

M&C EXECUTIVE COMMITTEE MEETING MINUTES

San Diego, CA, June 5, 2005

Meeting location and time

The Mathematics and Computation (M&C) Division Executive Committee met at the American Nuclear Society (ANS) 2005 Annual Meeting in San Diego, CA, at the Town and Country Hotel, Royal Palm Salon 6, on Sunday, June 5, between 2:00 and 4:00 p.m.

Attendees

The following people attended the meeting:

| Attendee | Affiliation | E-mail |
|-----------------------|---------------------|--|
| Azmy, Yousry | PSU | yya3@psu.edu |
| Brown, Forrest | LANL | fbrown@lanl.gov |
| Cho, Nam Zin | KAIST | nzcho@kaist.ac.kr |
| Feltus, Madeline | USDOE | Madeline.feltus@nuclear.energy.gov |
| Haghighat, Ali | Univ. of Florida | haghighat@ufl.edu |
| Kirk, Bernie | ORNL | kirkbl@ornl.gov |
| Martin, Bill | Univ. of Michigan | wrm@umich.edu |
| Ougouag, Abderrafi M. | INL | Abderrafi.Outouag@inl.gov |
| Palmer, Todd | Oregon St. Univ. | palmerts@ne.orst.edu |
| Palmtag, Scott | Studsvik | palmtag@soa.com |
| Peplow, Douglas E. | ORNL | peplowde@ornl.gov |
| Pevey, Ron | Univ. of Tennessee | rpevey@utk.edu |
| Prinja, Anil K. | Univ. of New Mexico | prinja@unm.edu |
| Rahnema, Farzad | GIT | Farzad.rahnama@nre.gatech.edu |
| Singleterry, Robert | NAS | robert.c.singleterry@nasa.gov |
| Sjoden, Glenn | Univ. of Florida | sjoden@ufl.edu |
| Smetana, Andy | SRNL | Andy.Smetana@srnl.doe.gov |
| Smith, Michael A. | ANL | masmith@anl.gov |
| Sood, Avneet | LANL | sooda@lanl.gov |
| Turinsky, Paul | NCSU | turinsky@ncsu.edu |
| Wilson, Paul | UW-Madison | wilsonp@engr.wisc.edu |

Agenda

The agenda for the meeting was submitted by the Chair, Bernadette Kirk at the meeting.

The agenda was as follows:

1. Call to order and consideration of agenda
2. Secretary Ron Pevey
Approval of minutes
3. Chair Bernie Kirk
Report on Professional Divisions Committee Meeting
4. Vice-Chair Ali Haghghat
Roundtable
5. Chair Ex-Officio Roger Blomquist
Election Results
6. Treasurer Abderrafi Ougouag
7. Program Committee Todd Palmer, Anil Prinja
M&C 2005
M&C 2007 and SNA 2007
8. Standing Committee Reports
Students Jeff Favorite
Honors and Awards Paul Turinsky
Membership Madeline Feltus
Standards Andy Smetana
Update of ANS 10
Benchmark Barry Ganapol
Publicity Avneet Sood
ANS Board Liaison Larry Foulke
Todd Palmer
9. Web
10. Old Business
11. New Business
ANS Student Conference 2005
ANS Membership Committee
Proposed Technical Group on Hydrogen
Young Members Technical Group
12. Date and time of next meeting
November 13, 2005 Washington, DC
13. Adjournment

Minutes

1. **Call to order and consideration of agenda**

Chair Bernadette Kirk opened the meeting at 2:00 pm. A quorum was declared in attendance and the agenda for this meeting (above) was distributed.

2. Approval of minutes

The minutes from the M&C Executive Committee Meeting held in Washington, DC, in November 2004, were summarized by Ron Pevey and approved. The approved minutes (Attachment 1) will be transmitted to Headquarters and made available through the division web site.

3. Chair report

Bernadette brought our attention to the list of new officers (Attachment 2) and welcomed those in attendance. She distributed an outline of her report (Attachment 3).

In response to the request of Matthew Panicker, chair of Professional Development Workshop, ORNL has proposed a workshop to be held at the Washington D.C. ANS meeting in November; an outline of the workshop is included at the end of Attachment 3.

Bernadette presented the Division's Vitality Measures for CY2003 (Attachment 4) and CY2004 (Attachment 5). She noted that everything is colored green ("good") except for the area of Class III Topicals, which we do not participate in. We should do even better for CY2005.

The chair recognized Margaret Mkhosi, chairperson of the 2005 ANS Student Conference held at Ohio State this past April. Margaret reported that the successful conference had 250 students attending from 23 universities, along with many representatives from industry and government. Rian Bahran was also present, representing the 2006 Student Conference to be held at Rensselaer Polytechnic Institute on March 27-April 1, 2006, with the theme "Nuclear Power: A Look at the Future." Rian indicated that they are looking for judges, sponsors, and papers for this conference.

Bernadette noted that the Society is working on standardizing division bylaws. She anticipated that the division-wide bylaws will be passed at this meeting, after which each of the divisions will be approached to examine its bylaws for compliance.

In addition, Bernadette indicated that executive committee members have been sent a draft of new rules for the creation of technical groups within the Society. Three technical groups have been proposed: Computational Medical Physics, Nuclear Production of Hydrogen, and Young Members.

4. Vice-Chair

Ali Haghghat reported that he had invited Dr. James F. Dempsey, an Associate Professor in the Radiation Oncology Department at the University of Florida, to give a talk tomorrow on the computational needs in radiation oncology. Dr. Dempsey is active in the American Association of Physicists in Medicine and in the Medical Physics program affiliated with the Nuclear Engineering Department at Florida.

5. Chair Ex-Officio

Roger Blomquist reported the election results (Attachment 2) and added his congratulations to the new officers.

6. Treasurer's Report

Abderrafi Ougouag drew attention to the Treasurer's report that had previously been distributed (Attachment 6). Table 2 shows this year's budget. In reference to the underspent categories, Abder pointed out that (1) the \$1000 for awards and plaques will be spent at Avignon; (2) the \$2500 remaining in "Students Support" will be spent as \$500 for student travel to the November 2005 meeting and \$2000 for the Avignon conference; and (3) the underspending under "National Meeting Costs" is due to lower student attendance at the ANS meeting President's reception, which is what the money is used for.

