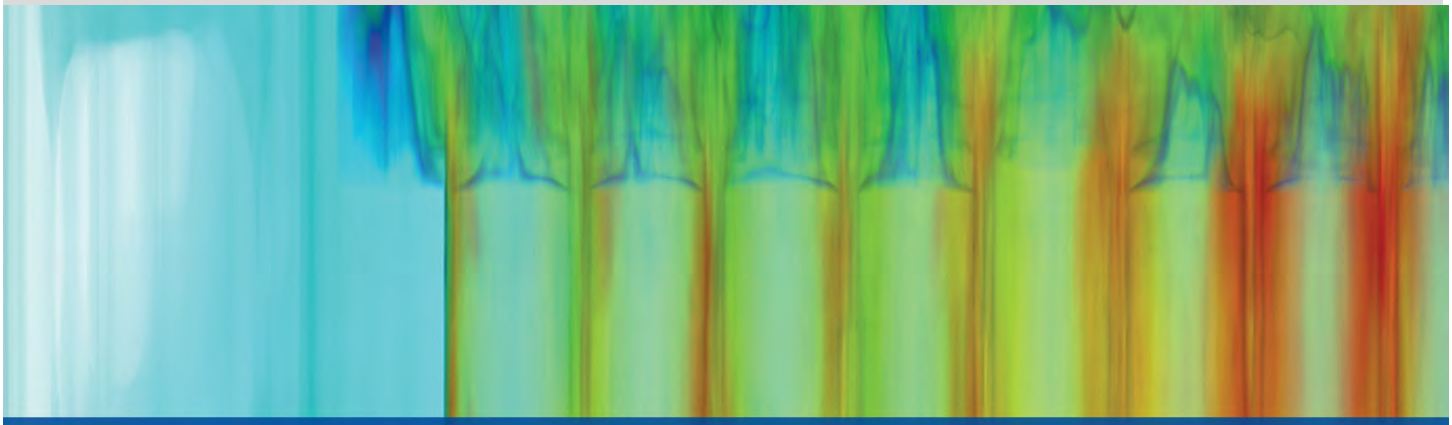


Thermal Hydraulics
Professional Division

A Message from the Chair

Dear colleagues,

It was a great privilege and honor for me to serve as our division Chair for the 2024/2025 term. As I am finishing this term, I am happy to report that with strong support from our THD leadership we have continued our activities with particular focus on international collaboration and industrial engagement. I am thankful for all the support I received from the past and future division leaders to help me navigate my responsibilities during this year.

In the past few months, we witnessed many changes in the political landscape, but it is promising to see the nuclear energy being accepted in more countries and being considered as an important future energy source. Specifically, countries like Germany, Denmark, Belgium are re-considering their anti-nuclear energy policies and now have future potential to contribute to nuclear energy production. Artificial Intelligence (AI) industry is starting to consider renovating existing reactors and building new nuclear to support the power hungry HPC centers which are required for training and building large new generation of AI models.

This newsletter summarizes division activities over the past few months, and I will mention a few notable highlights. We continue to engage our members in various activities. New at this Annual meeting in Chicago is a Monday night THD social event when we plan to get together and get to know each other in less formal setting at a local bar. Please consider joining us at the THD networking mixer (https://www.ans.org/meetings/ac2025/calendar/event-1853/).

I want to encourage the members to participate in the video-conference-based Program Committee meetings traditionally held 1 week before ANS meetings on Sundays. This is the easiest first step to engage with the division and learn about our activities. If you are attending the ANS Winter and / or Annual meeting, the division executive committee meetings are always open to any attendee (typically starting around 3pm on Sunday and listed in the ANS meeting program). Please stop by and connect with us to learn more about the division.

We greatly appreciate the efforts of Program Committee in their relentless efforts to provide high quality programs for each ANS meeting and the great support of the division members and the Program Committee to review the contributions to those meetings. This June marks the transition of the Program Committee leadership (based on 3-year terms).

