

**MINUTES OF THE MATHEMATICS AND COMPUTATION DIVISION
EXECUTIVE COMMITTEE MEETING
AMERICAN NUCLEAR SOCIETY**

Hilton Orlando Bonne Creek, Orlando, FL – November 11, 2018
2:00 PM – 4:00 PM

Officers Present

Dmitriy Anistratov, Chair
David Griesheimer, Vice Chair
Brian Kiedrowski, Treasurer

Executive Committee Members Present

Mathew Cleveland
Benoit Forget
Barry Ganapol
Diego Mandelli
Sebastian Schunert
Travis Trahan

Others Present

Bob Grove
Forrest Brown
Miriam Kreher
Steven Hamilton

1. Call to Order, Attendance, Introductions

- Chair, Dmitriy Anistratov, called the meeting to order immediately following the MCD Program Committee Meeting conclusion. Attendance was recorded (**Attachment A**). The chair showed the agenda using the projector (**Attachment B**). A quorum (quorum is eight voting members) was reached with a total of nine votes available.

2. Officer's Reports

Secretary's Report: Tara Pandya

- Steven Hamilton presented on the behalf of Tara Pandya who could not attend.
- Minutes from the 2018 Annual Meeting were sent to the EC via email prior to the meeting. Dave Griesheimer moved to accept the minutes. Brian Kiedrowski seconded the motion. Vote was unanimous in favor.
- No modifications were proposed to the current meeting agenda.

Treasurer's Report: Brian Kiedrowski

- The report was sent out electronically to the EC before the meeting (**Attachment C**).

- The Gelbard scholarship has been awarded for the first time. It is not yet fully funded and will require approximately \$700 per year from MCD to continually award the scholarship based on the current funding.
- Dave Griesheimer moved to award the Gelbard scholarship at the current amount of \$3500 indefinitely, with the balance taken from MCD operating funds. Ben Forget seconded the motion. Vote was unanimous in favor.
- MCD budget is favorable, with expense projections carried over from the previous year.
- Dave Griesheimer inquired about the status of funds from M&C 2017. Brian said that he has not received any information about the funds and suggested that MCD should contact Han Joo to determine the status.

Vice Chair's Report: Dave Griesheimer

- Dave organized the MCD "Current Issues in Computational Methods" roundtable session which is scheduled for Monday, November 12 at 1 p.m. The topic is "Diffusion Theory in the 21st century". The panelists are Yonghee Kim (KAIST), Joshua Hykes (Studsvik), Vefa Kucukboyaci (Westinghouse), Mathew Cleveland (LANL), and Thomas Downar (University of Michigan).

Chair's Report: Dmitriy Anistratov (Dima)

- Dima attended the professional division committee meeting, which included training for new ANS officers. Much of the meeting centered around budget discussions.
- ANS stated that all contact with hotels for topical meetings should go through them. They also pushed the idea of increasing the number of embedded topicals. Meetings now represent about 50% of total income for ANS and other income sources are shrinking. Forrest Brown noted that the discussion of embedding topicals goes back many years. He said that we have held 30 M&C meetings now that have all been well organized and there is no need to hand over organization to ANS. He suggested that we push back against the pressure to embed. Dave Griesheimer noted that the pressure has come from ANS headquarters staff, but the National Program Committee has been supportive of keeping M&C as it is. Travis Trahan said that there have been difficulties with topicals in other divisions, and does not think that MCD is the target of the current push from ANS.
- Dima noted that ANS' income has been stable over the past 5 years, but projected expenditures continue to grow. ANS acknowledges the need to go digital and that is a good thing. They also brought up the question of whether we really need to have two national meetings per year. There is also a belief that individual divisions have too much power, but it is not clear what exactly they mean by that or what they want to do. Dima recommended that we have MCD personnel get more involved on the national committees.