There is no information yet about whether M&C will get any money from the most recent Reactor Physics Division topical meeting. Bernadette indicated that she will check with the RPD chair about this.

7. Program Committee

Todd Palmer reported that this meeting has 20 M&C papers in 3 sessions. For the Washington meeting (Nov., 2005), he reported, there have been only 20 papers submitted for the entire ANS, so the deadline for abstracts has been extended to June 20. We are planning a special session on "Radiation Transport and Physics for Radiation Detection Simulation," with both invited and contributed papers. In addition, for the June 2006 meeting in Reno there will be a special session on "Computational Benchmarks in Medical Physics." For the upcoming topical meeting in Avignon, there were 345 abstracts submitted of which 326 were accepted. There will be four parallel sessions, including a poster session.

The next topical meeting is on track with the ANS Program Committee and will be held in April, 2007, in Monterrey, California.

8. Standing Committee Reports

Students

No report.

Jeff Favorite

Honors and Awards

Two members are up for Fellow. Currently we have nominations for both the Pomraning and Service Awards, but none yet for the Young Researcher Award.

Paul Turinsky

Membership

Next year the M&C membership will rise to 942, a net gain of 24 members. (84 gained, 60 lost.)

Madeline Feltus

Standards

Of the four standards that M&C supports for ANS-10, two are being revised. One of them (10.5, "Accommodating User Needs in Computer Program Development") has been submitted to N-17, and the committee revising another (10.4, "Guidelines for the Verification and Validation of Scientific and Engineering Computer Programs in the Nuclear Industry") has a meeting scheduled this week.

Andy Smetana

Benchmark

In Barry's absence there was no formal report, although there was some discussion about decreasing participation of M&C in the Joint Benchmark Committee and the need for continuing the effort. No action taken.

Barry Ganapol

Publicity

The previous M&C newsletter has been distributed by e-mail; the next one will be issued after this meeting.

Avneet Sood

ANS Board Liaison

Larry's tenure as our liaison with board ends with this meeting. He encouraged us to spend some time thinking about having an MCD member on the ANS Board of Directors. Beyond that his other suggestions were (1) to focus on member recruitment and retention; (2) to consider cutting back some on how much we try to do because of financial solvency issues; (3) to welcome and encourage international members; and (4) to concentrate on relevance to members and value to members. The new ANS Board Liaison will be Harold McFarlane.

Larry Foulke

In an ensuing discussion regarding the formation of ANS Technical Groups, a motion was made by Robert Singleterry (and seconded by Farzad Rahnema) in support of the creation of a Computational Medical Physics Working Group. After rewording through a substitute motion by Madeline Feltus, the following motion was unanimously approved:

That the M&C Division form a Working Group for Computational Medical Physics and seek the cooperation and participation of all related divisions.

The chair appointed the following committee to begin working on implementing this motion: Ali Haghghat, Bill Martin, Farzad Rahnema, Robert Singleterry, David Nigg, Paul Wilson, and Douglas Peplow.

9. Web

Todd Palmer reported that the website is up and running. He posts stuff when people give him stuff.

10. Old Business

None

11. New Business

ANS Student Conference 2005

Handled earlier under chair's report (Item 3)

ANS Membership Committee: No report

Proposed Technical Group on Hydrogen

There will be a vote this week on the formation of a new Technical Group on Nuclear Production of Hydrogen. After discussion, Scott Palmtag moved:

That the M&C Division approve the formation of a Nuclear Production of Hydrogen Technical Group.

The motion passed.

Young Members Technical Group

There was a considerable discussion about the creation of a Young Members Technical Group. The Professional Divisions Committee chairman Donald Hoffman spoke in favor of the new technical group, citing the advantages that it would hold for attracting and retaining younger members for the Society. According to Hoffman, there is near-unanimous support for the new technical group among ANS members under 35 years of age.

After the discussion, Robert Singleterry moved:

That the M&C Division approve the formation of a Young Members Technical Group.

The motion was seconded by Scott Palmtag and passed by a vote of 6 to 1.

12. Date and time of next meeting: November 13, 2005 Washington, DC

It was moved by Forrest Brown and seconded by Robert Singleterry that the meeting be adjourned. Motion passed.

Bernadette Kirk adjourned the meeting at 3:52 pm.

Draft submitted by Ronald E. Pevey, Secretary.

M&C EXECUTIVE COMMITTEE MEETING MINUTES

Washington, DC, Nov. 14, 2004

Meeting location and time

The Mathematics and Computation (M&C) Division Executive Committee met at the American Nuclear Society (ANS) 2004 Winter Meeting in Washington, DC, at the Omni Shoreham Hotel, Embassy Room, on Sunday, November 14, between 2:00 and 4:00 p.m.

Attendees

The following people attended the meeting, including all of the current board members (denoted by *):

| Attendee | E-mail | Phone |
|------------------------------|--|------------------|
| Azmy, Yousry | yya3@psu.edu | (814) 865-0039 |
| Blomquist, Roger | rnbloquist@anl.gov | (630) 252-8423 |
| Brown, Forrest B. | fbrown@lanl.gov | (505) 667-7581 |
| Clarno, Kevin | ktclarno@ornl.gov | (865) 241-1894 |
| *De Oliveira, Cassiano | cassiano.oliveira@nre.gatech.edu | (404) 385-4928 |
| *Favorite, Jeffrey A. | fave@lanl.gov | (505) 667-7941 |
| *Feltus, Madeline | madeline.feltus@nuclear.energy.gov | (301) 903-2308 |
| Foulke, Larry | larry.r.foulke@verizon.net | (412) 476-7511 |
| Ganapol, Barry | ganapol@cowboy.nec.arizona.edu | (520) 621-4728 |
| *Gheorghiu, Horia Nicholas | hng@soa.com | (617) 965-1508 |
| *Haghighat, Ali | haghighat@ufl.edu | (352) 392-1415 |
| *Kirk, Bernadette (Bernie) | kirkbl@ornl.gov | (865) 574-6176 |
| *Ougouag, Abderrafi | oom@inel.gov | (208) 526-7659 |
| Palmer, Todd | palmerts@ne.orst.edu | (541) 737-7064 |
| *Palmtag, Scott | palmtag@soa.com | (208) 522-1060 |
| Peplow, Douglas E. | peplowde@ornl.gov | (865) 481-6523 |
| *Pevey, Ron | rpevey@utk.edu | (865) 974-7573 |
| *Rahnema, Farzad | farzad.rahnema@nre.gatech.edu | (404) 894-3731 |
| Ravetto, Piero | piero.ravetto@polito.it | +39 011 564 4443 |
| Sanchez, Richard | richard.sanchez@cea.fr | +33 1 6908 5404 |
| Schuh, Denise | dschuh@wisc.edu | (608) 264-0792 |
| *Singleterry, Robert C., Jr. | robert.c.singleterry@nasa.gov | (757) 864-1437 |
| Smetana, Andrew (Andy) | andy.smetana@srs.gov | (803) 725-4192 |
| *Sood, Avneet | sooda@lanl.gov | (505) 667-2119 |
| Sun, Xiaodong | sun.zoo@osu.edu | (614) 247-7646 |
| *Sutton, Tom | sutton@kapl.gov | (518) 395-7047 |

