M&C candidates for ANS-wide awards. Contact Mike or Laurel with nominations. A motion was approved to add \$500 to the Dannels Scholarship Fund and to add a \$1000 line item to the yearly budget to further endow the scholarship.

Membership Committee - Farzad Rahnema for Madeline Feltus

Apparently, there has been a growth in M&C membership over the last year (12.6%), reversing what appeared to be a general decline in the previous four years.

Publicity - Todd Palmer

The Division's web page is up and running, and members are encouraged to check it out. It will serve to post items of interest to M&C members in a timely and convenient fashion. Also, future M&C national meeting summaries can be submitted to this site as well. The MCD web site can be found at <http://www.mcd.ans.org>.

PHYSOR 2000 Meeting - I.K. Abu-Shumays

I.K. reported that meeting attendance was well over 300. The Abstracts were published in printed form, and the full papers were published on CDROM. A final report will be presented in November.

M&C Topical Meeting 2001 - Jeff Borkowski

Jeff reported that the M&C 2001 Topical Meeting has moved to Salt Lake City due to problems with the original hotel in Coeur d'Alene, Idaho. The dates of the meeting have been changed to September 9-13, 2001.

Program Committee - Ali Haghighat

Three special sessions have been approved for the Milwaukee national meeting. Two special sessions will be presented at the upcoming Washington meeting. A motion was approved to provide a certificate and \$25 to students presenting M&C papers at national meetings.

Student Member Position on M&C Executive Committee - Farzad Rahnema

To create a student member position on the executive committee, approval must be given by a majority of the M&C members. That is, a proposed amendment approved by the "Bylaws and Rules" committee must be mailed to the M&C members for final approval for the creation of the new position. As an alternative, it was recommended that three students be invited to sit in the executive committee meetings, to provide advice on student matters. These students will serve for three years, will be selected by executive committee members from a list provided by ANS student advisors from schools with NE programs.

Upcoming Meetings

*2000 ANS Annual Winter Meeting
Marriot Wardman Park, Washington, D.C., November 12-16, 2000.*

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

*2001 ANS Annual Summer Meeting
Milwaukee, June 17-21, 2000*

For more information, see <http://www.ans.org/meetings/pdfs/2001/am2001.pdf>

*17th International Conference on Transport Theory
Imperial College, London, July 8-14, 2001*

For more information, see <http://junior.th.ic.ac.uk/>

*ANS International Meeting on Mathematical Methods for Nuclear Applications
Little America Hotel Salt Lake City, Utah, September 9-13, 2001*

For more information, see <http://www.srv.net/~ians/MC2001/>

*PHYSOR-2002
ANS International Topical Meeting on Advances in Reactor Physics and Mathematics and Computation into the Next Millennium
Sheraton Walker Hill Hotel, Seoul, Korea, October 7-10, 2002*

Cosponsored with the Reactor Physics Division. For more information see <http://physor2002.kaist.ac.kr>

[More up-to-date information about relevant conferences can be found at <http://www-rsicc.ornl.gov/Newsletters/>]

Changes to ANS National Paper Submission

The procedures for submitting & reviewing papers will change dramatically for the 2001 Summer meeting (Milwaukee). Rather than using the M&C website and/or submitting summaries by mail to the Program Chair, everything will be done via the web through the ANS website. Papers must be submitted in ASCII text, html, or PDF only, with figures/tables in GIF or JPEG formats. Instructions are online at <http://www.ans.org/meetings>.

MC2000 Conference Report

A major international conference, "Monte Carlo 2000 - Advanced Monte Carlo for Radiation Physics, Particle Transport Simulation and Applications," was held in Lisbon, Portugal on October 23-26, 2000. This conference was sponsored by the OECD/NEA, IAEA, RSICC, the Atomic Energy Society of Japan, and the American Nuclear Society. The location of the conference was the Instituto Superior Tecnico (IST) -- the Lisbon School of Engineering, near the center of Lisbon. Over 300 persons attended, with approximately 160 talks, classified in three broad categories: Electron-Gamma Transport, Neutron-Gamma Transport, and Hadron Transport. Sessions of each category often ran concurrently. Poster sessions were also scheduled, totalling 78 posters.

