

M & C Executive Committee Minutes – June 2000

AUG 07 2000

The meeting was called to order at 2 PM.

- 1) Farzad Rahnema announced there would be a review of the ANS Electronic Paper Submission system on Wednesday, June 7.
- 2) Minutes from the last Executive meeting were approved.
- 3) The Treasurers report was distributed. A copy is attached to the minutes.
- 4) M & C Topical Meeting 2001 - 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.
- 5) I. K. Abu-Shumays reported on the PHYSOR 2000 meeting. Meeting attendance was > 300. The Abstracts were printed with the Proceedings on CD-ROM. A final report will be presented in November.
- 6) A report by the Honors and Awards Committee was presented. A copy is attached to the minutes.

A motion was approved to have two Division Awards:

The Pomraning Award focused on Technical Merit, and

The Distinguished Service Award focused on service to the Division.

A general discussion was held on the Daniels Scholarship. A motion was approved to add \$500 to the Daniels Scholarship Fund and to add a \$1000 line item to the yearly budget to further endow the Scholarship.

- 7) The Program Committee report was presented. Three special sessions have been approved for the Milwaukee Meeting. Two special sessions will be presented at the Washing Meeting.

A motion was approved to provide a Certificate and \$25 to Students presenting M&C papers at the National Meeting.

- 8) A Proposal for a Joint Benchmarking Committee was presented. (See Attached). A motion passed to approve the Joint Benchmarking Committee (JBC). Barry Ganapol was appointed Co-Chair to the JBC.
- 9) The Membership report was presented and is attached.
- 10) Old Business – A brief report on PHYSOR 2002 was presented. A copy of the meeting flyer is attached.

11) New Business - The Executive Committee expressed its thanks to Farzad Rahnema for his efforts as Chair during the Past Year.

12) The Meeting was adjourned.

Treasurer Report
Mathematics & Computation Division
1-Jun-00

2000 Budget		
	Budget 12 Months 2000	Actual 5 Months 2000
2000 Member Allocation	801	817
Carry Forward from 1999	0	10187
Other Budget Income	10037	0
Total Budget Funds	10838	11004

Budget Expenses		
Newsletters	0	0
Awards, Plaques	700	0
National Meetings Costs	100	0
Division Officer Expenses	100	0
Student Support	800	0
Scholarship / Need Funding	100	0
Other expenses	500	0
Total Expenses	2300	0

Remaining Funds	8538	11004
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Notes

1. Math. & Comp. division did not spend any money during the first five months of year 2000.
2. We found out that in the first half of 1999 Bob Holloran was paid twice for web services and support of M&C paper review for the Summer ANS Meeting 1999. He got two checks in the amount of \$250 each. As usual this year he provided the division with web services for the Summer ANS meeting 2000 in San Diego. He kindly agreed to use the extra check in the amount of \$250 as a payment for his work. I am grateful to Forrest Brown for pointing out a potential problem with payments during 1998-1999 period.

Dmitriy Anistratov

Membership Report
Farzad Rahnema for Madeline Feltus

SOCIETY:

Total # of members: 10,188

Trend: Steady decline since 1996: 12,420 → 10,188

Total: down by 125 from 1/99 to 12/99 (gained 835 new members but lost 960 existing ones)
down by 189 from spring/99 to spring/00

Students: increased since 1996: 494 → 560

New student members: 275 in 1999

Retention: As of 2000, 1341 member are yet to renew
After 1 year: 83% renew
After 2 years: 60% renew
After 5 years: 43% renew

Recruiting Efforts:

In Feb 2000, 1404 members were called to renew: only 20% renewed, the rest refused or were unreachable

1341 members are yet to renew their 2000 membership

Initiated a mailing to 600 working on 150 navy ships
1900 attendees of the waste management conference in May

MATH & COMP DIVISION

12.6% increase since spring, 1999
1996: 928 members, spring 2000: 830 members

Reactor Physics Division (for comparison):
0.8% increase since spring, 1999
1996: 1185 member, spring 2000: 1055 members

Conclusion: long term trend: similar to RPD
short term trend: much better the RPD

Question:
ANS has initiated a recruiting effort as above.
Does M&C need to do anything beyond that?

Student Member Position on the EC
Farzad Rahnema

To create a student member position on the EC, must get approval of the majority of the MCD members. That is, a proposed amendment approved by the "Bylaws and Rules" committee must be mailed to the MCD members for final approval for the creation of the new position.