3. Standing Committees

- a. Benchmark Committee – Sebastian Schunert

- Sebastian had nothing specific to report and said that he needs to get in touch with co-chair Chris Perfetti to discuss next steps.
- b. Finance Committee – Brian Kiedrowski
- Brian suggested that MCD’s favorable financial standing makes it a potential target and we may want to increase funding for the Gelbard scholarship with excess.
 - Travis Trahan asked what the MCD award budget is used for. Brian replied that the number in the budget is a historical value and does not always get spent. Steven Hamilton noted that a monetary award is given by the division when the winner of the MCD Best Summary and Presentation Award is a student. Mathew Cleveland asked if we could apply unused funds from the awards budget toward the Gelbard fund. Dave Greisheimer asked if anyone had the spreadsheet for the Gelbard scholarship. No one present had the spreadsheet.
- c. Honors and Awards – Piero Ravetto
- Piero reported that the Pomraning award will be given next year.
 - Dave Greisheimer asked if MCD has awards that are not being given out. Piero said that other than the Pomraning, the awards have not been given out recently. Barry Ganapol proposed that we need to get people to nominate candidates. Dave said that we should plan to give awards on a regular basis. Barry asked Piero if he could find candidates to give awards to. Forrest said that the “distinguished service award” used to be given frequently and it is intended to recognize direct involvement with the division committees and interaction with ANS. Dave proposed that nominations should be put forward every year. Mathew asked if we could establish a timeline and Piero answered that award deadlines already exist. Miriam Kreher volunteered to make a flyer to publicize the awards. Dima said we should establish a formal procedure and Dave suggested that Miriam work with Piero to have an announcement sent out about the awards.
- d. Membership – No chair
- Dave Greisheimer said that MCD is in the top 3 in membership among divisions. It was asked who receives membership information and Brian said that he receives it indirectly through budget information provided by ANS.
 - Regarding the lack of a chair for the membership committee, several attendees asked if it is necessary to keep the membership committee. Dave Greisheimer said that he would review the bylaws and investigate whether the membership committee must be kept.
 - Dave Greisheimer reminded everyone to renew their ANS memberships by December 31 to avoid delays in MCD receiving the division portion of dues.
- e. Publicity – No chair

- Most recent listed chairs (Greg Davidson and Teresa Bailey) are no longer active.
 - Dima said that the website is in good shape and said that Tara Pandya is doing a great job with it.
- f. Standards – Paul Hulse
- Paul Hulse could not attend the meeting. A report from the standards committee is attached (**Attachment D**) noting the status of several MCD standards.

4. **Program Committee Report:** Steven Hamilton

- The MCD “Best Summary and Presentation Award” from the 2018 Annual Meeting in Philadelphia was awarded to Terry Haut, Peter Maginot, Vladimir Tomov, Thomas Brunner, and Teresa Bailey for their summary and presentation entitled “An Efficient Sweep-based Solver for the S_N Equations on High-Order Meshes.”
- In addition to the Computational Methods Roundtable, 29 MCD summaries will be presented across seven different sessions at the current meeting. MCD is also co-sponsoring three sessions with other divisions (two with NCSD and one with RPD).
- The M&C 2019 topical meeting will be held August 25-29, 2019 in Portland, OR. The meeting has received all approvals from ANS except for final approval, which will be proposed to the NPC in the spring of 2019.
- The program committee received three bids to host the M&C 2021 topical meeting; presentations were given during the program committee meeting preceding the executive committee meeting. The three bids presented were:
 - a. ANS Eastern Carolinas Section – Raleigh, NC
 - b. ANS Northeast New York Section – Saratoga Springs, NY
 - c. Canadian Nuclear Society – Niagara Falls, Ontario

5. **2019 ANS Student Conference**

- An update on the progress of organizing the 2019 ANS Student Conference was presented by Sarah Morgan from VCU.
- The conference will take place April 4-6, 2019 at Virginia Commonwealth University in Richmond, VA.
- It is anticipated that 400-450 students will attend.
- The organizing committee has arranged to hold a college fair for all local nuclear students and will be free to all high school students in Virginia.
- There will be three hosted dinners at the conference.
- A contract is in place with the Graduate Richmond hotel in downtown Richmond, which is walking distance from VCU.
- Miriam noted that the typical funding support for the student conference from MCD is \$2500.
- Dave Greisheimer made a motion to commit \$2500 in MCD funds to support the 2019 Student Conference, with \$150 earmarked for a best paper award. Mathew Cleveland seconded the motion and it passed with a unanimous vote.