I would like to welcome Dr. Drew Ryan as the new PC Assistant Chair and congratulate Dr. Gutowska on her promotion to the PC Chair! I would also like to express my gratitude to Dr. Dillon Shaver as he completes his term as the PC Chair.

On a very sad note, Prof. Bertodano, a faculty at Purdue and thermal hydraulics expert, passed away a few months ago. He served as a THD PC Chair two decades ago and was an active member of our community. We include an in-memoriam article authored by Prof. Ishii in this letter.

The NURETH-21 conference is right around the corner to be held in Busan, Korea on August 31st – September 5th, 2025. I hope to see many familiar faces at this premier thermal-hydraulics conference. More information can be found on the conference website (www.nureth-21.org).

Note that NURETH-22 selection has been made and we are looking forward to seeing many of you in Denver, CO in August 2027. If you would like to volunteer to support the organization of the NURETH-22, please contact Dr. Sabharwall (INL).
I am looking forward to interacting with you during the upcoming 2025 ANS Annual meeting in Chicago!

Igor Bolotnov
2024-2025 ANS THD Chair
Igor_bolotnov@ncsu.edu

Standing Committees

Technical Program Chair: Dillon Shaver
Honor & Awards Chair: Fan-Bill Cheung
Scholarship Chair: W. David Pointer
Nomination Chair: Annalisa Manera
Webmaster: Trevor Kent Howard
Membership Chair: Subash Sharma
Conference Screening Chair: Fan-Bill Cheung
YMG Liaison: Robert Kile

In Memoriam

Professor Martin Lopez de Bertodano of the School of Nuclear Engineering, Purdue University passed away in February, 2025. It was a sad news for all of us who were his friends and colleagues for a long time. He was originally from Argentina and obtained his BS in United States, MS in Nuclear Engineering from MIT and Ph.D. in Nuclear Engineering and Engineering Physics from Rensselaer Polytechnic Institute under Professor Richard Lahey in 1991. He specialized in Nuclear Thermal-hydraulic and Two-phase Flow. He had been at Purdue from 1992. Professor Bertodano was a dedicated educator and researcher.

His major focus of research was basic understanding of the Two-fluid Model, its physical formulation, mathematical characteristics, and its ability to analyze the dynamics and instabilities of two-phase flow. On these topics he published an important book entitled, “Two-fluid Model, Stability and Chaos” with coauthors W. Fullmer, A. Clasusse of Argentina and V. H. Ransom form Springer in 2016. I was personally happy to see that they demonstrated that the Two-fluid Model can predict the density wave instability boundary by using a numerical method, and they compared the result to the linear stability analysis using the Drift-Flux Model that was my Ph.D. Thesis topic at Georgia Tech. They showed that these two different approaches agreed very well. In his earlier career, Professor Bertodano was also interested in experimental research in thermal-hydraulics and reactor safety.

We collaborated for the programs addressing the limiting severe accident issue called

the Direct Containment Heating problems for PWRs. These are difficult experiments involving very high pressure gas and molten liquid metal simulating the corium. At Purdue Professor Bertodano had been a truly dedicated educator and taught both undergraduate and graduate thermal-hydraulic courses. He developed and taught a graduate course, “Two-phase Flow CFD Applications”. He even taught a large freshman undergraduate course on Strength of Materials for a long time. He obtained the School of Nuclear Engineering Best Teacher Award several times.

We all wish Professor Bertodano to sleep peacefully. He had a wonderful friendly personality and was liked by our students. He contributed significantly to our program and activity at the School of Nuclear Engineering at Purdue. He served as the Chair of the Thermal-hydraulic Division Program Committee as well as the Honors and Awards Committee of ANS THD. We thank him for all these contributions.