| | | |
|----------------|--|----------------|
| Turinsky, Paul | turinsky@ncsu.edu | (919) 515-5098 |
| Wilson, Paul | wilsonp@engr.wisc.edu | (608) 263-0807 |

*Board members

Agenda

The agenda for the meeting was submitted by the Chair, Bernadette Kirk at the meeting.

The agenda was as follows:

AGENDA

Mathematics and Computation Division
 Executive Committee Meeting
 Embassy Room
 Omni Shoreham Hotel
 2:00 - 4:00 p.m.
 Washington, DC
 Sunday, November 14, 2004

Call to order and consideration of agenda

| | |
|--|--------------------------|
| Secretary | Ron Pevey |
| Approval of minutes | |
| Chair | Bernie Kirk |
| Report on Professional Divisions Committee Meeting | |
| Vice-Chair | Ali Haghghat |
| By-laws update | |
| Chair Ex-Officio | Roger Blomquist |
| Nominating Committee roster | |
| Treasurer | Abderrafi Ougouag |
| Program Committee | Todd Palmer, Anil Prinja |
| M&C 2007 and SNA 2007 | |
| Standing Committee Reports | |
| Honors and Awards | Paul Turinsky |
| Membership | Madeline Feltus |
| Standards | Andy Smetana |
| Update of ANS 10 | |
| Benchmark | Barry Ganapol |
| Publicity | Avneet Sood |
| ANS Board Liaison | Larry Foulke |
| Web | Todd Palmer |

Old Business

New Business

Technical Group on Computational Medical Physics Ali Haghghat

Other

Date and time of next meeting

June 5, 2005 San Diego

Adjournment

Minutes

1. Call to order and consideration of agenda

Chair Bernadette Kirk opened the meeting at 2:00 pm. The agenda for this meeting (above) was passed around, along with a list of officers (Attachment 1) and list of student presenters at this meeting (Attachment 2).

2. Report about upcoming International Youth Nuclear Congress (out of order)

Bernadette introduced guest Lisa Shell, who is the Corporate Relations Chair for the International Youth Nuclear Congress (IYNC). Ms. Shell reported on IYNC 2006, to be held June 18-23, 2006 in Stockholm, Sweden. Ms. Schell stated that the previous congress had 263 attendees, 40 of them from the U.S., and more than 180 contributed papers, mostly from students and young professionals. In the ensuing discussion, we were reminded that we supported some of our own students to attend the last congress. She brought our attention to the Congress website at <http://www.iync.org>. Sponsorship information is available from <http://www.iync.org/sponsor/index.shtml>.

3. Approval of previous minutes

The minutes from the M&C Executive Committee Meeting held in Pittsburgh, PA in June 2004, compiled by previous secretary Michael Scott McKinley, were summarized by Ron Pevey and approved. The approved minutes will be transmitted to Headquarters and made available through the division web site.

4. Chair Report

Bernadette brought our attention to the five M&C sessions at this meeting and recommended that we promote attendance. She noted that she had received two letters of appreciation and a communication from the American Chemical Society requesting our help in supporting their request to the ANS for support numerical aspects of chemistry.

Bernadette noted that ten students are being supported by the division at the current meeting, and she encouraged those present to continue to involve younger members in our division committees and other division activities.

5. Report of ANS Board Liaison (out of order)

Larry Foulke, who is serving as our liaison with the ANS board, reported that he is still amazed at the energy level of the division. Noting his duty to take any advice or concern to the ANS Board of Directors, he opened the floor for comments; none were made. Larry noted that his term on the Board expires in June.

6. Report on Professional Divisions Committee Meeting

Bernadette reported that the ANS is still looking at how to increase membership. The current ANS membership is at about 11,000, with approximately 1000 attending the national meetings. The Professional Divisions Committee is looking for ways to encourage membership and activity, possibly through the development of technical groups in areas of interest to younger members, like the Computational Medical Physics technical group to be discussed later in this meeting. Bernadette also reported that each division is being asked to report their best practices with respect to increasing membership.

7. By-laws Update

Ali Haghghat reported that the ANS will be coming out with new bylaws by the end of the month, after eighteen months of work. When this is done, we will need to address our own bylaws in order to match any changes that ANS may make. Hopefully, this we will be able to accomplish this in our next meeting in San Diego.

8. Nominating Committee Roster

Roger Blomquist reported that the nominating committee, working from an initially long list of worthy candidates, had voted to approve the following slate of officers to be voted on by the division membership for 2006:

Chairman: Dr. Alireza Haghghat
Vice-chair: Dr. William Martin, Dr. Madeline Feltus
Secretary: Dr. Paul Wilson
Treasurer: Dr. Douglas Peplow
Executive Committee members (4): Prof. Piero Ravetto, Dr. Taro Ueki,
Dr. Robert Roy, Dr. Richard Sanchez.

Roger pointed out the diversity in international contribution and age balance reflected by this slate. The slate of officers was accepted.

