

ANS – THD Division
Executive Committee Meeting
Winter Meeting
Orlando, FL
17 November, 2024

Attendees (EC Members):

Leadership

- Chair: Igor Bolotnov (+ proxy from Maria Avramova)
- Vice Chair: Steve Bajorek
- Secretary: Ferry Roelofs (+ proxy from Donna P. Guillen)
- Treasurer: Dillon Shaver (+ proxy from Sierra Tutwiller)
- Ex Officio: Annalisa Manera (not present)

Appointments

Webmaster: Trevor Kent Howard

Members with Terms:

Term Ending 2025

- Yassin Hassan
- Maria Avramova (not present, proxy to Igor Bolotnov)
- Jun Liao
- Bob Martin
- Marilyn Delgado

Term Ending 2026

- Fan-Bill Cheung
- Chul-Hwa Song
- Izabela Gutowska
- Donna P. Guillen (not present, proxy to Ferry Roelofs)
- Ling Zou

Term Ending 2027

- Rui Hu
- Elia Merzari
- Subash Sharma
- Sierra Tutwiler (not present, proxy to Dillon Shaver)
- Xu Wu

Absent: Annalisa Manera, Maria Avramova, Donna P. Guillen, Sierra Tutwiller

Attendees (Other):

(Refer to sign-up sheets in Appendix B.)

1. Opening

Dr. Bolotnov called the meeting to order. The quorum is met. Igor reminds the EC of the sad passing away of John Kelly and De Groeneveld.

2. Approval of Meetings Agenda

A DRAFT agenda was provided for approval (APPENDIX A)

MOTION: Dr. Elia Merzari moved to approve the agenda

SECOND: Dr. Dillon Shaver

NO DISCUSSION

All in favor.

Agenda is APPROVED.

3. Approval of Minutes from 2024 ANS Annual Meeting

The DRAFT minutes of the 2024 ANS Annual Meeting have been provided for review and approval.

MOTION: Dr. Steve Bajorek moved to approve the minutes.

SECOND: Dr. Marilyn Delgado

NO DISCUSSION

All in favor.

Minutes are APPROVED.

4. ANS Student Conference organizer(s)

Michael Trombetta and Peter MacDonell announce that the next ANS Student conference will be organized in New Mexico from 3-5 April 2025. The website and the Call for Papers are live. An invitation with highlights is handed out (APPENDIX C). There are 17 technical tracks and papers are due 17 Jan 2025. Volunteers to review papers being solicited and also TH panels. The students request the THD to consider a budget to sponsor their conference, e.g. through a TH paper award.

5. Action Items from 2024 ANS Annual Meetings

a. Bylaws review

Elia Merzari summarizes the changes proposed to the rules. The language has been revised to comply with ANS bylaws. The text has been cleaned up and the language was made more consistent. A clear

distinction is made between special committees (appointed by the chair) and standing committees (appointed through the nomination committee and an EC vote). The minimum number of members has been mentioned and other small changes. Elia reminds the EC that the acting chair is a member of all standing committees as per the rules.

Trevor Howard inquires on a framework for direct appointments (webmaster...). Elia mentioned that the chair can appoint special committees.

MOTION to accept the amended rules (with changes highlighted) as sent before the meeting: Elia Merzari

SECOND: Rui Hu

NO DISCUSSION

All in favor, the motion carries.

The task force recommends the Membership committee to update their rules. The chair defines an ACTION to form a task force under the lead of the current Membership committee chair on updating the name/rules of the Membership committee including engagement and bring it to next EC.

6. Chair report

Igor Bolotnov provides a short update from HQ. The ANS is doing well. For the first time in long time the society has more members under the age of 40 than above 60. Igor shows some division snapshots and statistical data on the membership. All agree that it is and will be important to retain students and early career members. ACTION: Igor Bolotnov will forward the present.

