AMERICAN NUCLEAR SOCIETY
MATHEMATICS AND COMPUTATION DIVISION

Message from the Chair

I am Richard Sanchez and I took office as Chair of the Mathematics and Computations Division (MCD) of the ANS last June, just after the Hollywood ANS Annual Meeting. At this meeting we had quite a turnover of officers: Forrest Brown stepped down from his office as Chair of the MCD to replace Farzad Rahnema as Chair of the Nominating Committee, Roger Blomquist took over from me the position of Vice-Chair and will be our next Chair, Abderrafi Ougouag left his position of Secretary to Piero Ravetto, Alireza Haghighat, former Chair of the Program Committee, was replaced by Anil Prinja and our previous Treasurer, Steve Nolen, left his position to Glenn Sjoden. Later, I appointed Alireza Haghighat as Program Committee Assistant Chair to help Anil Prinja in the arduous task of organizing the MCD technical sessions for the biannual ANS National Meetings. I take advantage of this occasion to thank our former officers for their outstanding services to the division and to encourage our new officers (including myself) in their task of conducting the business of the division.

News from the front

There were two interesting news items in the October 3, 2002 issue of Nucleonics Week. I just quote here the title of the articles: 'Report suggests DOE help finance first new reactors in U.S.' and 'Finland's TVO asks nuclear vendors to bid on building fifth reactor.' The message is that soon new reactors will be built in the US and in Europe. Consequently, the development of advanced reactors and the planning for Generation Four will call for more precise and fast computational methods and will provide challenging problems for the members of our division. This will require a continuous effort on our part as well as a need for the training of the younger generation.

Meetings

I have just come from Seoul, where I participated in the PHYSOR 2002 meeting. This topical meeting, organized by our friends in the Reactor Physics Division, featured over 300 contributions (with four parallel sessions and two poster sessions) and was a great success. During the plenary opening session Dan Cacuci, editor of the ANS journal *Nuclear Science and Engineering,* was presented the Eugene P. Wigner Award. Congratulations professor Cacuci! I particularly enjoyed the sessions dedicated to 'Deterministic Transport Methods,' 'Lattice Physics Methods and Verification' and 'Homogenization and Nodal Methods.' There were also two motivating sessions on 'Whole Core Transport Calculations' and interesting presentations of some of the results for the OECD/NEA C5G7

MOX benchmark. The meeting was hosted by the Korean local section and the Technical Chair was Nam Zin Cho, who is also a member of our division.

The ANS 2002 Winter National Meeting will be held at the Omni Shoreham Hotel in Washington D.C. this coming November. Our division organizes three technical sessions on Transport Methods, one technical session on Mathematical Methods, and we co-sponsor four other sessions.

The 2003 M&C Topical Meeting is well on its way. A special plenary session will be dedicated to the historical development and current status of computational methods of reactor physics. The speakers in this session will be Ed Larsen, Jim Morel, Elmer Lewis, Jerry Spanier, Kord Smith, Dick Hwang, Jack Dorning and Dan Cacuci. The web site for the meeting, http://meetingsandconferences.com/MC2003, is open for submitting papers. By the time you get this newsletter the posted deadline for submission, October 21, 2002, will be long past but you may try to contact the Technical Chair, Yousry Azmy, and maybe he will accept your paper (if he finds reviewers for it). Remember that full papers have to be submitted. In any case, try to go to the meeting. Our topical meetings are held every other year and give us a unique opportunity to keep abreast of the developments in our areas of interest!

MCD web site

I have been interacting with our Webmaster, Todd Palmer, to add information to our web site. Todd has done an excellent job at improving and updating our web site and I invite you to visit it, at http://www.mcd.ans.org, and send your comments to Todd. The web site contains the current list of MCD officers and members of the Executive Committee (with emails and phone numbers), copies of past newsletters and minutes of the Executive Committee and links to upcoming meetings. Lately, I have gotten hold of our bylaws and you may check them out there. Todd and I will keep working together and adding material to the web site. I have in mind to create a repository of pedagogical programs for use in teaching and to open a chat forum so we can interchange and seek information about computational tools and numerical methods, but the final decision will have to be approved by our Executive Committee. Sorry for the workload, Todd! Todd Palmer is also in charge of our newsletter and he has harassed me

soliciting this 'message from the Chair' so I think it is fair that I level up with him.

