

# American Nuclear Society Mathematics and Computation Division (MCD)

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Presentation to the  
ANS Board of Directors

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# MCD Mission

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Division members promote the advancement of mathematical and computational methods for solving problems arising in all disciplines encompassed by the Society. They place particular emphasis on numerical techniques for efficient computer applications to aid in the dissemination, integration, and proper use of computer codes, including preparation of computational benchmark and development of standards for computing practices, and to encourage the development on new computer codes and broaden their use.



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# MCD Governance

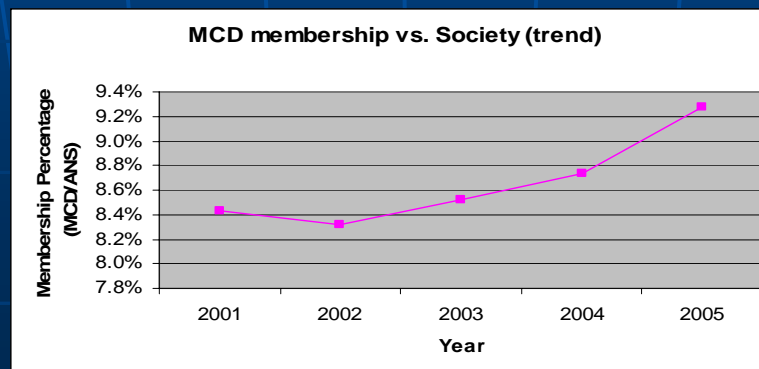
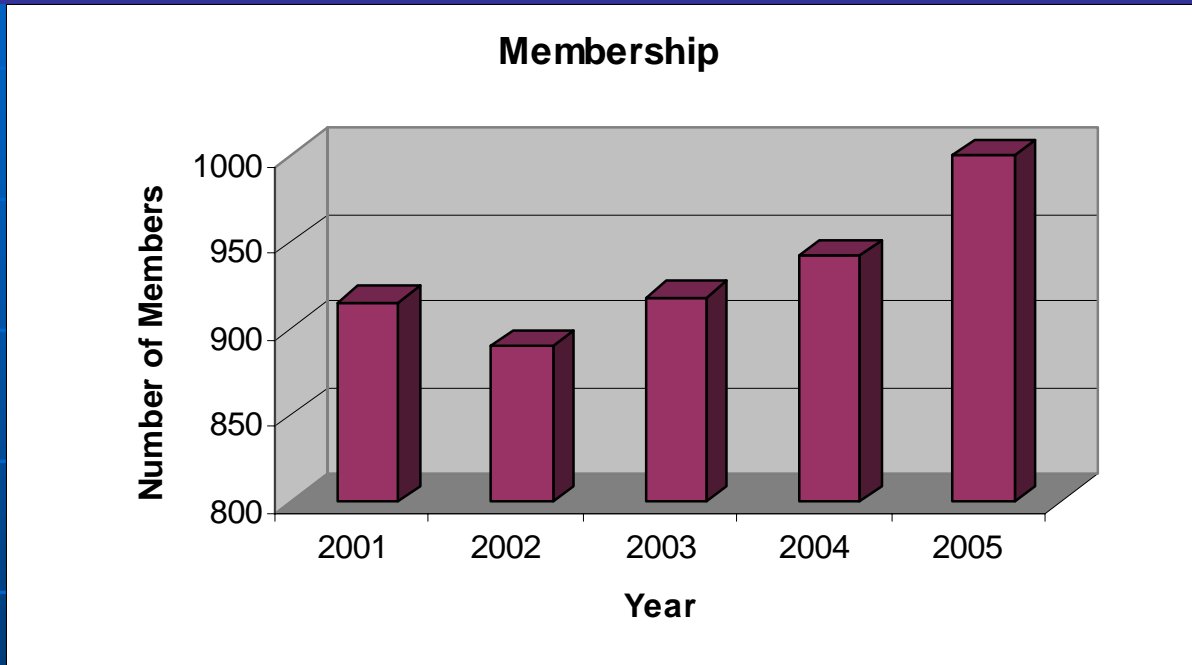


# Executive Committee Structure

- 15 members
  - 10 elected members (they are elected for a 3-year term) +
  - 4 officers (Chair, Vice-Chair, Secretary, Treasurer) +
  - Chair ex-officio
- BOD Liaison – Harold McFarlane
- **NOTE:** 5 out of 8 the elected officers for 2006-2007 are younger than 35!