6. Ely M. Gelbard Memorial Graduate Scholarship

- Dave Greisheimer suggested that we need to look at the budget to decide how to proceed on the Gelbard Scholarship. Brian Kiedrowski said he would put together a report.
- Dave and Dima discussed the fact that Gelbard was awarded by ANS last year, and MCD was not involved in the process. Dave volunteered to participate in the selection this year as a liaison to the selection committee. He suggested establishing a long-term representative and reporting process at the 2019 Annual Meeting.
- Dave said that there is one more planned Gelbard fundraiser at the M&C 2019 meeting, and that there is no need for further action at the current time to move additional funding to Gelbard. Brian agreed that we should wait until after M&C 2019 and look at any funding deficit at that time.

7. M&C 2021 Selection

- The EC held a private meeting to discuss the bids for the M&C 2021 topical meeting.
- Dmitry Anistratov and Ben Forget did not participate because of their involvement on organizing committees of bids.
- At the conclusion of this meeting, a secret ballot vote was taken to select the winning bid. Based on the results of this vote, Brian Kiedrowski made a motion to accept the ANS Eastern Carolinas Section bid to host M&C 2021 in Raleigh, NC. The motion was seconded by Diego Mandelli and the vote was unanimous in favor.

8. Adjournment

- Brian Kiedrowski made a motion to adjourn at approximately 4:50 pm and Travis Trahan seconded the motion. The vote was unanimous in favor of adjourning.

Attachment A: Attendance

**Mathematics & Computation Division
Executive Committee Meeting
Hilton Orlando Bonnet Creek Hotel
Orlando, FL
November 2018**



Name	Initial when present
<small>Only those listed below are voting members of your division</small>	
Dmitriy Anistratov, Chair	<i>DA</i>
David Griesheimer, Vice Chair	<i>DG</i>
Tara Pandya, Secretary	
Brian Kiedrowski, Treasurer	<i>BK</i>
Rachel Slaybaugh, Immediate Past Chair	
David Pointer, Board Liaison	
Mathew Cleveland	<i>MC</i>
Benoit Forget	
Barry Ganapol	<i>BG</i>
Han Gyu Joo	
Diego Mandelli	<i>DM</i>
Ryan McClarren	
Christopher Perfetti	
Sebastian Schunert	<i>SS</i>
Travis Trahan	<i>TT</i>
Jonathan Walsh	
Others, please PRINT in	<small>(if there is not enough space, feel free to use the other side)</small>
Name	E-mail
Forrest Brown	<i>fbrown@lanl.gov</i>
Miriam Kieher	<i>mkieher13@gmail.com</i>
Bob Grove	<i>grovrb@ornl.gov</i>

Article B10.2 - A quorum for the transaction of business at all Division (or TG) meetings shall consist of fifteen (15) qualified voters or twenty (20) percent of the qualified voters.

Attachment B: Agenda

Executive Committee Meeting Agenda ANS Mathematics and Computation Division 2018 Winter Meeting

Sunday, November 11, 2018 – 2:00-4:00 pm
Hilton Orlando Bonnet Creek, Orlando, FL

- I. Call to Order, Attendance, Introductions
- II. Officer Reports
 - a. Secretary: Steven Hamilton (for Tara Pandya)
 - i. Approval of minutes from 2018 Annual Meeting in Philadelphia, PA
 - ii. Approval of agenda
 - b. Treasurer's Report: Brian Kiedrowski
 - c. Vice-Chair – Roundtable: David Griesheimer
 - d. Chair: Dmitriy Anistratov
 - i. Professional Division Committee report
 - ii. President's Meeting with Professional Division and Committee Chairs report
- III. Standing Committees
 - a. Benchmark: Chris Perfetti and Sebastian Schunert
 - b. Finance: Brian Kiedrowski
 - c. Honors and Awards: Piero Ravetto
 - d. Membership: TBD
 - e. Publicity: Greg Davidson and Teresa Bailey
 - f. Standards: Paul Hulse
- IV. Program Committee Report: Steven Hamilton and Jeffery Densmore
 - a. Update on technical program for this conference
 - b. Report on M&C 2019
 - c. Summary on proposals for M&C 2021 (see also item VII of this agenda)
- V. 2019 ANS Student Conference (2:40 pm)
 - a. Update from the organizing committee: Sarah Morgan, VCU
- VI. Ely M. Gelbard Memorial Graduate Scholarship
 - a. On selection process etc
 - b. Proposal on Vice Chair of MCD to join Dannels and Gelbard Scholarship Evaluation Committee
- VII. Closed Session for Executive Committee Members Chaired by David Griesheimer
 - a. Discussion of proposals for M&C 2021 and selection of the site
- VIII. Adjourn