7. Treasurer's report

Dillon Shaver explains that the THD has a very strong financial position and that the scholarship funds are all in good shape. He mentions that the Hochreiter and Esposito funds have enough principal balance to increase the awards from \$3000 to \$4000. He also mentions the ANS request to support the student travel fund (also known as the student program). This was done before but was discontinued in 2020 due to the cancellation of in-person conferences. Dave Pointer explains that the student program has reduced available funds. The total budget for THD student support has historically been around \$2500-3500, split between the student conference and the student program with a majority going to the student program. When the student program was dropped, all support from THD was redirected to the student conference. There is a discussion on how to accommodate both, sponsoring the student conference and providing budget to the student travel fund.

MOTION: Bob Martin moves to amend the approved 2025 budget for student support to \$4000 THD and split it in \$3000 for student conference support and \$1000 for travel fund

SECOND: Steve Bajorek

NO DISCUSSION

All in favor.

Since the financial position of the division is very good, Dillon Shaver puts forward an idea to create an account for student support income. This account would be invested and bear interest for THD, unlike our current account balance, and ensure consistent student support in perpetuity. A fund of \$60000 would allow to extract 5% each year, adding up to \$3000. ACTION: The chair requests Dillon Shaver to make a formal proposal to set aside \$60000 for student and young member support. For consideration: possibly the name of this fund can be sold to a sponsor.

8. Town Hall Update

a. THD Benchmark Competition Initiative

Trevor Howard explains that during the last two Town Hall meetings it was discussed to organize a Thermal Hydraulics Division Benchmark Competition for students and young professionals. To stimulate and attract participation, a prize would help. The idea is to organize a short competition on a relatively simple problem. Rules and benchmark should be announced at the Student and Annual conference and the winner should be announced at the Winter Meeting or at least before the end of 2025. The task force to organize this benchmark is formed by: Trevor Howard, Subash Sharma, Elia Merzari, Victor Petrov, Marilyn Delgado, Drew Ryan, and Yue Jin.

MOTION: Steve Bajorek moves to approve to set-aside \$1000 to support the THD benchmark competition initiative.

SECOND: Izabela Gutowska

DISCUSSION: The EC members agree with a prize of \$1000 sponsored by the THD. However, they encourage the task force to contact the industry for alternative or additional sponsoring.

All in favor.

b. THD Social events budget discussion

Ferry Roelofs explains the initiative of setting up a task force to organize a THD social event that was discussed during the most recent Town Hall meetings. The task force has the following volunteers: Benjamin Kalish, Nadish Saini, Carolina Dutra, Elia Merzari, and Ferry Roelofs. The proposal is to organize a social event after the presidents reception at the ANS Annual meeting in Chicago in a local pub.

DISCUSSION: The EC agrees that no budget will be made available from the THD, but proposes that participants should pay a cover charge. This cover charge may be lower for students than for other THD members. The EC also agrees that it is reasonable that the division will be back-up for costs in case of unforeseen cancellation, otherwise the task force would be responsible personally.

9. Program Committee report (see newsletter and PC minutes)

Dillon Shaver refers to the PC report (Appendix D), gives a few explanations, and is open for questions.

a. Update THD Sessions 2024 Winter Meeting / ATH'24

No discussion

b. Update on THD Program 2025 Annual Meeting

No discussion

c. Discussion on Dr. John Kelly in memoriam session

This special panel session will be organized by Xiaodong Sun, Elia Merzari, Bao-Wen Yang, and Yassin Hassan.

d. Summary of the 2025 Winter meeting planning

No discussion

e. NUTHOS-14 Update

No discussion

f. NURETH-21 Update

Jeong-Ik Lee reports that to date about 650 abstracts have been received, 150 from the USA, 130 from China, and about 75 from South Korea. The largest tracks are CFD with 160 and Advanced Reactor TH with 150 abstracts. Submission will be open until end of November.

g. Update on ATH'26

Dillon Shaver reports that the ANS Technical Program Committee strongly encourages ATH'26 to combine with the Advances in Reactor Safety (ARS) meeting in Phoenix AZ, will discuss with ISD.

10. Membership Committee Report (see newsletter)

No discussion

11. Division Website Report (see newsletter)

Trevor Howard mentions that the website has been transferred to a new Content Management System. He has tried to repair/replace all broken links, but if someone still finds one, he requests to let him know.

12. Honors and Awards Committee Report (see newsletter)

Congrats to all recipients.

13. Scholarship Committee Report (see newsletter)

Applications are open.