9. Treasurer's report

Abderrafi Ougouag presented the attached 2004 budget (Attachment 3) and proposed budget for 2005, recommending what was presented as "Option 2."

He particularly noted that (1) the budget does not reflect any money that may come from our co-sponsorship of PHYSOR 2004, (2) the budget drops back to our traditional \$1000 contribution to the Dannels Scholarship fund from the special contribution of \$10,000 last year, and (3) that the student support category comprises \$2000 for the 2005 student conference, \$500 for student travel support to each of the two national meetings, and \$500 for student travel to the 2005 M&C Topical meeting in Avignon in September.

The recommended budget passed.

10. 2005 Student conference (out of order)

Student guests from Ohio State reported on the upcoming student conference to be held at Columbus, OH, April 14-16, 2005. In addition to handing out a brochure promoting the conference, the students noted that they are still looking for speakers and topics for professional development sessions. They also encouraged meeting attendees to participate as reviewers and judges. See the website: <http://ans-2004.engr.wisc.edu>

11. Program committee

Todd Palmer reported on the meeting of the Program Committee that had just been held. He reported that only one bid has been received for the M&C 2007 Topical meeting, from the Northern California section. The bid does not specify a definite meeting location because San Francisco, Monterrey, and Lake Tahoe are each still being considered. Also, the possibility is being investigated that the meeting be held jointly with the International Conference on Supercomputing in Nuclear Applications (SNA). Todd brought forward a recommendation from the Program Committee that the bid be accepted contingent on additional information being provided soon.

Following an amendment offered by Robert Singleterry, the Executive Committee approved a motion that the recommendation be accepted with the proviso that we receive enough information to make a complete and adequate proposal to the National Program Committee meeting in February. As part of the discussion, it was stressed that bidders should be aware that meeting this deadline is essential to get the topical meeting on the schedule.

12. Honors and Awards Committee report

Paul Turinsky reported for the Honors and Awards committee that four award nominations have been identified; two should go through by February and the other two require a bit more paperwork. Three awards are to be given in Avignon: the Pomraning award, the Service award, and the Young Researchers award. Nominations are due June 1, 2005; more information is available on the MCD website.

13. Membership Committee Report

Madeline Feltus reported for the Membership Committee. She noted that the division had 918 members last year, but is down to 911 as of September, including 136 students. Madeline stressed the need to try to get student members to continue with the division members after graduation, but noted that with the current data available to us we cannot really track whether student MCD members maintain division membership after becoming full members.

14. Standards Committee Report

Andy Smetana reported for the Standards committee that ANSI/ANS 10.5 (covering end user's needs) is being balloted at ANS-10 and predicted that it will become a new national standard in six or seven months.

15. Benchmark Committee Report

Barry Ganapol reported that the Joint Benchmark Committee (JBC) meeting with the Reactor Physics and Radiation Protection and Shielding Divisions was well attended. Several analytical benchmarks are in place and several others are being considered, including fuel management, accelerator driven system, homeland security, and medical physics benchmarks.

Barry pointed out that the JBC has started publishing a newsletter with minutes and other interesting information, and requested that the MCD website include a link to allow MCD members to get to the JBC information more easily.

In addition, Barry reported that the JBC meeting included a presentation from the Computational Medical Physics technical group for liaison with their benchmark committee.

16. Publicity Committee Report

Avneet Sood reported for the Publicity committee that the division newsletter has been sent out both by paper and electronically (<http://www.mcd.ans.org/newsletters/MCD-Nov04.pdf>).

17. New Business: Technical Group on Computational Medical Physics (out of order)

Ali Haghghat reported on a new technical group on Computational Medical Physics that has been proposed and will be considered in the ANS Professional Divisions Committee meeting later this week. Ali reported that this expanding area involves approximately 6000 currently trained medical

physicists, with 200 new trainees being graduated to fill 600 job openings annually.

According to Ali, the purpose of the technical group formation is to attract these professionals to the ANS through a focus area that will complement the American Association of Physicists in Medicine (AAPM) organization to which many of them already belong. With our expertise on spatial radiation transport, MCD has talent, capabilities, and tools to offer them.

The formation of the technical group will be considered at the Professional Divisions Committee meeting on Tuesday, with Bernadette Kirk presenting the proposal.

A motion was made by Robert Singleterry that the Executive Committee representatives vote to approve formation of the technical group. The motion passed.

18. Upcoming 2005 Topical Meeting

Richard Sanchez reported on progress in the planning of our co-sponsored International Topical Meeting on Mathematics and Computation, Super Computing, Reactor Physics, and Nuclear Biological Applications to be held in Avignon, France, September 12-15, 2005.

A motion was made by Robert Singleterry regarding increasing our budget allotment for student support to present papers at this meeting. As amended, the motion was that MCD increase student support to the M&C 2005 topical meeting from \$500 to \$2000 for any student giving a paper at the conference for travel assistance to attend the meeting. The motion passed. The effect on the budget is to increase the "Student Support" category from \$3500 (i.e., \$2000 for student conference, \$500 each for M&C Topical and the two 2005 ANS meetings) to \$5000. This change has been indicated on the "Amended Budget 2005" column of Attachment 3.

19. Old Business

There was no old business offered for consideration.

20. New Business: Other

There was no other new business offered for consideration.

21. Adjournment

Bernadette Kirk adjourned the meeting at 3:56 pm.