Attachment C: Treasurer Report

ANS MCD Winter 2018 Treasurer's Report

	Actual	Budget	Comment
2017 Carryover:	28206		
Income			
Membership	1791	2138	Expect total of 2388 by end of year
Expenses			
Awards & Plaques	65	1500	Outgoing chair plaque
Meeting Costs	850	1500	AV equipment for M&C 2021
Student Support	2700	3500	
Scholarship	689	2500	Needed to award Gelbard scholarship
Other	0	30	
Total	4304	9030	
Current Funds:	\$26,290		

* Proposed budget for 2019 is identical to the budget for 2018 with the exception of updated (2018) membership numbers.

Action Items:

- Funds have not been received from M&C 2017
- Additional allocation to Gelbard Scholarship fund

Attachments:

- ANS MCD budget statement from 09/30/2018
- 2018-19 MCD budget spreadsheet

Attachment D: Standards Committee Report

MCD Executive Committee Meeting
ANS Winter Meeting, Hilton Orlando, Bonnet Creek, FL.
2pm-4pm, 11th November 2018

MCD Standards Committee Report – Paul Hulse

Current standards activity is centred on ANS-10.4, ANS-10.7 and ANS-41.5 as detailed below.

The current Mathematics and Computation standards cover the design and development of both high integrity and non-safety related software, and the verification and validation of radiological data for waste management. In particular the following standards are current:

ANS-10.2, "Portability of Scientific and Engineering Software", which was reaffirmed in 2009. The working group chair is Robert Singleterry. The standard will need a major re-write to remain current and this is not currently possible given the changes that are occurring in software development at this time. Therefore the standard will be administratively withdrawn on its 10th anniversary (8/14/19).

ANS-10.4, "Verification and Validation of Non-Safety Related Scientific and Engineering Computer Programs for the Nuclear Industry", is reaffirmed until 2021. Robin Jones of Southern Nuclear has formed a working group for the update to this standard. Development on the standard has been ongoing following a meeting at the summer conference. Particular focus is being placed on updating the definitions and nomenclature to ensure they are consistent with both modern usage and similar ANS standards. There is no working group meeting scheduled for this week; anyone wishing to be involved in the working group is encouraged to contact Robin directly (RDJONES@southernco.com).

ANS-10.5, "Accommodating User Needs in Scientific and Engineering Computer Software Development". This was re-affirmed in 2016, the working group chair is Andy Smetana. There is currently no planned activity for this standard, but reaffirmation will be due in 2021.

ANS-10.7, "Non-Real Time, High-Integrity Software for the Nuclear Industry—Developer Requirements". This was a new standard in 2013 with Charles Martin as working group chair. The standard was re-affirmed in 2018.

ANS-10.8, "Non-Real Time, High-Integrity Software for the Nuclear Industry—User Requirements". This was a new standard in 2015 with Keith Morrell as working group chair. There is currently no planned activity for this standard, where reaffirmation will be due in 2020.

ANS-41.5, "Verification and Validation of Radiological Data for Use in Waste Management and Environmental Remediation". This standard was re-issued in 2012 with Saleem Salaymeh as working group chair. ANSI have granted an extension to this standard until the 31st December 2019. The standard had no obvious fit with other MCD standards, and it was transferred over the summer to the ANS Environmental and Siting Consensus Committee. In particular it was assigned to ESCC's Siting: General & Monitoring Subcommittee chaired by Leah Parks.