14. Conference Screening Committee Report (NURETH-22)

Fan-Bill Cheung explains that 1 proposal has been received to organize NURETH-22 in the USA. It will be screened by the committee for eligibility. The screening should be performed by 15 December.

The next NUTHOS conference is announced to be organized in the Tokyo area (Japan) in August-September 2026.

15. Nominating Committee Report

EC

The following members are nominated for the EC: Jun Liao, Maria Avramova, Marilyn Delgado, Trevor Howard, Bao Wen Yang

ALL APPROVE

The following members are nominated for leadership positions:

- Ferry Roelofs as vice chair
- Dillon Shaver as secretary
- Donna Guillen as treasurer

ALL APPROVE, but Ferry Roelofs and Dillon Shaver who abstain voting for themselves

PC

Izabela Gutowska will roll in as the new PC chair replacing Dillon Shaver.

Drew Ryan is nominated as new vice-chair of the PC

ALL APPROVE

Conference Screening Committee

Bob Martin and Dominique Bestion have terms ending in 2025. Bao-Wen Yang is nominated as new chair. Steve Bajorek and Hisashi Ninokata as new members.

ALL APPROVE

Honors and Awards Committee

Wade Marcum (current vice-chair) has terms ending in 2025. Elia Merzari is nominated as new member.

ALL APPROVE

Membership Committee

No changes

Scholarship Committee

Donna Guillen and Marilyn Delgado have term ending in 2025.

DISCUSSION: It is important to keep track of members who currently hold positions and held positions in the past. Bao-Wen Yang and Elia recently made an effort to document the past. The division secretary should maintain and update this document. ACTION: Ferry Roelofs to acquire the list of past positions, update and maintain it. With this, the information on the website can be updated as well.

Fan-Bill Cheung stresses that the nominating committee should put forward a proposal for new positions shortly after the Annual Meeting in order for the rest of the EC to provide feedback and intervene if necessary.

16. Old Business

a. Bylaws review

Already discussed at point 5.

17. Adjourn

None

MOTION to Adjourn: Marilyn Delgado

SECOND: Jun Liao

All in favor: MOTION CARRIES.

APPENDIX A: Proposed agenda

PROPOSED AGENDA

American Nuclear Society – Thermal Hydraulics Division

Executive Committee Meeting:

3:30 PM - 5:15 PM US Eastern Time, Sunday November 17, 2024 (Walu)

1. Opening Bolotnov
2. Approval of Meetings Agenda All
3. Approval of [Minutes](#) from 2024 ANS Annual Meeting All
4. ANS Student Conference organizer(s) Trombetta, MacDonell (UNM)
5. Action Items from 2024 ANS Annual Meeting
 - a) Bylaws review (see item 15(a)) Merzari/Sun/Martin
6. Chair Report
 - a) Update from HQ Bolotnov
7. Treasurer’s report (see newsletter)
 - a) Creating an account for student support income Shaver
8. Town Hall update Roelofs
 - a) THD benchmark initiative Howard
 - b) THD social events budget discussion All
9. Program Committee Report
 - a) Update THD Sessions 2024 Winter Meeting / ATH’24 Shaver
 - b) Update on THD Program 2025 Annual Meeting Shaver
 - Discussion on Dr. John Kelly in memoriam session Yang / All
 - c) Summary of the 2025 Winter meeting planning Shaver
 - d) NUTHOS-14 Update Novog/Morreale
 - e) NURETH-21 Update Lee
 - f) Update on ATH’26 Shaver
10. Membership Committee Report (see newsletter) Sharma
11. Division Website Report (see newsletter) Howard
12. Honors and Awards Committee Report (see newsletter) Sun
13. Scholarship Committee Report (see newsletter) Pointer
14. Conference Screening Committee Report (NURETH-22) Cheung
15. Nominating Committee Report (see newsletter) Manera/Bolotnov
16. Old Business
 - a) Bylaws review Merzari/Sun/Martin
17. Adjourn Bolotnov

APPENDIX B: Attendees list (EC Meeting)