Instead, recommend inviting up to 3 students to sit in the EC meetings to advise the EC members on student matters. These students will serve for 3 years and be selected by the EC members from a list suggested by the ANS student advisors from the schools with NE programs. These students may also sit in the Program Committee meetings. Recommend that the recruiting responsibility of the student members be with the vice chair of the division.

Suggested Motion: Form a 3 member committee to look into the process of selecting X students every Y years to sit in the EC meetings to advise the EC and Program Committee members on student matters.

Dannels Scholarship Committee

<u>Current</u>	<u>New</u>	
I.K. Abushumays	Melissa Hunter	
Jack Olhoeft	Farzad Rahnema	(this year's winner: Jeffrey Densmore)
Paul Neilson	Barry Ganapol	
Anil Prinja	Anil Prinja	
Jim Rathkopf (chair)	Jim Rathkopf	
Bob Singleterry	Bob Singleterry	

A new chair to be elected by the committee members.

M&C Honors and Awards Committee Report
ANS Annual Meeting, San Diego, California
June 4, 2000
L. L. Briggs

Pomraning Award: 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 SAIC providing some or all of the endowment for such an award. I have attached to this report a recommendation regarding naming an award for Jerry, and I would like to ask that the Executive Committee take a vote on it at this meeting.

Distinguished Service Award: The committee would like to begin 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. Anyone who would like to make a nomination for this award should contact Laural. A supporting letter summarizing the nominee's technical contributions, how they have influenced the work of others, and their service to the Division would be extremely helpful.

Fellow Nominations: Mike Westfall is continuing to work on identifying M&C candidates for fellow and processing the nomination packages through the national Honors and Awards Committee. Anyone who would like to suggest a candidate for fellow should contact either Mike or Laural.

National Awards: The committee is continuing to try to identify M&C candidates for the various ANS-wide awards. Anyone with a suggestion for a nomination for one of these awards should contact Laural.

Recommendation of the Mathematics and Computation Division's Honors and Awards Committee regarding the naming of a divisional award in memory of Jerry Pomraning:

1. If sufficient funding is obtained to endow a national-level award, name that award for Jerry. The committee was evenly divided as to whether 1) such an award should replace the current division-level Distinguished Service Award or 2) the Distinguished Service Award should continue at the division level and the Pomraning Award be given separately at the national level. The Honors and Awards Committee asks that the Executive Committee consider both possibilities and vote between them. Factors to evaluate include, but are not limited to, whether the division wishes to give only one top award every two years, whether we might give a Distinguished Service Award and a Pomraning Award on alternate years, whether the division wishes to financially support two awards (the endowment for the national-level award should support that award without further contributions from the division, but we would probably want to add something to it in much the same way that we add to the Dannels scholarship), whether we can identify enough qualifying candidates to receive two awards in the timeframe in which we currently present only one award. There is certainly precedent in ANS for a division to give two top-level awards, particularly if their criteria are substantially different.
2. If sufficient endowment funding is not obtained, the Committee recommends leaving the Distinguished Service Award as it is, rather than renaming it for an individual.

Proposed Charter: Joint Benchmark Committee

The Joint Benchmark Committee (JBC) shall be a joint standing committee of the Mathematics and Computations Division, the Radiation Protection and Shielding Division, and the Reactor Physics Division of the American Nuclear Society (ANS). It shall have members from all three divisions.

1. Statement of Purpose

The purpose of the JBC is to allow a sanctioned group of chosen professionals in the fields of reactor physics, shielding, and computational mathematics to combine their efforts and focus upon experimental, analytic, and computational ~~nuclear~~ benchmarks of interest to the ANS ~~missions and public policies~~ ^{three sponsoring divisions}. These professionals will examine potential candidate benchmarks, lend a helping hand through working groups, and evaluate, submit, and publish the benchmarks in a form useful to the experimental and computational communities. The effort should maintain its objective through guidance from the ~~ANS community~~ ^{three sponsoring divisions}, working with organizations both within and outside the U.S. that are ~~familiar with the benchmark(s) in question~~ ^{interested in the benchmark,}

The ultimate and ongoing goal of the JBC is to provide useful, essentially complete, and accurate benchmark information within a single ~~source~~ ^{document, easily accessible}, at the fingertips of users interested in performing predictive computational analysis. The form of the data should promote and combine the ease of use and data acquisition, with the versatility necessary for differing types of benchmarks.

