

**ANS MATHEMATICS & COMPUTATION DIVISION  
2004-2008 DRAFT STRATEGIC PLAN  
Rev. October, 2003**

**2004 Tactical Plan**

**2004 Top Priorities**

Continue technical program excellence in support of ANS Goals A & B. (Program Chair)  
Succession planning and bylaws revision in support of ANS Goal E. (Chair)  
Improve financial management and institutionalize thorough budgeting in support of ANS Goal B. (Finance Committee)

**2004 Operational Plans and Activities**

1. Improve ANS meeting paper reviewer assignment procedures to reduce duplication of effort and improve the quality of reviews. (Program)
2. Publicize paper review standards on the MCD web site and newsletters. (Publicity)
3. Improve succession planning for committee chairs. (Chair)
4. Review MCD Bylaws to align them with good governance and operations. (Vice Chair)
5. Produce and maintain a baseline budget for student support, awards, student conference support, and scholarship fund contributions. (Finance)
6. Enhance MCD web site, and publish two newsletters. (Publicity)
7. Support attendance at and paper reviews for PHYSOR-2004, Chicago, IL, April, 2004 (Publicity, Program)
8. Support planning for International Topical Meeting, Avignon, France, 2005. (Program)
9. Support planning for Monte Carlo 2005 (jointly sponsored by ANS Oak Ridge/Knoxville Section, RPSD, and MCD).
10. Solicit proposals for International Topical Meeting, 2007 (Program)
11. Continue active development/qualification of computational benchmarks to include comparison with experiments. (Joint Benchmark)
12. Support ANS-10 standards activities, particularly update of ANS10.4.
13. Track and analyze membership trends (Membership)
14. Nominate at least one MCD member for ANS Fellow, and solicit nominations for the MCD Distinguished Service and the Pomraning Awards.

**Succession Plan**

Committee Chair appointments are for a fixed term of two years, but are renewable:

<b>Position</b>	<b>Incumbent</b>	<b>Term End</b>	<b>Successor</b>	<b>Successor Term End</b>
Program Chair	Anil Prinja	2004	Todd Palmer	2006
Asst. Program Chair	Todd Palmer	2004	Anil Prinja	2005
Nominating Chair	latest ex-chair	2004	current chair	2005

Finance Chair (1 year)	current treasurer	2004	next treasurer	2005
Finance Member	latest ex-treasurer	2004	current treasurer	2005
Joint Benchmark Rep	Barry Ganapol	2004		
Joint Benchmark Rep	Mike Smith	2005		
Publicity Chair	Avneet Sood	2005		
Membership Chair	Madeline Feltus			
Honors and Awards Chair	Paul Turinsky			
Standards Chair	Andy Smetana			

## **2004-2008 MCD Five-Year Plan**

### **Mission**

The Mathematics and Computation Division (MCD) promotes the advancement of mathematical and computational methods for solving problems which are of interest to the membership of the American Nuclear Society (ANS) and of benefit to the application of nuclear science and engineering. The Division keeps its members informed through its regular newsletters, participation in ANS meetings, and sponsorship of regular topical meetings.

### **Long-Term Goals**

- To hold an average of 4 regular and special sessions at the semi-annual national ANS meetings. (Program Committee)
- To hold biennial topical meetings focused on a range of mathematical and computational topics of interest to the MCD membership, and to encourage international participation. To sponsor at least every third biennial topical meeting outside of the U.S., as well as other relevant meetings such as Supercomputing in Nuclear Applications. (Program Committee)
- To continue the biennial PHYSOR topical meeting partnership with RPD by mutual support through membership attendance and profit-sharing. (Program and Finance Committees)
- To support ANS non-meeting publications by encouraging topical meeting organizers to propose submission of high-quality technical papers to ANS journals. (Program Committee)
- To foster recognition of deserving MCD members through the biennial MCD Distinguished Service Award, the Gerald C. Pomraning Award, and through nomination of MCD members for national ANS awards. (Honors and Awards Committee)
- To foster professional development of MCD members through workshops on codes, computational methods, and other topics, to be held in conjunction with MCD topical and ANS meetings. (Program Committee)
- To foster student development by improving the funding level of the Dannel Scholarship and by encouraging student participation and attendance at ANS activities through cash awards for best student papers at topical meetings and by

MCD contributions to the ANS national meeting student travel fund. (MCD Honors and Awards Committee, Finance Committee)

- To support efforts in the formulation, solution, and evaluation of computational benchmark problems under the auspices of the Joint (MCD, PRD, RPSD) Benchmark Committee, which disseminates benchmark work through distribution of the original Benchmark Problem Book and supplements to this book. Efforts toward this goal should be coordinated with relevant OECD expert benchmark groups.
- To continue active involvement in the formulation of computational standards. (Standards Committee)
- To publish the biennial MCD newsletter, and ensure that it remains an effective communication medium among the MCD membership. (Publicity Committee)
- To maintain and improve the MCD web site to enhance its value to members, officers, and committee chairs. (Publicity Committee)
- To increase MCD membership by analyzing membership data provided by ANS and responding to trends. To increase the participation of MCD members in its activities. (Membership Committee)
- To improve MCD governance by specifying fixed and renewable committee chair tenure lengths, by early identification of successor chairs who will act as assistant chairs, and by re-evaluating the tenure lengths of MCD officers. (Chair)

**Recommended Changes to ANS Strategic Plan:** None

### **Analysis of Trends**

The scope of the MCD has expanded considerably in recent years. Initially, the division was primarily focused on methods in neutronics calculations. MCD membership interests eventually broadened to include thermal-hydraulic calculations as well, with the emphasis still primarily on methods development. These two areas are still very important in the division, but they have been joined by a widespread interest in supercomputer applications to nuclear technology, as well as a growing involvement in non-reactor transport problems and in statistical analysis.

In response to the growing diversity of technical interests among MCD members, the Joint Benchmark Committee has expanded the range of types of benchmark problems included in each new supplement to the Benchmark Problem Book. The committee is active seeking benchmarks for areas such as machine performance and thermal hydraulics. The committee is also seeking to work cooperatively with outside organizations.

The ANS 10 standards committee will review the existing standards and update them according to developments in computing technology.

### **Recurring Student and Award Expenditures**

The following expenditures in support of students and awards are anticipated. Items designated “automatic” are always budgeted for, and will be paid, barring MCD fiscal complications or meeting schedule conflicts.

<b>Item</b>	<b>Amount</b>	<b>Schedule</b>
ANS meeting student travel	\$500	Automatic, semiannual
MCD topical meeting student travel	\$1000	Automatic, biennial (2005)
MCD biennial topical meeting student paper awards		Biennial (2005)
MCD Distinguished Service Award		Biennial (2005)
Gerald C. Pomraning Award		Biennial (2005), endowed
Dannel Scholarship Contributions		
ANS NEED		
ANS Student Conference Support	\$1000	annual
ANS President's Reception Student Tickets	\$200	semiannual