ANS Winter
Conference and Expo

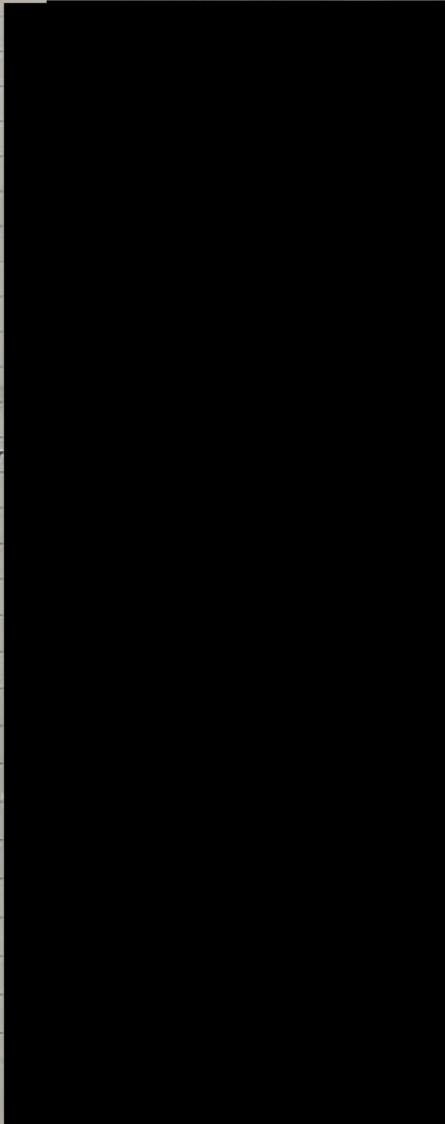
24

November 17-21
NOW COMES THE
HARD PART...
Orlando, FL



EC

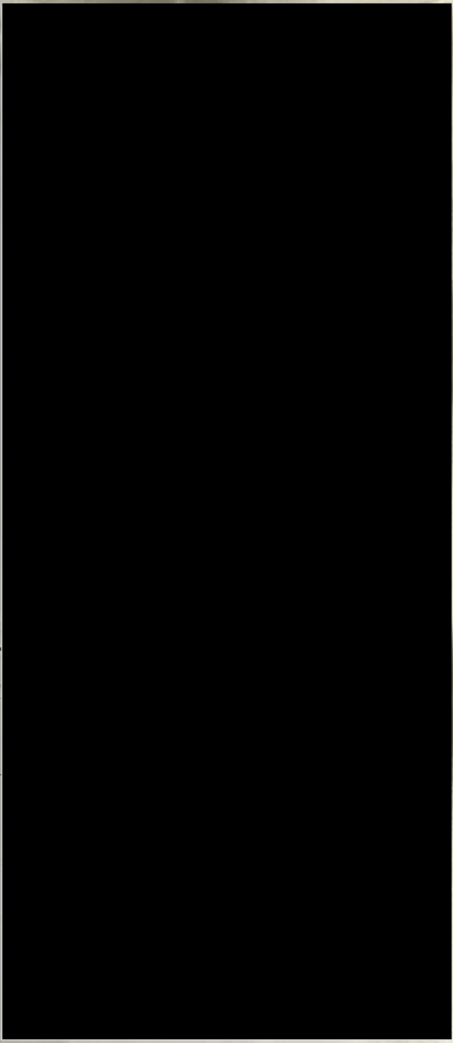
<u>Name</u>	<u>Organization</u>
Ferry Roelofs	NRG PALLAS
Jean Bolohun	NCSU
Drew Ryan	NNL (Beths)
Victor Petrov	ETHz
Rui Hu	ANL
Joel McDuffee	ORNL
DAVE POINTER	ORNL
Wade Marcum	Oregon State Un.
BAOUBEN YANG	Pelita Energy Group, NREL
Piyush Sabharwal	INL
Carolina Dutra	Penn State
Sinan Okyay	INL
Bebele Gutierrez	Oregon State University
Trevor Kett Howard	Oregon State University
Marilyn Delgado	BWXT
Steve Bajisrek	USNRC
Chul-Hway SONG	KAERI
Robert Martin	USNRC
JEONG Ik LEE	KAIST
LUKE GODFREY	MOLTECH FLEX
ELIA PERZARI	PSU
Ling Zou	Argonne
Jun Liao	WGC
Subash sharma	UMASS Lowell
XU Wu	NCSU