2. JBC Co-Chairs

- 2.1 The JBC shall have three co-chairs, one from each of the three sponsoring divisions.
- 2.2 The co-chair from each division is subject to reappointment each year by the chair of that division.
- 2.3 The chairmanship of the JBC shall revolve annually among the three co-chairs.

3. JBC Membership

- 3.1 The JBC shall have 12 permanent members, including the co-chairs.
- 3.2 Permanent membership of the JBC shall be divided equally among the three divisions.
- 3.3 Permanent members of the JBC from each division shall be appointed by the JBC co-chair from that division for a fixed term of 3 years.
- 3.4 Incumbent permanent members of the JBC can be reappointed.
- 3.5 Chairs of working groups actively working to develop or maintain benchmarks shall be *ex officio*, non-voting members of the JBC.

4. Benchmark Requirements

It is advisable, due to the extensive nature of the JBC work ahead, to minimize unnecessary redundancies in collecting, checking, or evaluating each benchmark.

4.1 Benchmark Criteria

- 4.1.1 Benchmarks should include references to published articles and reports, if available. Other information such as logbooks and notes as well as direct communications from the experimenters can be cited to support development of the benchmark.
- 4.1.2 Measurement uncertainties ~~and~~^{and/or} analytic or computational approximations employed to develop the benchmark shall be identified and should be quantified when feasible.
- 4.1.3 The JBC may establish additional benchmark criteria subsequent to its formation and at any appropriate time thereafter.

4.2 Designation as an official JBC benchmark requires:

- 4.2.1 Approval by 3/4 of the voting permanent JBC members (i.e., members who abstain or fail to vote are not counted in this determination); and
- 4.2.2 approval by at least half of all permanent JBC members.

5. Publication

Publication of each JBC Benchmark will be done through the Radiation Safety Information Computational Center and the OECD NEA Databank. Both have previously established themselves as leaders in the areas of collecting and disseminating benchmark information. Specifics as to when and how these benchmarks are to be published shall be established by the JBC.

6. Changes to This Charter

Any change~~s~~ to this charter requires approval by the JBC itself and by the Executive Committee of each of the sponsoring divisions. Specifically, each change requires

- 6.1 Approval by 3/4 of the voting permanent JBC members (i.e., members who abstain or fail to vote are not counted in this determination);
- 6.2 approval by at least half of all permanent JBC members; and
- 6.3 approval by a voting majority of the Executive Committee of each of the three sponsoring divisions.

PHYSOR 2002

**2002 ANS RPD Topical Meeting
International Conference on the New Frontiers of
Nuclear Technology : Reactor Physics, Safety
and High-Performance Computing**

**October 7~10, 2002
Seoul, Korea**

1. Opening of Web Site

- Address : <http://physor2002.kaist.ac.kr>
- E-mail : tpc@physor2002.kaist.ac.kr

2. Distribution of First Call for Papers Flyer

- May 2000 at the Pittsburgh PHYSOR 2000 Conference

3. Additional Co-Sponsors :

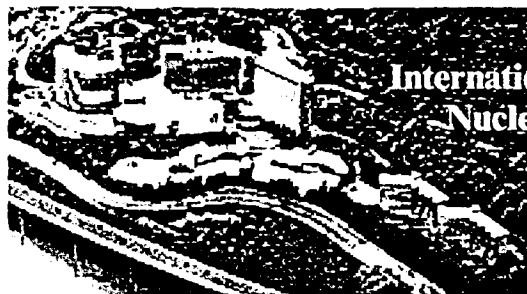
- ANS M&C (to be confirmed)
- Chinese Nuclear Society (to be contacted)

4. Plan to hold Progress Report and Organizers Meeting

- ANS National Meeting (November 2000, Washington, D.C.)