Users and code developers of most major Monte Carlo codes were present at this conference. Both groups discussed their latest research, code development, and applications efforts. Special sessions were held on the recent activities in developing realistic Monte Carlo software for medical physics (radiation oncology treatment planning), the use of quasirandom number sequences, and other topics. Most of the talks at this conference dealt with applications. One of the frequent topics of discussion was how Monte Carlo codes are increasingly being used -- successfully -- to simulate problems that were never in the minds of the original code developers.

This meeting was a sequel to an earlier international Monte Carlo conference in 1993 in Saclay (France) and a one-day workshop in 1997 in Monte Carlo (Monaco). In a discussion period at the conclusion of the conference, the local conference organizer (Professor Pedro Vaz, IST & OECD/NEA) expressed satisfaction with the quality of the talks and especially the turnout -- the attendance was nearly double what was originally expected. A sequel to this conference was discussed, possibly to be held in 3 or 4 years, at a location to be determined. [Thanks to Ed Larsen for contributing this report.]

2000-2001 Dannels Scholarship Recipient

M&C congratulates Jennifer L. Parsons from the University of Tennessee as the 2000-2001 Robert A. Dannels Memorial Scholarship award winner.

2000-2001 ANS MATHEMATICS AND COMPUTATIONS DIVISION OFFICERS

Chair:	Andrew O. Smetana (Savannah River Site, 803/725-4192, andrew.smetana@srs.gov)
Vice-Chair/Chair Elect:	Forrest B. Brown (LANL, 505/667-7581, fbrown@lanl.gov)
Secretary:	Thomas M. Evans (LANL, 505/665-3677, tme@lanl.gov)
Treasurer:	Tunc Aldemir (Ohio St. Univ., 614/292-4627, aldemir.1@osu.edu)
Outgoing Chair:	Farzad Rahnema (Georgia Tech Univ., 404/894-3731, farzad.rahnema@me.gatech.edu)

EXECUTIVE COMMITTEE

2001 Jeffrey A. Borkowski (Studs vik, 208/522-4440, jeff@soa.com)
2001 Todd S. Palmer (Oregon St. U., 541/737-7064, palmerts@engr.orst.edu)
2001 Anil K. Prinja (U. New Mexico, 505/277-4600, prinja@unm.edu)
2002 Randal S. Baker (LANL, 505/667-3041, rsb@lanl.gov)
2002 Robert E. Grove (KAPL, 518/395-7042, regrove@earthlink.com)
2002 Richard Sanchez (CEA, +33 (0) 1 5908 5404, richard.sanchez@cea.fr)
2003 Bernadette L. Kirk (ORNL, 423/574-6176, blk@ornl.gov)
2003 William R. Martin (Univ. of Michigan, 734/764-5534, wrm@umich.edu)
2003 Piero Ravetto (911-564-4443, ravetto@oolito.it)
2003 Michael R. Zika (LLNL, 925/423-5249, zika@llnl.gov)

BOARD LIAISON

Laural Briggs (ANL, 630/252-4677, llbriggs@anl.gov)

CHAIRS OF STANDING DIVISION COMMITTEES

FINANCE:	Tom Evans
HONORS AND AWARDS:	Laural Briggs
MEMBERSHIP:	Madeline A. Feltus (USDOE, 202/586-0541, madeline.feltus@hq.doe.gov)
NOMINATING:	Marv Adams (Texas A&M, 409/845-4198, mladams@tamu.edu)
PROGRAM:	Ali Haghghat (Penn St. U., 814/865-0039, haghgha@gracie.nuce.psu.edu) and Robert Singleterry (NASA, 757/864-1437, r.c.singleterry@larc.nasa.gov) (Co-Chairs)
PUBLICITY:	Todd Palmer
STANDARDS:	Andy Smetana
STUDENT:	

Editor's Message: This newsletter will (hopefully) be issued twice a year and can be accessed electronically at <http://www.mcd.ans.org/newsletters>. Please send your news and *constructive* comments to me at Oregon State University, Department of Nuclear Engineering, 116 Radiation Center, Corvallis, OR 97331-5902; FAX (541) 737-0480; e-Mail, palmerts@engr.orst.edu; or call (541) 737-7064.

Todd Palmer