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<u>Name</u>	<u>Organization</u>
NAOSH SAINI	ANL
Xiaodong Sun	U. of Michigan
Yu-Jou Wang	MIT
Yue Jin	Univ. Missouri
Dillon Shewer	ANL
Jean-Marie Le Corre	Westinghouse
Walter Ludwig	U.S. Dept of Navy
Ben Kalish	US Dept of Navy
Hisashi Ninokata	Tokyo Tech/PALMI
Anna Iskhakova	KSU
BARIS LAZUCARA	Constellation
Yassin Hassan	Texas A & M University

Peter MacDonell	University of New Mexico
Mike Trombetta	Univ. New Mexico





2025 ANS Student Conference

April 3-5, 2025

The University of New Mexico | Albuquerque, New Mexico

Conference Highlights

■ Panel Series:

- 📍 Fusion Energy
- 📍 Graduate School
- 📍 Nuclear Medicine
- 📍 Nuclear Policy
- 📍 Nuclear Waste

■ Dinners & Socials:

- 📍 ABQ BioPark
- 📍 National Museum of Nuclear Science & History

■ Tours:

- 📍 Los Alamos National Lab
- 📍 Sandia National Labs
- 📍 Kairos Power
- 📍 The Trinity Site
- 📍 UNM Research Labs

■ Career Fair & Interviews

■ Technical Sessions

 @ans.unm

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APPENDIX D: PC Report

2024 ANS Winter Meeting

D. Shaver and I. Gutowska

A total of 83 submissions are included in the sessions sponsored and organized by the Thermal Hydraulics Division at the ANS 2024 Winter Meeting and Embedded ATH '24. This exceeds the number submitted to ATH 2022 and is in line with long term trends showing a slight increase in submitted papers. In ATH '24 we will host a total of 16 standard sessions, 5 panel sessions and 6 keynote sessions with 11 keynote presentations. Note that the standard presentations are 15 minutes + 5 minutes Q&A and some afternoon sessions include 6 presentations. The figures below present the historical submission statistics for ATH in Fig. 1, the raw 10-year winter meeting statistics, including the overall number of summaries submitted to the ANS winter meeting by all divisions in Fig. 2, and the normalized values for THD in Fig. 3.