Respectfully submitted,

Ronald E. Pevey, Secretary

M&C Officers 2005-2006

Chair

Dr. Alireza Haghighat
University of Florida
202 Nuclear Sciences Bldg.
PO Box 118300
Gainesville, FL 32611-8300
Phone# 352-392-1401
Fax# 352-392-3380
E-Mail: haghighat@ufl.edu

Vice Chair

Dr. William R. Martin
University of Michigan
Dept of Nuclear Engng.
2355 Bonisteel Boulevard
Ann Arbor, MI 48109-2104
Phone# 734-764-5534
Fax# 734-763-4540
E-Mail: WRM@UMICH.EDU

Secretary

Dr. Paul P. Wilson
University of Wisconsin-Madison
1500 Engineering Drive
Madison, WI 53706
Phone# 608-263-0807
Fax# 608-263-4499
E-Mail: wilsonp@engr.wisc.edu

Treasurer

Dr. Douglas E. Peplow
Oak Ridge National Laboratory
PO Box 2008
Bldg. 5700 MS 6172
Oak Ridge, TN 37831
Phone# 865-574-0521
Fax# 865-574-9619
E-Mail: peplowde@ornl.gov

Executive Committee

Dr. Jeffrey A. Favorite
1981 41st Street
Los Alamos, NM 87544-1703
Phone# 505-667-7941
Fax# 505-665-3046
E-Mail: fave@lanl.gov

Mr. Horia N. Gheorghiu
Studsvik Scandpower, Inc.
1087 Beacon St., Ste. 301
Newton, MA 02459
Phone# 617-965-1508
Fax# 617-965-7549
E-Mail: hng@soa.com

Dr. Scott P. Palmtag
Studsvik Scandpower, Inc.
504 Shoup Ave Ste 201
Idaho Falls, ID 83402-3658
Phone# 208-522-1060
Fax# 208-522-1187
E-Mail: palmtag@soa.com

Dr. Farzad Rahnema
Georgia Tech
8640 Sentinae Chase Dr
Roswell, GA 30076-4468
Phone# 404-451-4686
Fax# 770-557-5211
E-Mail: farzad@nazconsulting.com

Prof. Piero Ravetto
Politecnico Di Torino
Corso Duca Degli Abruzzi 24
Torino 10129,
ITALY
Phone# 39011-564-4443
Fax# 39011-564-4499
E-Mail: piero.ravetto@polito.it

Dr. Robert Roy
Institut de Genie Nucleaire
Ecole Polytechnique de Montreal
PO Box 6079, Station CV
Montreal (Quebec) H3C 3A7,
CANADA
Phone# 514-340-4262
Fax# 514-340-3240
E-Mail: Robert.Roy@polymtl.ca

Staff Liaison
Ms. Sharon S. Kerrick
American Nuclear Society
555 N. Kensington Ave
La Grange, IL 60526
Phone# 708-579-8230
Fax# 708-352-0499
E-Mail: skerrick@ans.org

Dr. Richard Sanchez
CEA de Saclay
DM2S/SERMA bat 470
91191 Gif sur Yvette Cedex,
FRANCE
Phone# 33-01-6908-5404
Fax# 33-01-6908-9490
E-Mail: richard.sanchez@cea.fr

Ex Officio
Ms. Bernadette L. Kirk
1608 Helmbolt Rd
Knoxville, TN 37909-1019
Phone# 865-574-6176
Fax# 865-241-4046
E-Mail: Kirkbl@ornl.gov

Dr. Robert C. Singleterry, Jr.
617 Todd Trail
Newport News, VA 23602
Phone# 757-864-1437
Fax# 757-864-7943
E-Mail: robert.c.singleterry@nasa.gov

Mr. Donald R. Hoffman
EXCEL Services Corporation
11921 Rockville Pike Ste 100
Rockville, MD 20852
Phone# 301-984-4400
Fax# 301-984-7600
E-Mail: donaldh@excelservices.com

Dr. Avneet Sood
Los Alamos National Laboratory
PO Box 1663, MS F663
Los Alamos, NM 87545
Phone# 505-667-2119
Fax# 505-665-3046
E-Mail: sooda@lanl.gov

ANS Board Liaison
Dr. Harold F. McFarlane
Idaho National Laboratory
PO Box 1625, MS 6000
Idaho Falls, ID 83403-1625
Phone# 208-533-7106
Fax# 208-533-7735
E-Mail: harold.mcfarlane@inl.gov

Dr. Taro Ueki
University of New Mexico
Chemical & Nuclear Engineering
209 Farris Engineering Ctr
Albuquerque, NM 87131
Phone# 505-277-7964
Fax# 505-277-5433
E-Mail: tueki@unm.edu

Chair's Report (Bernie Kirk)
June 5, 2005

I. M&C Sessions June 2005

| | |
|--------------|---|
| Monday PM | Current Issues in Computational Methods "Computational Needs in Radiation Therapy", James Dempsey (University of Florida) |
| Tuesday AM | Mathematical Modeling |
| Tuesday PM | |
| Wednesday AM | Computational Methods |
| Wednesday PM | Transport Methods |

II. Letters of Appreciation

Dan Torres
Student Conference Organizing Committee for April 2005 support

III. Professional Development Workshop

Matthew Panicker, chair of Professional Development Workshop asked M&C last November 2004 if it is possible for experts from either ORNL or LANL to deliver a one or two days workshop/tutorial on computer codes such as MCNP or SCALE to be sponsored by the division. ORNL proposed the workshop (attached at the end of this report) for the November 2005 meeting.

IV. Student Presenters at June 2005 Meeting

Abder requested a total of 8 tickets to the presidential reception. Only 8 of the presenters below will be at the June 2005 meeting.

| | |
|--------------------|---------------------------------|
| Benoit Forget | Georgia Institute of Technology |
| HyeongKae Park | Georgia Institute of Technology |
| Justin Pounder | Georgia Institute of Technology |
| Massimiliano Rosa | Pennsylvania State University |
| Jose Ignacio Duo | Pennsylvania State University |
| Wei Ji | Michigan |
| Jeremy Conlin | Michigan |
| Viktoriya V. Kulik | Michigan |
| Jeffrey C. Davis | Michigan |
| Tomasz Kozlowski | Purdue University |

Not Members of M&C

Viktoriya V. Kulik University of Michigan
Jeffrey C. Davis University of Michigan

Not in ANS

Jose Ignacio Duo Pennsylvania State University

Comments from Jeff Favorite

May 16, 2005 email:

I regret that I won't be attending the M&C ExCom meeting on June 5. I have a commitment near Albuquerque that morning and I won't be in San Diego until 5:30 pm. So maybe you can fill me in at the President's Reception.

If you still want to discuss students at the meeting, here is what I did:

1. I got a list of the authors in M&C-sponsored and -cosponsored sessions. That list identifies students as ANS members or not. That list also identifies presenting authors.
2. I got a list of all current M&C members. That list identifies students.
3. I compared the lists and found the M&C students presenting in M&C sessions. ANS sent me the lists in Excel format, so I just sorted on the "member" field.