Mamoru Ishii
Walter H. Zinn Distinguished Professor
School of Nuclear Engineering
Purdue University

Conference Selection Committee

The Conference Screening Committee (CSC) of the ANS Thermal Hydraulics Division (THD) has carefully evaluated and recommended the proposal from INL for the 22nd International Topical Meeting on Nuclear Reactor Thermal Hydraulics (NURETH-22) to take place on August 22-27, 2027, in Denver, Colorado, USA. The recommendation by the CSC has since been approved by the Executive Committee of the ANS/THD. The key organizers for NURETH-22 who have been officially notified by the Chair of the THD, have accepted the responsibility to host NURETH-22. Preparation for the conference is currently well underway.

Fan-Bill Cheung
Chair, ANS/THD Conference Screening Committee
fxc4@psu.edu

Technical Program Committee

The ANS Thermal Hydraulic Division Program Committee (ANS THD PC) is pleased to welcome everyone to Chicago, IL, for the 2025 ANS Annual Meeting. The technical program for THD will include a total of 76 summary presentations in 18 technical sessions and 5 panel sessions. All sessions are listed in the table on the right. We are still looking for volunteers to serve as session chairs or co-chairs, so if you are planning to attend and wish to volunteer, please contact us!

A total of 78 summaries were submitted to THD with 201 reviews completed by 42 reviewers. We had an average of 2.58 reviews per submission with reviewers contributing on average 4.8 reviews each of those who participated. Notably, 4 reviewers contributed 10 or more reviews and we would like to take this opportunity to thank the session organizers and reviewers for their efforts.

Papers, summaries, and lightning talk abstracts are solicited for the 2025 ANS Winter Conference on November 9-12, 2025, at Washington, DC. We expect to have an exciting program with summaries and panel sessions on the following subject areas:

- Nuclear Technology 60th anniversary,
- AI/ML applications in thermal hydraulics,
- Thermal hydraulics challenges in multiphysics simulations,
- Thermal hydraulics challenges and opportunities in microreactors,
- Thermal hydraulics research and challenges in advanced fuels,
- OECD/NEA AI/ML benchmark on CHF,
- General thermal hydraulics,
- Advanced reactors thermal hydraulics,
- Experimental thermal hydraulics,
- Computational thermal hydraulics,
- Computational multiphase Flow,
- Experimental multiphase Flow,
- Young professionals competition,
- Increase enrichment, high burnup, power update (Panel),
- Thermal hydraulics of Small Modular Reactors,
- Thermal hydraulics of micro reactors.

Full papers, summaries, and abstracts due: June 24, 2025. The full call for papers can be found here.

The other upcoming conference is the 21st International Topical Meeting on Nuclear Reactor Thermal Hydraulics (NURETH-21) to be held in Busan, Korea, August 31 - September 5, 2025.

Proceeding the 2025 ANS Annual Meeting, the THD PC meeting will be held online on Friday June 6th from 10:00am – 12:00pm (EST). It can be accessed here via Teams.

As always, we would like to encourage our members to actively participate by attending our meetings, submitting paper summaries, volunteering to organize sessions, and supporting the peer-review of the papers.