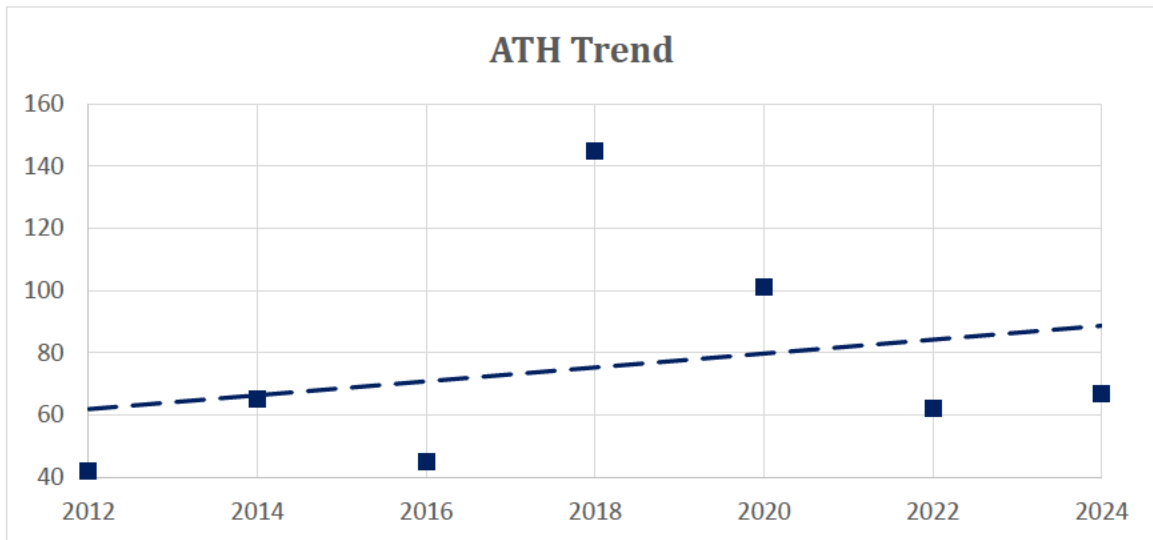


Fig. 1: ATH submission statistics

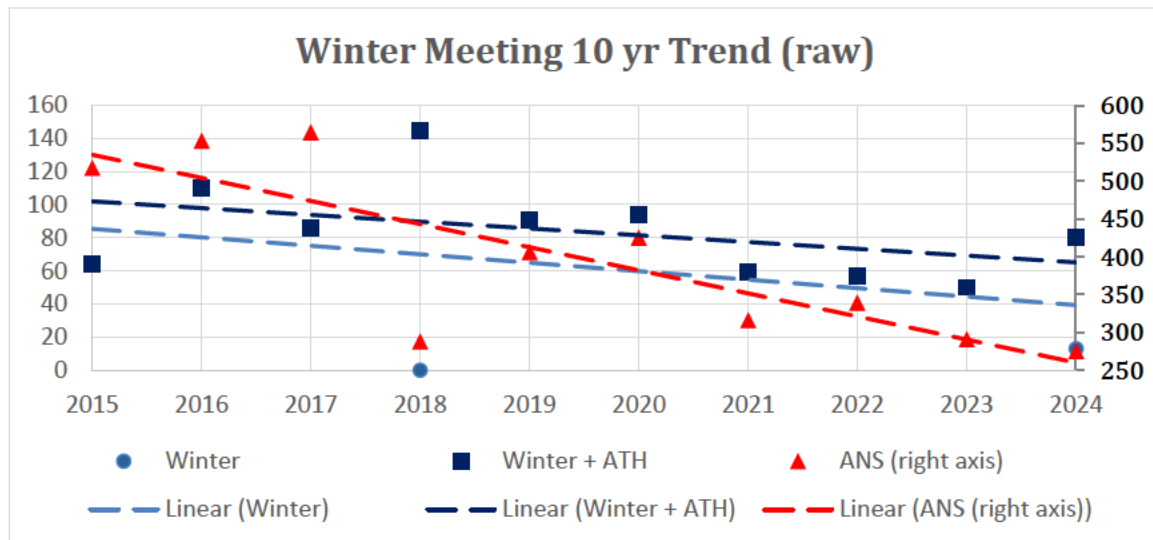


Fig. 2: Raw submission statistics for THD and ANS overall

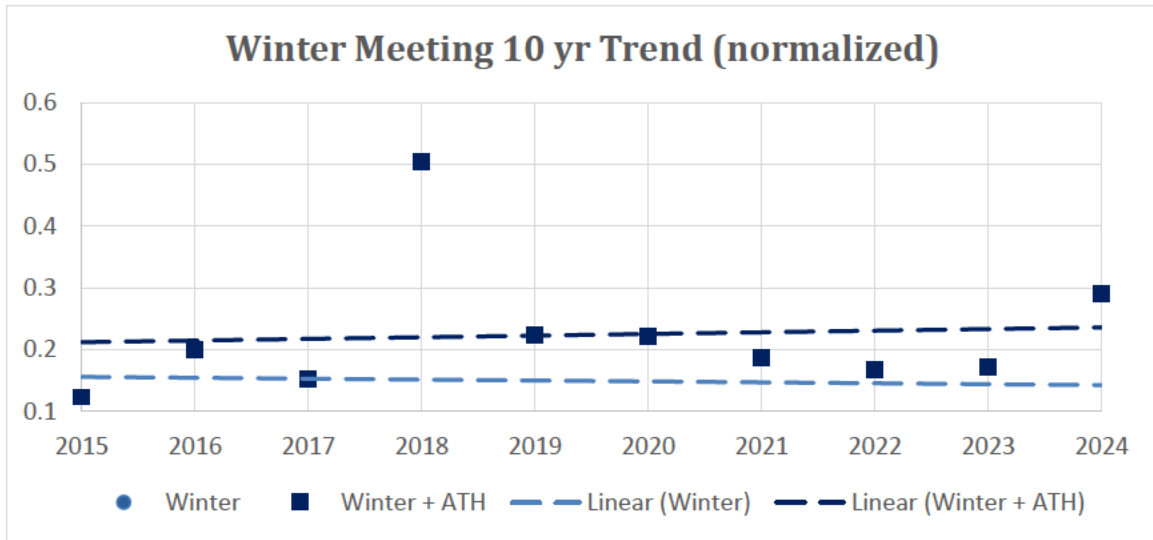


Fig. 3: Submission statistics for THD normalized to the total number of ANS summary submissions

In terms of raw numbers, the trend continues downward. However, we also see a significant downward trend in the total ANS submissions. When looking at the normalized statistics there is a very slight upward trend, which indicates that proportionally, submissions from THD are likely remaining steady.

Reconciled review recommendations for the submissions are as follows:

	83	Accept
	2	Reject
Total	85	

Two submissions were rejected after two rounds of reviews, which is expected. The trend for rejection rates ($R/(A+R)$) is historically at roughly 15% but has been lower in recent years, it is currently at 2.4%. We encourage the authors to respect the process and the time that the reviewers dedicate to evaluating the summaries and to strictly follow the ANS template and submit summaries with all the required sections.

Overall, the review participation was sufficient. All the papers received adequate review on a timely basis. *Many thanks to our dedicated reviewers!* The distribution is as follows:

There were 186 review recommendations that were coordinated from 58 reviewers for an average of 3.2 reviews per reviewer. The average number of reviews per paper was 2.2, which is lower than average. We had about 18% of the reviewers participating in the process, which is on par with our typical average of around 20% participation. The reviewers' support is much appreciated!

Reviewer participation over the last decade is as follows:

Year	Location	Number of Reviews	Number of reviewers
2024	Orlando (inc. ATH)	178	57
2024	Las Vegas	121	29
2023	D.C.	133	42
2023	Indianapolis	112	34

2022	Phoenix	185	44
2022	Anaheim (inc. ATH)	217	54
2021	D.C.(Hybrid)	164	38
2021	Providence, R.I. (Online)	136	37
2020	Chicago (Online)	278	43
2020	Phoenix (Online)	85	21
2019	D.C.	258	40
2019	Minneapolis	127	24
2018	Orlando	No general sessions (ATH only)	
2018	Philadelphia	188	32
2017	D.C.	222	28
2017	San Francisco	264	39
2016	Las Vegas	337	45
2016	New Orleans	87	20
2015	San Antonio	135	28
2015	Anaheim	212	33

The review process was made possible by valuable contributions from:

Roelofs, Ferry	19	Marcum, Wade	3	Breijder, Paul	1
Qin, Sunming	13	Panicker, Nithin	3	Cheung, Fan-Bill	1
Liu, Xiaojing	9	Popov, Emilian	3	Guillen, Donna	1
Shaver, Dillon	8	Wang, Guanyi	3	Gutowska, Izabela	1
Ji, Wei	7	Baglietto, Emilio	2	Habiyaremye, Victor	1
Zou, Ling	7	Cammi, Antonio	2	Hu, Rui	1
Liao, Jun	6	Carasik, Lane	2	Komen, Everardus	1
Ryan, Drew	6	Dix, Adam	2	Koren, Chaï	1
Yang, Bao-Wen	6	Iskhakov, Arsen	2	Merzari, Elia	1
Bolotnov, Igor	5	Jeong, Yeongshin	2	Oder, Jure	1
Shirvan, Koroush	5	Keijers, Steven	2	Pangukir, Fajar Sri	
Tiselj, Iztok	5	Lomperski, Stephen	2	Lestari	1
Cervi, Eric	4	Pucciarelli, Andrea	2	Sharma, Subash	1
Howard, Trevor Kent	4	Ramey, Kyle	2	Song, Chul-Hwa	1
Huang, Xiaoxue	4	Saini, Nadish	2	Thomas, Justin	1
Ortiz, Marcos	4	Stempniewicz, M.	2	Visser, D.	1
Petrov, Victor	4	Villanueva, Walter	2	Xu, Yiban	1
Raverdy, Bruno	4	Yilgor, Ilyas	2	Yu, Yiqi	1
Angeli, Diego	3	Arcilesi, David	1	Zwijssen, Kevin	1
Iskhakova, Anna	3	Batta, Abdalla	1		

The final technical session schedule, including panels and keynotes, is shown below. Note that for number of papers given in n+m format, n indicates full 20 minute presentations and m indicates lightning talks.