May 27, 2005 email:

We need to develop a process for buying student tickets to the President's Reception. The process should rely on author lists kept by ANS so that whoever does this task twice per year doesn't have to poll every M&C professor and ask if his students are going.

Abder sent disbursement form to Toni Bishop on April 4, 2005 for a transfer of \$500 from M&C to student travel funds to support San Diego attendance.

V. Succession Plan

| Position | Incumbent | Term | Successor | Successor Term |
|---------------------------|-------------------|-----------|-------------------|----------------|
| Program Chair | Todd Palmer | 2004-2006 | | |
| Asst. Program Chair | Anil Prinja | 2004-2006 | Kevin Clarno | |
| Nominating Chair (1 year) | Roger Blomquist | 2004-2005 | Bernie Kirk | 2005-2006 |
| Finance Chair (1 year) | Abderrafi Ougouag | 2004-2005 | next treasurer | 2005-2006 |
| Finance Member | Bill Martin | 2004-2005 | Abderrafi Ougouag | 2005-2006 |
| Joint Benchmark Rep | Barry Ganapol | 2004-2006 | | |
| Joint Benchmark Rep | Mike Smith | 2004-2006 | | |
| Publicity Chair | Avneet Sood | 2004-2006 | Scott McKinley | |
| Membership Chair | Madeline Feltus | 2004-2006 | Sara Pozzi | |
| Honors and Awards Chair | Paul Turinsky | 2004-2006 | | |
| Standards Chair | Andy Smetana | 2004-2006 | | |

Introduction to New Analysis Capabilities of the ORIGEN Code

WORKSHOP ORGANIZER:

Stephen M. Bowman, SCALE Project Manager, Oak Ridge National Laboratory

INSTRUCTORS:

Ian C. Gauld, ORIGEN Code Manager, Oak Ridge National Laboratory

Stephen M. Bowman, SCALE Project Manager, Oak Ridge National Laboratory

PURPOSE OF WORKSHOP:

The ORIGEN (Oak Ridge Isotope GENERation) series of nuclear isotopic depletion/decay codes are recognized as a standard throughout the world for spent fuel simulations and have been widely used in the nuclear industry for nearly 30 years. The latest version, ORIGEN-S, the only version of ORIGEN that is actively supported at Oak Ridge, is contained in the depletion analysis system called ORIGEN-ARP, which is part of the SCALE code system. ORIGEN-ARP creates problem- and time-dependent ORIGEN-S libraries by interpolating from pre-generated cross-section libraries generated using SCALE 1-D and 2-D burnup sequences. The advantage of this new ORIGEN-ARP system is that it runs in a small fraction of the time required by conventional methods, preserves full accuracy, and has been implemented on a PC with a graphical user interface (GUI), a post-processing utility, and a plotting code. ORIGEN-ARP is available as part of the SCALE code package or as a stand-alone code package.

This one-day workshop will include presentations on the capabilities of the ORIGEN-S code, and cover nuclear data improvements, new analysis capabilities, and validation studies to support its application to a wide range of current and advanced nuclear applications. The target audience is new users, users who desire more extensive knowledge of code applications, and users of ORIGEN2 who would like to upgrade to the currently supported version. The presentations will cover: new libraries for commercial reactor fuel designs (MOX & LEU), cross-section interpolation methods, upgraded cross section data, new neutron source spectra methods adopted from the SOURCES code, new gamma ray library, addition of ENDF/B-VI fission yields for 30 fissioning actinides, options to support use of the ANS decay heat standard, and extensive and ongoing validation studies. Methods that allow users to generate their own ORIGEN-ARP libraries using the 1-D and 2-D burnup sequence models in SCALE will also be demonstrated.

About half the workshop will involve presentation and demonstrations, and the other half hands-on problem sessions. Attendees are strongly encouraged to bring a laptop PC with Windows XP or 2000.

Note: The workshop is limited to 30 attendees.

WORKSHOP OUTLINE:

| Time | Topic |
|-------------------------|---|
| 8:00 a.m. – 8:30 a.m. | Introduction to ORIGEN-S analysis capabilities |
| 8:30 a.m. – 9:00 a.m. | Summary of new nuclear data libraries and validation studies |
| 9:00 a.m. – 10:00 a.m. | Overview of ORIGEN-ARP and the Windows user interface |
| 10:00 a.m. – 10:30 a.m. | Break and code installation on participant PCs |
| 10:30 a.m. – 11:00 a.m. | New fuel assembly cross section libraries in SCALE |
| 11:00 a.m. – 11:50 a.m. | Developing ORIGEN libraries using SCALE 1-D and 2-D assembly models |
| 11:50 a.m. – 1:00 p.m. | Lunch |
| 1:00 p.m. – 2:00 p.m. | Demonstration using ORIGEN-ARP and data plotting package (hands-on) |
| 2:00 p.m. – 5:00 p.m. | ORIGEN-ARP problem session (hands-on) |

Professional Division Metrics MCD Vitality Measures – CY 2003

| Division Meetings | Division Governance | Division Contributions to Society | Division Services to Membership |
|--|--|---|--|
| <p>National Meeting Participation</p> <p>2003: 3 session, 1 panel's session planned</p> | <p>Succession Planning</p> <p>Included in 2003 Strategic Plan</p> | <p>ANS Position Statements</p> <p>MCD is not responsible for Position State</p> | <p>Professional Development</p> <p>MCD's workshop on parallel processing at 2003 Topical</p> |
| <p>Class I Class II Topicals</p> <p>Greater than 25% increase (134/179) (April 2003 Topical paid attendance was 179)</p> | <p>Membership Trends</p> <p>918 members + 3.1% change in 2003 890 members - 1.8% change 2002</p> | <p>Participation with Outside Professional Societies</p> <p>Supercomputing Ntc App Sep 2003 & OEGOP expert benchmark group liaison activities</p> | <p>Scholarships</p> <p>Dannels Scholarship (Grad) – NOT fully fund</p> |
| <p>Class III Topicals</p> <p>MCD does not support Class III Topicals</p> | <p>Communications</p> <p>2 newsletters in 2003 Website updated (good content) in 2003</p> | <p>Society Leadership</p> <p>Both Migs: 75% Exec Comm Both PDC & All NPC</p> | <p>Peer Recognition/Awards</p> <p>Forwriting award, several fellows & best paper/poster awards</p> |
| | <p>Division Planning</p> <p>2003 Strategic Plan submitted to PDC Chair</p> | <p>Non-Meeting Publications</p> <p>MCD provided papers to NS&P in 2003</p> | <p>Student Support</p> <p>MCD supported student conference, Annual & Winter Migs - 2003</p> |