Thank You,

Izabela Gutowska
Oregon State University
Chair THD PC

Dillon Shaver
Argonne National Laboratory
THD Assistant PC Chair

Annual Meeting 2025 Technical Sessions

June, 15-18 2025

Session	# of papers	Time Slot (EDT)
Memorial Panel -- John Kelly	panel	Mon 1:00pm
High-Fidelity Computational Fluid Dynamics	5	Mon 1:00pm
Lightning Talks: Thermal-hydraulics and Safety	9	Mon 1:00pm
Advances in Research Reactors and Isotope Production with High-Density LEU Fuel: I	5	Mon 1:00pm
Thermal Hydraulic Education: Opportunities with AI	panel	Mon 3:15pm
Thermal Hydraulics of SMRs and LWRs	5	Mon 3:15pm
Advances in Research Reactors and Isotope Production with High-Density LEU Fuel: II	5	Mon 3:15pm
Thermal Hydraulics Challenges and Opportunities for LWR Initiatives	panel	Tue 10:00am
Thermal Hydraulics of the High Temperature Test Facility	5	Tue 10:00am
AI/ML Applications in Thermal Hydraulics	5	Tue 1:00pm
Thermal Hydraulic Testing for Advanced Reactors	panel	Tue 1:00pm
Advances in Research Reactors and Isotope Production with High-Density LEU Fuel: III	5	Tue 1:00pm
Thermal-hydraulics Issues and Opportunities of Non-traditional Uses of Nuclear Energy	panel	Tue 3:15pm
Enabling Deployment of Fast Reactors	6	Tue 3:15pm
Experimental Thermal Hydraulics: I	5	Wed 8:00am
Thermal Hydraulics: General	5	Wed 8:00am
Thermal Hydraulics and Multiphysics	5	Wed 8:00am
Experimental Thermal Hydraulics: II	5	Wed 10:00am
Computational Thermal Hydraulics	5	Wed 10:00am
Advanced Reactor Thermal Hydraulics: I	5	Wed 1:00pm
Experimental Multiphase Flow: I	5	Wed 1:00pm
Advanced Reactor Thermal Hydraulics: II	5	Wed 3:15pm
Experimental Multiphase Flow: II	5	Wed 3:15pm

Honors and Awards

2024 THD Technical Achievement Award

The Technical Achievement Award is the highest award given by the THD. It is normally presented annually to a member of the THD in recognition of outstanding past or current technical achievements.

On November 18, 2024, the Thermal Hydraulics Division held a brief award ceremony at the ANS 2024 Winter Meeting in Orlando, Florida to present the THD's 2024 Technical Achievement Award (TAA) to Prof. Xiaodong Sun of the University of Michigan in recognition of his significant technical contributions in advancing the fundamental knowledge of thermal hydraulics through experiments, yielding novel insights and improving modeling to support nuclear power utilization.

Prof. Xiaodong Sun (left) and Prof. Fan-Bill Cheung

An official recognition of Prof. Sun will be held at the THD Award Ceremony at NURETH-21 in Busan, Korea in 2025, during which Prof. Sun will deliver a TAA lecture at the Conference. Congratulations, Prof. Sun, on receiving this highly prestigious award!

2025 Bal-Raj Sehgal Memorial Award

The Bal-Raj Sehgal Memorial Award was established by the THD in 2020 to recognize, once every two years, an early-career to a mid-career individual for his/her exceptional and/or sustained contributions to the thermal-hydraulics field with a particular focus on the application of thermal-hydraulics to nuclear reactor safety. The Honors and Awards Committee received excellent nominations for the 2025 Bal-Raj Sehgal Memorial Award. Dr. Igor Bolotnov of North Carolina State University was selected for the Award in recognition of his innovative research contributions to reactor thermal-hydraulics and safety modeling through state-of-the-art high resolution computational techniques.

On November 18, 2024, the Thermal Hydraulics Division held a brief, preliminary award ceremony at the ANS 2024 Winter Meeting in Orlando, Florida to present the Bal-Raj Sehgal Memorial Award to Prof. Bolotnov.

Prof. Igor Bolotnov (left) and Prof. Fan-Bill Cheung

An official recognition of Prof. Bolotnov will be held at the THD Award Ceremony at NURETH-21 in Busan, Korea in 2025, during which Prof. Bolotnov will deliver an award lecture at the Conference. Congratulations, Prof. Bolotnov, on receiving the 2025 Bal-Raj Sehgal Memorial Award!

2024 THD Best Paper Award

The Honors and Awards Committee received candidate papers from the ATH'24 and NUTHOS-14 Technical Program Committees for the 2024 THD Best Paper Award. After careful evaluation and deliberations, the Committee selected the following paper as the 2024 THD Best Paper in recognition of its exceptional quality and archival value:

Carolina da Silva Bourdot Dutra, Elia Merzari, Tri Nguyen, and Joshua Hansel, "Study of Turbulence and Pressure Recovery in the Heat Pipe Vapor Flow Using the Spectral Element Method," presented at the 14th International Topical Meeting on Nuclear Reactor Thermal-Hydraulics, Operation, and Safety in Vancouver, Canada, August 2024.