# Membership Trends Last 5 Years/Composition

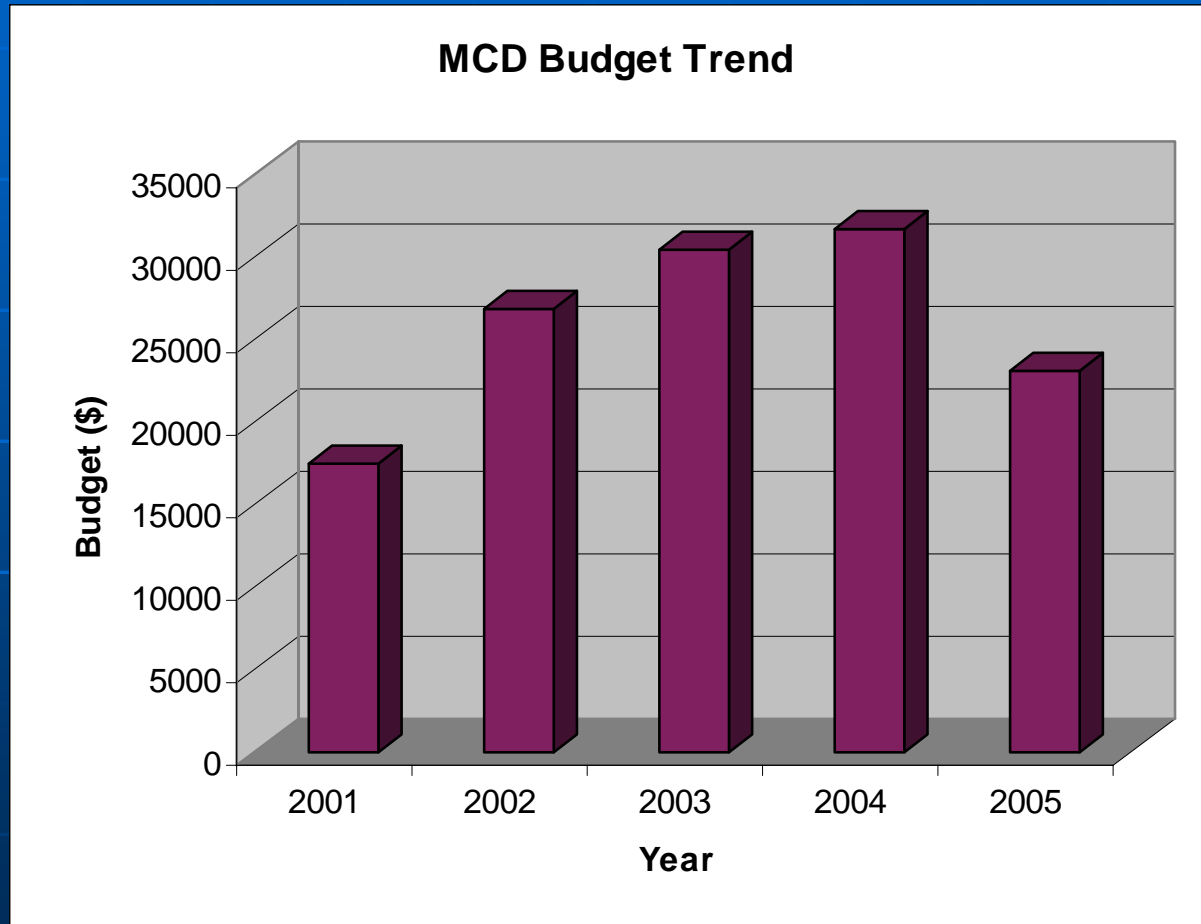


# Budget Information/Previous Year/Current

Year	Budget	Expense	Comments on expense
2005	\$22,994	\$8,606	Awards, plaques, Tickets for student members, student travel (National meeting, Topical meetings), student conference, Dannels scholarship, Landis Challenge
2006	\$22,888	\$10,540	Awards, plaques, Tickets for student members, student travel (National meeting, Topical meetings), student conference, Dannels scholarship



# Budget History – Past 5 years



# Division Planning/Strategic Plan, Succession Planning

- MCD strategic planning is to enhance the Division by
  - Organizing excellent Topicals
  - Organizing excellent sessions for the national meetings
  - Collaborating with other divisions, especially, with RPD, RPSD, and more recently with BMD
  - Collaborating with international nuclear community (meeting organization and participation, benchmarking, serving as Division officers)
  - Attracting other societies to ANS; recently in collaboration with BMD formed the Computational Medical Physics Group





# Division Planning/Strategic Plan, Succession Planning

- Attract young members (provide funds for student travel to ANS meetings, MCD topicals, RPD topicals, Student conferences, and relevant conferences; awards for best student papers at topical meetings)
- Organizing workshops on codes
- Benchmarking of codes and methods in collaboration with RPD and RPSD
- Continually explore subject areas that MCD members can contribute to; recently, we have been organizing sessions on Computation Medical Physics.
- Finally, we are conducting a survey in order to identify issues, if any, and seek comments and suggestions from the membership



# Communications/Web, E-mail/Copy of Newsletter

- Website addresses:
  - MCD
    - <http://www.mcd.ans.org/committees.html>
  - CMPWG
    - <http://cmpwg.ans.org>
- Division publishes two newsletters every year; the newsletter is posted on Division's website, and hard copies are distributed by ANS
- Division uses the ANS' email list for communication with members effectively