Membership
The last counting I got from ANS headquarters gives a total of 904 members but this number should be taken with care because, while surveying the list, I observed a few repeats. I will check with Madeline Feltus, Membership Committee Chair, and, if there are no confidentiality issues I will ask Todd to post the membership list to our web site. Membership and excellence are what our division is all about. I join here our past Chairs to urge you to help to attract new members and also to pay your dues in a timely manner.

MCD activities and you
Our bylaws state the objectives of our division as follows:

a) Promote the advancement of mathematical and computational methods for solving problems arising in all disciplines encompassed by the Society, with particular emphasis on numerical techniques for efficient computer application.

b) Aid in the dissemination, integration, and proper use of computer codes, including preparation of computational benchmarks and development of standards for computing practices.

c) Encourage the development of new computer codes and broaden their use.

To do this our Executive Committee works together with our Standing and Special Committees to prepare the organization of MCD topical meetings and to promote the division by providing financial support for student prizes and student travel to the MCD topical and to ANS National meetings, and by subsidizing MCD-related student conferences, among others.

The Program Committee prepares the MCD technical sessions for the bi-annual ANS National Meetings and helps prepare MCD special sessions. This committee is also in charge of the reviewing all papers in MCD sessions. The Honors and Awards Committee proposes MCD candidates to the rank of Fellow of ANS and selects candidates for the M&C Distinguished Service Award and for the recently founded Pomraning Award. This award has been recently founded by a generous $15,000 gift from SAIC. I want to thank here Bill Martin and Paul Turinsky for their efforts to secure the funding from SAIC. The Nominating Committee proposes MCD members for the elections to the Executive Committee as well as officers of the MCD.

All these activities and more that I do not detail here require the dedication and work of the members of the Executive Committee and of our Standing and Special Committees. You can help by getting involved in the business of our division:

a) As a member of an ANS local section you may help to host a MCD topical meeting. This is the greatest contribution you can make to our division.

b) MCD sponsored special sessions are a proof of the vitality of our division. I encourage you to consider organizing a special session for the 2003 ANS Winter Annual Meeting. You may prepare a proposal and come to the Washington D.C. Winter Meeting or send it to the Program Committee Chair.

c) You may contact the Nominating Committee Chair to propose candidates for the Executive Committee and for Officials of the division for the upcoming or future elections.

d) Becoming a member of the Executive Committee is the best way to learn the workings of our division and to give your personal impact in helping to select the priorities of the division.

e) You may contact the Honors and Awards (H&A) Committee Chair to propose candidates for nomination to the rank of Fellow of ANS, as well as for the M&C Distinguished Service Award and the Pomraning Award.

f) You may write papers about your work and submit them to the biannual ANS National Meetings and/or the MCD topical meetings.

g) Lately, the MCD decided to form a joint benchmark committee with the Reactor Physics and the Radiation Protection and Shielding divisions. You may submit a benchmark to our benchmark subcommittee or, better, get involved with the activities of the subcommittee.

h) Andy Smetana, Chair of the Standards Committee, needs motivated individuals to help with the maintenance of two of the standards.

A last reminder
Do not forget to send in your ballots for the upcoming election. We have to elect three Officers (Vice Chair – Chair Elect, Secretary and Treasurer) and five members of the Executive Committee.

Richard Sanchez
Chair, M&C Division, 2002-03

An Invitation from Barry Ganapol

I would like to personally invite the MCD membership to attend a special session called--Transport Theory-III: Analytical Techniques-- to be held at the upcoming ANS meeting on Wednesday morning. I will be presenting 6 papers dealing with analytical transport solutions and their numerical realizations as analytical benchmarks. My primary motivation in delivering this session is to focus attention on the importance of the analytical aspects in the nuclear enterprise which seem to receive little attention in today's educational and industrial training. The topics will cover basic stationary and time dependent diffusion theory in the 1-D one-group approximation to 3-D one-group transport theory. Analytical solution methodologies as well as numerical techniques to evaluate the resulting analytical representations will be stressed. The session is especially appropriate for undergraduate and graduates interested in the fundamental theory and numerical evaluation as well as for those of us involved in teaching. Expanded summaries and related computer programs will be available at the session. Some refreshments will be provided.