Congratulations to the authors!

2025 THD Meritorious Service Award

The THD Meritorious Service Award recognizes an individual for sustained and exemplary service to

the nuclear thermal-hydraulic profession. The THD Honors and Awards Committee selected Prof. Bao-Wen Yang of the Delta Energy Group, New York as the recipient of THD's 2025 Meritorious Service Award in recognition of his long-standing and exemplary service and contributions, and developed leadership to the nuclear thermal-hydraulics community and profession.

Congratulations, Prof. Yang, and thank you for your outstanding service and contributions to the THD!

2025 NURETH Scholar Awards

The THD NURETH Scholar Award recognizes, once every two years, individuals who have made outstanding technical contributions to the NURETH series. In this award cycle, two distinguished new scholars, Dr. Jinzhao Zhang of Tractebel, Belgium, and Dr. Ki Yong Choi of KAERI, Korea, were selected by the THD Honors and Awards Committee for the Award.

Dr. Zhang was selected in recognition of his significant work in reactor thermal hydraulics and uncertainty analysis, and his outstanding contributions to numerous International Topical Meetings on Nuclear Reactor Thermal Hydraulics (NURETH) whereas Dr. Choi was selected in recognition of his significant contributions in promoting international collaboration among experts and advancement of nuclear technology as well as his sustained contributions to the past ten NURETH series as author, session chair, invited panelist, and TPC. Official presentations of the two NURETH Scholar Awards will take place at NURETH-21 in Busan, Korea in 2025,

Congratulations, Dr. Zhang and Dr. Choi, and thank you for your significant, long-term contributions to the NURETH series!

Final Remarks

The THD Honors and Awards Committee encourages and welcomes nominations for the THD awards. The details about these awards can be found at https://thd.ans.org/awards/.

Finally, we would like to take this opportunity to thank the THD H&AC members and all the nominators for their dedicated work!

Congratulations to the highly deserving award recipients!

Fan-Bill Cheung
Chair, THD Honors and Award Committee
fxc4@psu.edu

Wade Marcum
Vice Chair, THD Honors and Award Committee
wade.marcum@oregonstate.edu

Scholarship Committee

The American Nuclear Society Thermal Hydraulics Division awards two annual graduate student scholarships: the Lawrence E. Hochreiter Graduate Scholarship and the Vincent J. Esposito Graduate Scholarship. Applications for both scholarships are due February 1 each year, and they are awarded for the following academic year. The winner of the 2025 Lawrence E. Hochreiter Graduate Scholarship is Ms. Sierra Tutwiler of Virginia Commonwealth University. The 2025 winner of the Vincent J. Esposito Graduate Scholarship is Ms. Lauren Kohler of North Carolina State University.

The **Lawrence E. Hochreiter Graduate Scholarship** was established by the ANS THD in 2019 and first awarded for the 2020-2021 academic year. The scholarship honors Dr. Lawrence E. Hochreiter, pioneer in nuclear thermal hydraulics modeling and nuclear safety analysis at Westinghouse Electric Company and the Pennsylvania State University, who was an active member of the Thermal Hydraulics Division. The scholarship is awarded to a graduate student in nuclear science and engineering who is studying topics related to nuclear thermal hydraulics.

Lawrence E. Hochreiter Graduate Scholarship Recipients
2025 Sierra Tutwiler
2024 Broderick Sieh
2023 Victor Coppo Leite
2022 Arturo Cabral
2021 Adam Kraus

The **Vincent J. Esposito Graduate Scholarship** was established by the ANS THD in 2020, with the generous support of the Esposito family, and will be

first awarded for the 2022-2023 academic year. The scholarship honors the ongoing contributions of Dr. Vincent J. Esposito, who is an Adjunct Professor at the University of Pittsburgh, former Vice President of the Nuclear Fuel Business Unit of Westinghouse Electric Company, and the 2013 American Nuclear Society Glenn T. Seaborg Congressional Fellow. The scholarship is awarded to a first-year graduate student in nuclear science and engineering who is studying topics related to nuclear thermal hydraulics.