# MCD Contributions to ANS

- ANS Position Statements
  - MCD members, especially the members of the executive committee, standing committees, and officers have contributed to the ANS position statement
- Participation with Other Professional Societies
  - Our members participate at SIAM, AAPM and ASTM societies
  - Co-sponsorship of meetings, e.g., Supercomputing in Nuclear Applications (SNA), Monte Carlo (MC)
- Society Leadership
  - Our members serve on ANS board and actively participate in societies' strategic planning



# MCD Contributions to ANS

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- Non-Meeting Publications

- Our members publish papers in NSE, Nuclear Technology, Annals of Nuclear Energy, Progress in Nuclear Energy, Journal of Computational Physics, Journal of Medical Physics, TTSP, SIAM Journals, IEEE Journals, ASTM Journals

# MCD Services to Membership

- Professional Development
  - MCD organizes and hosts various workshops and short courses on computer codes at national meetings and topical meetings; we also organize a roundtable on “Current Issues in Computational Methods” at every national meeting
- Scholarships
  - MCD offers Dannel’s scholarship, annually
- Peer Recognition/Awards
  - MCD offers three awards: Pomraning Memorial, Distinguished Service, and Distinguished Young Member
- Student Support
  - MCD provides funds for trips to national and topical meetings, student conferences, purchases tickets to President’s reception for student presenters at the national meetings



# MCD Meetings

- National Meeting Participation
  - MCD is committed to hold sessions at both national meetings; generally holds 3-4 general sessions, and 1-2 special sessions
  
- Topicals/Prior Two Years, Current Year, Future Two Years
  - Every other year holds a topical meeting (class I), and every six years holds a meeting outside US (class IV)
  - Our next topical will be held in Monterey, CA, April 15-19, 2007
  - Every other year, we co-sponsor RPD and RPSD meetings; this year's meetings are RPSD Topical, April 3-6, 2006 & RPD Topical, Sept. 10-14, 2006