B. Ganapol

MCD Roundtable – ANS Winter Meeting, 2002

The MCD Roundtable at the Washington ANS meeting will be an informal technical session in memory of Ely Gelbard. Some of those who worked with Ely over the decades will describe aspects of his technical work and remember the personal side of working with him. Those who would like to add there remembrances should contact RNBlomquist@anl.gov, or just come to the Roundtable, scheduled right after the MCD session, "Transport Methods - III: Analytical Methods" on Wednesday morning.

Upcoming Meetings

2002 ANS Annual Meeting
Building the World Nuclear Community - Strategies for the Deployment of New Nuclear Technologies
Washington, DC, November 17-21, 2002.

For more information, see http://www.ans.org/meetings/pdfs/2002/wm2002-cfp.pdf.

Supercomputing 2002
High Performance Networking and Computing
Baltimore, MD, November 16-22, 2002.

For more information, see http://sc-2002.org/.

CSE03
SIAM Conference on Computational Science and Engineering
San Diego, CA, February 10-13, 2003

For more information, see http://www.siam.org/meetings/cse03/.

M&C 2003
Nuclear Mathematical and Computational Sciences: a Century in Review, a Century Anew
Gatlinburg, TN, April 7-10, 2003.

For more information, see http://meetingsandconferences.com/MC2003/.

2003 ANS Summer Meeting
The Nuclear Technology Expansion – Unlimited Opportunities!
San Diego, CA, June 1-5, 2003.

SNA 2003
International Conference on Supercomputing in Nuclear Applications
September 22-24, 2003, Paris, France.

Cosponsored by CEA, SFANS, co-organizer: OECD/NEA. For more information - email SNA-2003@cea.fr, and see http://SNA-2003.cea.fr

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

20002-2003 ANS MATHEMATICS AND COMPUTATIONS DIVISION OFFICERS

Chair: Richard Sanchez (CEA de Saclay, 33-01-5908-5404, richard.sanchez@cea.fr)
Vice-Chair/Chair Elect: Roger Blomquist (ANL, 630/ 252-8423, rnblomquist@anl.gov)
Secretary: Piero Ravetto (Politicnico Di Torino, 39-011-564-4443, ravetto@polito.it)
Treasurer: Glenn Sjoden (USAF, 321/ 494-4955, joedean@sprintmail.com)
Outgoing Chair   Forrest B. Brown (LANL, 505/667-7581, fbrown@lanl.gov)

EXECUTIVE COMMITTEE

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   Richard Sanchez (CEA, 33-01-5908-5404, richard.sanchez@cea.fr)
2003   Glenn Sjoden (USAF, 321/494-4955, joedean@sprintmail.com)
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 (Imperial College, London, 44-20-7594-9319, c.oliveira@ic.ac.uk)
2005   Madeline Feltus (USDOE, 202/506-0541, madeline.feltus@hq.doe.gov)

BOARD LIAISON

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

CHAIRS OF STANDING DIVISION COMMITTEES

FINANCE: Glenn Sjoden
HONORS AND AWARDS: Paul Turinsky (N.C. St. Univ., 919/515-5098, turinsky@eos.ncsu.edu
MEMBERSHIP: Madeline A. Feltus
NOMINATING: Forrest Brown (LANL, 505/667-7581, fbrown@lanl.gov)
PROGRAM: Anil Prinja (U. New Mexico, 505/277-4600, prinja@unm.edu) and
                      Ali Haghighat (Penn St. U., 814/865-0039, haghigha@gracie.nuce.psu.edu)(Co-Chairs)
PUBLICITY: Todd Palmer (Oregon St. U., 541/737-7064, palmerts@ne.orst.edu)
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