Session	Chairs	# papers	Time Slot (EDT)
Plenary	Yang, Pointer	--	Monday 1:00pm
Molten Salt Reactor TH	Frederix, Bae	6	Monday 3:15pm
Small Modular Reactor TH	Yang, Liao	6	Monday 3:15pm
General TH	Roelofs, Angele	5+1	Monday 3:15pm
Advancing Molten Salt Technology for the Next Generation of Nuclear Reactors	Busco	panel	Tuesday 8:00am
AI and ML for Thermal Hydraulics: General	Sharma	3	Tuesday 8:00am
Industrial Panel on the Development of Liquid Metal Reactor	Delgado	panel	Tuesday 8:00am
AI and ML Based Reduced Order Modeling	Merzari, Wong	4	Tuesday 10:00am
Computational Fluid Dynamics: I	Bolotnov, Habiyaemye	5	Tuesday 10:00am
Young Professional Thermal Hydraulics Research Competition: I	Zhao, Xu	4	Tuesday 10:00am
Keynotes: I	Pointer, Zou	2	Tuesday 1:00pm
Keynotes: II	Petrov, Busco	2	Tuesday 1:00pm
Keynotes: III	Sarikaya, Liao	1	Tuesday 1:00pm
Computational Fluid Dynamics: II	Benhamadouche, Fang	5+1	Tuesday 3:15pm
Young Professional Thermal Hydraulics Research Competition: II	Zhao, Xu	3	Tuesday 3:15pm
Thermal Hydraulics Challenges and Opportunities for LWR Initiatives	Sarikaya, Muftuoglu	panel	Tuesday 3:15pm
T/H Phenomena Testing Related to High Temperature Gas-Cooled Reactors	Martin, Delgado	panel	Wednesday 8:00am
Scaling for Small Modular Reactors	Bajorek, Liao	panel	Wednesday 8:00am
Verification and Validation Methods for Thermal Hydraulics Analyses	Kile, Dai	5	Wednesday 8:00am
System Thermal Hydraulics	Hu, Verdonschot	5	Wednesday 10:00am
Two-Phase Flow and Heat Transfer: I	Frederix, Petrov	3+2	Wednesday 10:00am

Gas-Cooled Reactor Thermal Hydraulics	Gutowska, Jasica	5	Wednesday 10:00am
Keynotes: IV	Yang	2	Wednesday 1:00pm
Keynotes: V	Petrov, Sharma	2	Wednesday 1:00pm
Keynotes: VI	Roelofs, Pointer	2	Wednesday 1:00pm
Liquid Metal Cooled Fast Reactor Thermal Hydraulics	Yoon, Habiyaemye	5+1	Wednesday 3:15pm
Multiphysics-Coupled and Microreactor Thermal Hydraulics	Howard, Petrov	5+1	Wednesday 3:15pm
Two-Phase Flow and Heat Transfer: II	Saini, Dix	4+1	Wednesday 3:15pm

Finally, our next meeting will be held June 15-18 in Chicago, IL. The EPSR will close at midnight February 7th for submissions.

The program committee thanks everyone who volunteered to organize or chair a session for this meeting. As a reminder, session organizers are responsible for stimulating summary submissions, assisting with reviews, and coordinating session chairs.

Additional Notes:

- All paper presentations are **20 minutes each** (15-minute talk + 5-minute Q&A and transition to the next speaker). Session chairs are responsible for keeping speakers on time.
- If you are chairing a session, coordinate with your co-chair prior to the start on which speakers each will introduce and collect a brief bio for each speaker for their introduction.
- In the event of a no-show, do NOT skip to the next presenter. Try to keep attendees engaged with discussion or offer a 20 minute break in order to keep with the program schedule.