Since Mar 1, 2000

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October 7~10, 2002

Sheraton Walker Hill Hotel, Seoul, Korea

Topical Areas**A. Reactor and Neutron Physics**

- A-1 Nuclear Data
- A-2 Resonance Physics
- A-3 Delayed Neutrons
- A-4 Critical Experiments and Analysis
- A-5 Integral Experiments for Thermal and Fast Reactors
- A-6 Spent Fuel Criticality and Burnup Credit

C. Fuel/Core Design and Analysis

- C-1 Core Design Optimization
- C-2 Fuel Management and Fuel Cycles
- C-3 Weapons-Grade Pu Disposition
- C-4 MOX Core Design and Operational Experience
- C-5 High Burnup Fuel
- C-6 Advanced Fuel Design
- C-7 Design Codes : Verification and Validation

E. Reactor Operation and Control

- E-1 BWR Stability Analysis
- E-2 On-Line Core Monitoring Methods
- E-3 Load Follow Operations
- E-4 Reactor Operation Support and Control Aids
- E-5 Reactor Operation Anomaly and Transient Analysis

G. Non-Power Reactor Applications

- G-1 Accelerator Applications/Spallation Physics
- G-2 Plasma and Particle Transport for Industrial Applications
- G-3 Medical Applications : Imaging and Radiation Therapy
- G-4 Non-Destructive Assay Methods
- G-5 Neutron Radiography
- G-6 Nuclear Geophysics

I. Research and Test Reactors

- I-1 Design and Operation
- I-2 Start-Up Test and Design Verification
- I-3 Research Reactor Fuels
- I-4 Cold Neutron Source

B. Reactor Analysis Methods

- B-1 Lattice Physics Methods and Verification
- B-2 Deterministic Transport Methods
- B-3 Stochastic Transport Methods
- B-4 Homogenization and Nodal Methods
- B-5 Homogenization-Free Reactor Core Analysis Methods
- B-6 Monte Carlo Depletion Methods
- B-7 Spatial Kinetics Methods
- B-8 Perturbation Theory and Variational Methods

D. Future Reactor Design

- D-1 Advanced Light Water Reactors
- D-2 Integral and Passive-Safety Reactors
- D-3 Fast Reactors
- D-4 Actinide Burners
- D-5 Subcritical Reactor Physics and Analysis
- D-6 Thorium Cycles
- D-7 Gas-Cooled Reactors
- D-8 New Reactor Concepts

F. High-Performance Computing

- F-1 Parallel Computing
- F-2 Distributed Computing
- F-3 High-Fidelity Simulators
- F-4 Computational Methods on Advanced Computers
- F-5 Large-Scale Nuclear Problems

H. Nuclear Safety

- H-1 Reactivity Induced Accident Analysis
- H-2 Coupled Neutron Kinetics and Thermal Hydraulics
- H-3 Advanced Computational Fluid Dynamics
- H-4 Criticality Safety

J. Radiation Shielding

- J-1 Radiation Monitoring and Dosimetry
- J-2 Pressure Vessel Lifetime Extension
- J-3 Fusion Reactor and Accelerator Shielding

K. Others

Summaries and full papers on the above topics should be submitted in MS-Word or PDF format as an E-mail attachment.

Website : <http://physor2002.kaist.ac.kr> / E-mail : tpc@physor2002.kaist.ac.kr

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The scene of the first electric light in Korea : March 1887 at Kyongbok Palace

International Conference on the New Frontiers of Nuclear Technology : Reactor Physics, Safety and High-Performance Computing

This meeting will provide a forum for world-wide experts in various areas of reactor physics, design and analysis methods for nuclear power and related technologies to discuss most recent developments, both analytical and experimental, including areas on safety, high-performance computing, and non-power reactor applications.

Dates of Meeting and Location

October 7 (Mon) ~ 10 (Thu), 2002 / Sheraton Walker Hill Hotel, Seoul, Korea

Conference Organizers

General Chair : Chang Hyo Kim, *Seoul National University*

Technical Program Chair : Nam Zin Cho, *KAIST*

Technical Program Co-Chairs :

Alain Kavenoky, *CEA, France*

Dimitrios Cokinos, *BNL, U. S. A.*

Enrico Sartori, *OECD/NEA*

Toshikazu Takeda, *Osaka University, Japan*

Important Dates

January 15, 2002 Submission of 1000-word summaries in English to Technical Program Chair
 March 15, 2002 Notification to authors of summary acceptance/invitation for full papers
 May 31, 2002 Full papers in English to Technical Program Chair

Sponsors

Conference Sponsors Korean Nuclear Society, ANS - Reactor Physics Division

Conference Co-Sponsors ANS - Mathematics and Computation Division

Atomic Energy Society of Japan, (OECD Nuclear Energy Agency)

Canadian Nuclear Society, Brazilian Association for Nuclear Energy

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