Professional Division Metrics MCD Vitality Measures – CY 2004

| Division Meetings | Division Governance | Division Contributions to Society | Division Services to Membership |
|---|--|--|--|
| <p>National Meeting Participation</p> <p>2004: 5 sessions; 1 panel; 4 sessions (roundtable)</p> | <p>Succession Planning</p> <p>Included in 2004 Strategic Plan</p> | <p>ANS Position Statements</p> <p>MCD is not responsible for Position State</p> | <p>Professional Development</p> <p>MCNPS workshop on parallel processing at 2003 topical</p> |
| <p>Class I Class II Topicals</p> <p>Greater than 25% increase (134/179) (April 2003: Topical paid attendance was 179)</p> | <p>Membership Trends</p> <p>918/942 membership + 2.6% change in 2004</p> | <p>Participation with Outside Professional Societies</p> <p>Supercomputing Nucleus App Sep 2003 & OECD expert benchmark group liaison activities</p> | <p>Scholarships</p> <p>Dannels Scholarship – in 2004 contributed 10K to build fund</p> |
| <p>Class III Topicals</p> <p>MCD does not support Class III Topicals</p> | <p>Communications</p> <p>2 newsletters in 2004 website updated in 2004</p> | <p>Society Leadership</p> <p>Both Mtgs: 75% Exec Comm Both PDC & All NPC: Presentation to Board of Directors Nov 2004</p> | <p>Peer Recognition/Awards</p> <p>Forman award, several fellows & best paper/poster awards</p> |
| | <p>Division Planning</p> <p>2004 Strategic Plan submitted to PDC Chair</p> | <p>Non-Meeting Publications</p> <p>MCD: provided papers to NS&E in 2004</p> | <p>Student Support</p> <p>MCD supported student conference, Annual & Winter Mtgs. 2004</p> |

**EXECUTIVE COMMITTEE
MATHEMATICS AND COMPUTATION DIVISION
AMERICAN NUCLEAR SOCIETY**

**ANS Mathematics and Computation Division Treasurer Report
June 2005**

June 5, 2005

Dear MCD Executive Committee members:

I am pleased to provide the attached MCD Treasurer's report for presentation at the ANS 2005 Annual Summer Meeting.

2004 Balance

Table 1 gives the actual expenditures for 2004 as received from ANS HQ in September 2004 and augmented to show the \$650 spent on tickets to the ANS President's reception for students.

Table 1: Projected and actual MCD budget for 2004

| | BUDGET | | ACTUAL |
|---------------------------|---------------|--|---------------|
| | 12 MONTHS | | 11 MONTHS |
| | 2004 | | 2004 |
| BUDGET FUNDS | | | |
| CARRY FORWARD FROM 2003 | 28,069 | | 28,069 |
| 2004 MEMBER ALLOCATION | 918 | | 918 |
| DIVISION INCOME 2004 | 0 | | 0 |
| | | | |
| TOTAL BUDGET FUNDS | 28,987 | | 28,987 |
| BUDGET EXPENSES | | | |
| NEWSLETTERS | 0 | | 0 |
| | | | |
| AWARDS, PLAQUES | 1,000 | | 0 |
| | | | |
| NATIONAL MEETING COSTS | 725 | | 650 |
| | | | |
| DIVISION OFFICER EXPENSE | 0 | | 0 |

| | | |
|----------------------------|--------|--------|
| | | |
| STUDENT SUPPORT | 3,500 | 3,000 |
| | | |
| SCHOLARSHIP/NEED FUNDING | 10,000 | 10,000 |
| | | |
| OTHER EXPENSES | 0 | 0 |
| | | |
| TOTAL EXPENSES | 15,225 | 13,150 |
| | | |
| EXCESS (DEFICIENCY) OF | | |
| BUDGET FUNDS OVER EXPENSES | 13,762 | 15,337 |

The data in the table assumes that no income has been received from the profits of PHYSOR-2004 form RPD. That income has still not been received, or if received, notification from ANS to that effect has not been issued to the M&C treasurer or the M&C Executive Committee. Also possible incidental expenses (such as newsletter expenses) are not shown.

The table assumes there was no expenditure in Pittsburgh for student tickets to the President's Reception. The \$650 "National Meeting Costs" entry is for 10 tickets to the President's Reception for students who are presenting papers in Washington DC (November 2004).

Student support was budgeted at \$3500, corresponding to \$500 at New Orleans, \$2000 for University of Wisconsin Student Conference, and \$500 each for Pittsburgh and Washington DC ANS Meetings. Actual expenses were reported to us as \$3,000. Not shown in this budget is a commitment of \$1000 for students travel to the International Youth Nuclear Congress (IYNC) approved by the MCD Executive Committee one year ago but apparently never disbursed. If that amount was applied to the budget in 2003, then no additional expense would be expected, however there is no evidence to that effect. Therefore, the actual total expense on this chapter is expected to be \$4000 if the IYFC commitment is honored or be final at \$3,000 otherwise. As of the writing of this report, the expenses are considered final at \$3,000.

The EXCEL spreadsheet corresponding to the above table was distributed at the November 2004 meeting along with the information shown above. This information is repeated in order to provide initial conditions for the Year 2005 budget.

Year 2005 Budget as Proposed and Approved at the November 2004 Meeting

Table 2 gives the end of Year 2004 data along with the approved budget plan for YEAR 2005 and the YEAR 2005 actual budget as of June 2005. The justifications for the approved budget were given in the previous report.

Summary

| | |
|----------------------------------|-----------------|
| Carryover from 2004 | \$15,337 |
| Recommended budget for 2005 | \$16,237 |
| Projected balance at end of 2005 | \$7,937 |
| Current balance as of June 2005 | \$12,217 |

An Excel spreadsheet used to generate Table 2 is attached.