Vincent J. Esposito Graduate Scholarship Recipient
2025 Lauren Kohler
2024 Carolina da Silva Bourdot Dutra
2023 Fadel Nasr
2022 Brandon Aranda

Chair: W. David Pointer (ORNL)

Nominating Committee

The THD Nominating Committee (NC) is responsible for selecting candidates for the division's Executive Committee (EC), standing committees, and division officers. The NC consists of the current Division Chair, Vice Chair, Program Committee Chair and the Immediate Past Division Chair, who serves as the Chair of the Nomination Committee.

For 2025-2026 the Nominating Committee will become Division Chair (Steve Bajorek), Vice Chair (Ferry Roelofs), Program Committee Chair (Dillion Shaver) while the Immediate Past Division Chair (Igor Bolotnov) becomes Chair of the Committee. We thank the previous Chair (Annalisa Manera) for her support and guidance over the past few years.

We welcome anyone who is interested in serving the division in any capacity to contact the division leadership and actively participate in the division activities and volunteer work. We especially encourage the members of the Program Committee (PC) who have shown their dedication and contribution to the PC or other standing committees to apply for the EC positions and other senior roles.

The following is the list of nominations for the 2025-2026 term:

Division Officers Nominations (2025-2026):
- Vice Chair/Chair-Elect: Ferry Roelofs (NRG)
- Secretary: Dillon Shaver (ANL)
- Treasurer: Donna Guillen (INL)

Webmaster [2024-2027]: Trevor Howard (OSU)

Executive Committee Member Nominations (Term Expires June 2028):
- Trevor Howard (OSU)
- Bao-Wen Yang (DEQD)
- Jun Liao (W)
- Marilyn Delgado (BWXT)
- Maria Avramova (NCSU)

Honors and Awards Committee:
- Chair [2024-2027]: Fan-Bill Cheung (PSU)
- Vice Chair [2025-2026]: Elia Merzari (PSU)

Members (past chairs):
- Bao-Wen Yang (DEQD)
- Manera Annalisa (UMich)
- Igor Bolotnov (NC State)

Members [2024-2027]:
- Hisashi Ninokata (POLIMI)
- Yassin Hassan (TAMU)

Scholarship Committee
Chair [2024-2027]: W. David Pointer (ORNL)
Term Expires [2024- 2027]:

- Victor Coppo-Leite
- Ling Zou
- Marylin Delgado
- Victor Petrov
- Don Todd
- Piyush Sabharwall

Membership Committee
Chair [2024-2027]: Subash L Shama (UML)
Ferry Roleofs
Dillon Shaver (ANL)
:

- Yue Jin (Missouri)
- Emre Tatlie (Westinghouse)
- Prashant K. Jain (ORNL)
- Guanyu Su (UCB)
- Wei Ji (RPI)
- Jun Wang (Terra Power)
- Baris Sarikaya (Constellation)

Industrial Engagement Committee (tentative, pending Bylaws update)
Chair: Jun Liao (W)
Members:

- Kurshad Muftuoglu (EPRI)
- Jon McWhirter (TerraPower)
- Bao-Wen Yang (DEQD)
- Bob Martin (NRC/BWXT)
- Giacomo Busco (Kairos Power)
- Baris Sarikaya (Constellation)

We consistently invite and encourage robust participation in division activities. Those eager to contribute to the division in any role are urged to reach out to the division leadership. We particularly advocate for member involvement in activities spearheaded by the Program Committee, as well as other standing committees, webinars, and task forces.