# Summary

## ■ Status of Division/TG Metrics and Measures

Division Meetings	Division Governance	Division Contributions to Society	Division Services to Membership
<p><b>National Meeting Participation</b></p> <p>2005: 3 session 1panel/4 session 1roundtable</p>	<p><b>Succession Planning</b></p> <p>Included in 2004 Strategic Plan</p>	<p><b>ANS Position Statements</b></p> <p>MCD is not responsible for Position State</p>	<p><b>Professional Development</b></p> <p>MCNPS workshop on parallel processing at 2003 topical</p>
<p><b>Class I Class II Topicals</b></p> <p>Greater than 25% increase (134/179) (April 2003 Topical paid attendance was 179) Monte Carlo 2005 – 204 attendees</p>	<p><b>Membership Trends</b></p> <p>942/1,000 membership + 6.2% change in 2005</p>	<p><b>Participation with Outside Professional Societies</b></p> <p>Supercomputing Nuc App Sep 2003 &amp; OECD expert benchmark group liaison activities</p>	<p><b>Scholarships</b></p> <p>Dannels Scholarship – in 2004 contributed 10K to build fund) 2005 Landis Challenge</p>
<p><b>Class III Topicals</b></p> <p>MCD does not support Class III Topicals</p>	<p><b>Communications</b></p> <p>2 newsletter in 2005 website updated in 2005</p>	<p><b>Society Leadership</b></p> <p>Both Mtgs: 75% Exec Comm Both PDC &amp; All NPC</p>	<p><b>Peer Recognition/Awards</b></p> <p>Pomraning award, several fellows &amp; best paper/poster awards</p>
	<p><b>Division Planning</b></p> <p>2004 Strategic Plan submitted to PDC Chair</p>	<p><b>Non-Meeting Publications</b></p> <p>MCD provided papers to NS&amp;E in 2004</p>	<p><b>Student Support</b></p> <p>MCD supported student conference, Annual &amp; Winter Mtgs. 2005.</p>



# Summary

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- List Areas of Success

- Organization of successful topical meetings
- Increasing trends in number of members
- Organization of code workshops at national and international meetings
- Effective collaborations with international nuclear community
- Formation of the Computational Medical Physics Group in collaboration with BMD
  - Involvement of other divisions such as RPSD in this activity



# Summary

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## ■ Focus for Future Action

- Continue our activities for attraction of young members and students
- Continue our efforts to attract other societies into ANS; our current efforts on the Computational Medical Physics Group should help with attraction of AAPM members to ANS
- Continue our efforts in organization of quality meetings
- Explore other subject areas in which MCD membership can make a difference.



Feedback

# Areas of Success

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- Very pleased with the ANS' support with conducting and analyzing membership surveys
- ANS staff, especially the Publication staff are very helpful

# Suggestions (1)

- ANS' support with the Topical Meetings
  - Access to the ANS' website for publicity, review process, program, etc.
- Availability of conference proceedings and transactions, electronically (e.g., free for members)
- Encourage participation of the Divisions in non ANS (class IV) meetings
- Index the ANS member allocation to the annual dues
- Enhancement of continuing education/training for nuclear professionals at national meetings
- Do not distribute the hard copy of the newsletters

# Suggestions (2)

- Provide incentives for Divisions to reach out to other societies/groups with common technical interests, e.g., ASTM, IEEE, TMS, AAPM, ASME, APS, SIAM, etc.
- More frequent survey of the membership, e.g., following every annual meeting
- Explore ways to make ANS more attractive to professionals working in nuclear industry (e.g., surveys, focus groups, dialog with management)
- Develop a matching program for establishment of Division sponsored scholarships

# Typical Complaints from MCD members

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- Page charges for ANS publications
- Expense for attending national meetings
- Lack of understanding of ANS' budget issues