Table 2: Proposed Budget for 2005:

| DESCRIPTION | PROPOSED | | APPROVED | | Notes | |
|--------------------------------|----------|--------|----------|--------|----------------|---|
| | ACTUAL | BUDGET | ACTUAL | BUDGET | | |
| | 2003 a | 2004 | 2004 | 2005 | | |
| | | | | | (To June 2005) | |
| Membership Allocations | 885 | 900 | 918 | 900 | 900 | 1 |
| Carry Over Prior Year Funds | 18,956 | 27,962 | 28,069 | 15,337 | 15,337 | |
| Other Budget Funds | 9,812 | 0 | 0 | 0 | 0 | |
| TOTAL Starting Budget | 29,653 | 28,862 | 28,987 | 16,237 | 16,237 | |
| | 0 | 0 | 0 | 0 | 0 | |
| Awards, Plaques | 101 | 1,000 | 0 | 1,000 | 0 | 2 |
| National Meetings Costs | 0 | 725 | 650 | 1,300 | 520 | 3 |
| Division Officer Expenses | 0 | 0 | 0 | 0 | 0 | |
| Students Support | 590 | 3,500 | 3,000 | 5,000 | 2,500 | 4 |
| Scholarship/NEED Funding | 1,000 | 10,000 | 10,000 | 1,000 | 1,000 | 5 |
| Other Expenses | 0 | 0 | 0 | 0 | 0 | |
| TOTAL EXPENSES | 1,691 | 15,225 | 13,150 | 8,300 | 6,300 | |
| (DEFICIT) or UNSPENT REMAINDER | 27,962 | 13,637 | 15,337 | 7,937 | 12,217 | 6 |

1. Estimate (Actual figures have not been received from ANS HQ)
2. Estimate \$1000/year for two new MCD awards (Service and Young Achievement) at \$750 each every two years plus related costs - including plaque etc.; as of June 2005, the YEAR 2005 obligation has not been disbursed
3. Actual expenses are \$650 for student tickets to ANS President's Reception at the ANS Annual Meeting in Washington DC in November 2004 is shown in the actual column for YEAR 2004. Actual expense of \$520 for the same purpose at the San Diego Annual Meeting in June 2005 is shown in the actual budget column of YEAR 2005
4. Initial approved estimate based on \$2,000 support for students at the "2005 Avignon M&C Topical Meeting" (approved by MC Exec. Cmte. Nov. 2004), \$2000 for Student Conference in April at Ohio State University, and \$500 each for San Diego and Wash DC

Annual Mtgs to be held in 2005. The funds for the Student Conference were approved by M&C Executive Committee in November 2003. The Annual Meeting funds are recurrent. In the actual to-date budget column, total of \$2,500 corresponds to the \$2,000 for the Ohio State Student Conference and the \$500 for student travel to the San Diego ANS Annual Meeting in June 2005.

5. Dannels Funds needed \$30K in 2003 to fully endow; MCD could afford only \$1000 in YEAR 2005. This amount is shown in the actual column of 2005 Budget as it was disbursed.
6. Proposed and actual budgets for 2005 and actual budget for 2004 do not reflect share from PHYSOR-2004 income and reflect only and ESTMATE for Division income from members dues.

The following provides background and explanation for the adopted budget for YEAR 2005.

- MCD income (other than membership allocation): assumed to be zero.
- Student support: based on \$2000 for student conference, \$500 student travel support each of the ANS Annual Meetings (San Diego and Washington DC 2005), and \$2000 to support student travel to M&C 2005 (for students who will be presenting papers). All of these items have been approved by the M&C Executive Committee. The Student Conference support was approved in November 2003, the M&C 2005 support was approved in November 2004. The other items are recurrent.
- National Meeting Costs: relates to \$1300 for tickets to the President's Reception for student attendees.
- Awards: Continuing the budget recommendation by Paul Turinsky and Bill Martin from the 2004 budget (when planned) to fund the two new MCD awards (Distinguished Service and Young Member's Research Achievement awards) at \$750 each. Given the expense for plaques and possible meeting registration, this represents an annualized expense of approximately \$1000.
- Dannels (NEED) funding: In 2004, in order to help it reach full endowment level in the next few years, MCD departed from previous practice of providing \$1000 per year to this scholarship fund and instead donated \$10,000. It was hoped that this level of contribution could be repeated in 2005 if the budget allows. Unfortunately, the budget appears to be too tight to allow the same level of contribution. Therefore, the MCD Executive Committee decided at its November 2004 meeting to that the contribution to the Dannels Scholarship fund would be set at \$1000 for 2005.
- No funds have been allocated as a loan to support M&C 2005. Such funds may have to be considered and finalized at the M&C Executive Committee Meeting in June 2005 in San Diego.

TO THE ATTENTION OF THE NEXT M&C TREASURER AND EXECUTIVE COMMITTEE:

Remaining Commitments for Year 2005

(1) The M&C Division has obligated \$500 to support student travel to the Washington DC Annual Meeting in November 2005. A disbursement form for that amount should be issued to ANS HQ in October 2005. (2) In addition, tickets for students to attend the ANS President reception are to be purchased (disbursement request probably to be issued at the end of October 2005). (3) A final unmet obligation is the support for student travel to the M&C Topical meeting in Avignon (France) in September 2005. Although the money was offered upfront, Dr. Richard Sanchez declined to receive the money upfront because of the way the Avignon conference is carrying out its accounting. Dr. Sanchez recommended that the amount be deducted from the Division's share of profits from the conference. The Executive Committee agreed.

Unresolved Accounts Receivable

(1) As of the writing of this report, ANS HQ has not notified the division about the income to the division from members dues. When that information is finally received, it should be reconciled with the estimate of \$900 used in the budgets shown in this report. (2) In addition, the share of M&C from the profits realized by PHYSOR 2004 are not reflected in the budgets shown in this report. The profit sharing is received by MCD when RPD issues the request for the funds to be transferred to MCD. To-date, MCD has not been informed by ANS HQ of the receipt of the share of profits.

Respectfully submitted,

Abderrafi M. Ougouag
Treasurer, MCD