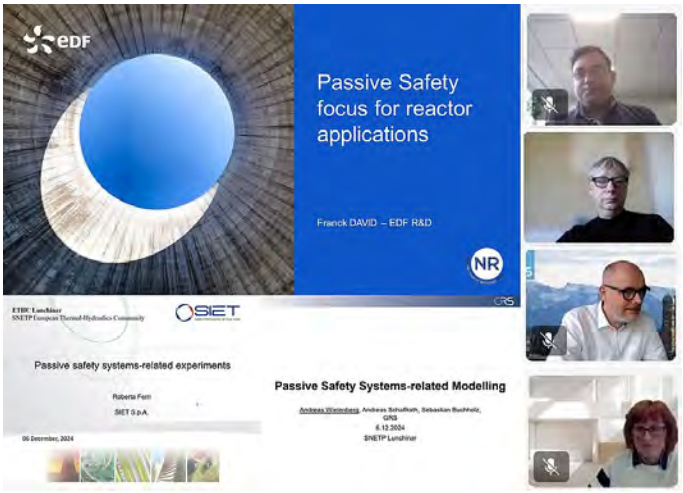
Annalisa Manera
Chair, ANS THD Nomination Committee (2024-2025)

News from Europe (ETHC)

About one year ago, the European Thermal Hydraulics Community was established as also reported in the THD spring 2024 newsletter. This community aims to reach its goals by:

- bringing together experts, students and young professionals,
- stimulating networking and mobility,
- sharing resources and setting up collaborations,
- facilitating knowledge management, expansion, and development
- connecting students and (young) professionals with SNETP and other international organizations (e.g. ANS THD)

During the first year of operation, several activities were organized which might be of interest as well to our US and other international colleagues. Three newsletters were issued which are available through our new website: https://snetp.eu/european-thermal-hydraulics-community-ethc/. These newsletters do not only contain some information on the ETHC, but especially aim at keeping the community up to date with respect to news of interest for the field of nuclear thermal hydraulics, ranging from conference announcements and information on collaborative projects, to courses, books, and interesting publications.



Another important activity was the organization of the first ETHC lunchinar (a webinar organized during lunch time). This inaugural Lunchinar was on the topic of passive safety systems for nuclear reactors. Key speakers were Frank David (EDF, France), Roberta Ferri (SIET, Italy), and Andreas Wielenberg (GRS, Germany), who discussed design, experimental challenges, and modelling advancements. Discussions covered scaling approaches for test facilities, licensing and reliability, expanding experimental databases, and the importance of large-scale testing under representative conditions to support safety demonstrations and code validation.
Together with international nuclear thermal hydraulics societies/divisions/communities, the ETHC participated in the opening plenary of the Advances in Thermal Hydraulics (ATH) conference from 17 to 21 November 2024 in Orlando. The international panel consisted of representatives from the US, Canada, South Korea, Japan, and Europe. The aim was to discuss possibilities for inter-society exchanges, activities and events that provide added value to the community members. The representative from South Korea launched the idea of setting up a Global Alliance of Thermal Hydraulics networks in the nuclear field. This idea will be further discussed in the upcoming year.

Industry Engagement Committee

This marks the first time the Industry Engagement Committee contributes to the ANS Thermal-Hydraulic Division newsletter. We are excited to share our recent activities and accomplishments with the THD community. The mission of our committee is to serve as the “voice of industry” to ANS and THD, increase the engagement of ANS/THD industry membership, and support the professional development and career growth of industry members.

Prior to the Industry Engagement Committee, activities were managed by the Industry Engagement Task Force starting in December 2022. The task force held its first meeting in March 2023 and has been convening monthly ever since. The THD Executive Committee (EC)approved the formation of the standing Industry Engagement Committee during the 2023 ANS Winter Conference. However, the update to the THD bylaws, which officially permits the formation of the committee, was only approved by the EC during the 2024 ANS Winter Conference. Currently, the nomination process for committee members is underway.

In the last two years, our Task Force and committee have been actively involved in various initiatives to enhance collaboration and engagement within the thermal hydraulics community. The committee works closely with the EC, PC, and Membership Committee to promote industry-oriented suggestions that support the progress of the THD, and the committee actively contributes to THD-organized conferences and networking events. As a pilot case, the committee successfully organized panels and keynotes focusing on industrial topics for the ATH2024 conference. The keynote addressed thermal hydraulics challenges and opportunities for light water reactors facing the nuclear industry. The panels covered various thermal hydraulics topics such as technology development, reactor design, testing, and analysis across different types of nuclear reactors, including light water reactors, liquid metal reactors, molten salt reactors, gas-cooled reactors, and small modular reactors. These panels attracted major industry participants such as BWXT, CEA, Constellation, Dominion Energy, EPRI, Holosgen, Holtec, INL, Kairos, Moltex, Next Lab, NRC, TerraPower, Oklo, Radiant, Seaborg, Southern Nuclear, Westinghouse, and X-energy, who joined to discuss these topics of interest. Thanks to the task force members for successfully organizing and chairing those excellent panels.

Building on the success of ATH2024, plans are in place to continue organizing industrial panels for future conferences, including the 2025 ANS Annual Conference and NURETH-21. The committee continuously pushes forward other goals, such as promoting sponsorship for THD events and conferences and enhancing membership development within industrial organizations.

In the end, we encourage more industry engagement with the THD. If you are interested in supporting the committee or having any recommendations, please contact me or any committee members without hesitation.

Thank You,

Jun Liao
ANS/THD Industry Engagement Committee
liaoj@westinghouse.com

Young Professionals Update

Though summer is right around the corner, it is never too late to start looking forward to the Young Professionals Congress 2025, "It Takes A Village"! YPC is a one day workshop for students and young professionals to expand their professional skills and learn more about the ongoing work being done in the nuclear industry. This will be held on November 8th, 2025, in the Washington Hilton from 8:30 am-5:00 pm.

- Have you ever struggled to communicate your work to non-scientists? Jean-Luc Dumont will be delivering our keynote, an interactive workshop to help you learn skills to better communicate your research to others. Attend to learn how to ace your response the next time your family member asks "what is it you ACTUALLY do?"

- Enjoy other panel discussions, such as international involvement in nuclear, planning your next transition (without burning bridges), and career perspectives beyond nuclear as well as an interactive workshop giving you tools to assist you with your finances.

- After the event, come to the Board Room, a board game bar walking distance from the hotel, and enjoy free pizza and drinks!

Estimated rates for attendance will be $20 if attending the winter conference or if not the cost will be $50 for members, $95 for non-members.

Registration will be open soon! We look forward to seeing you there.

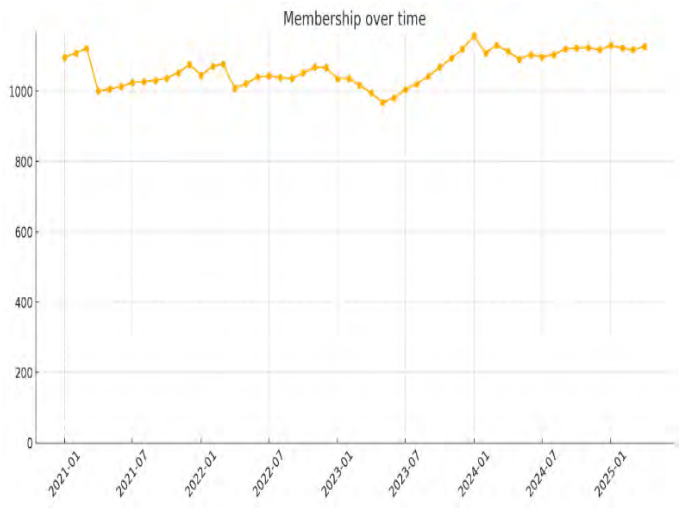
Young Professionals Contact
Chair: Robert Kile

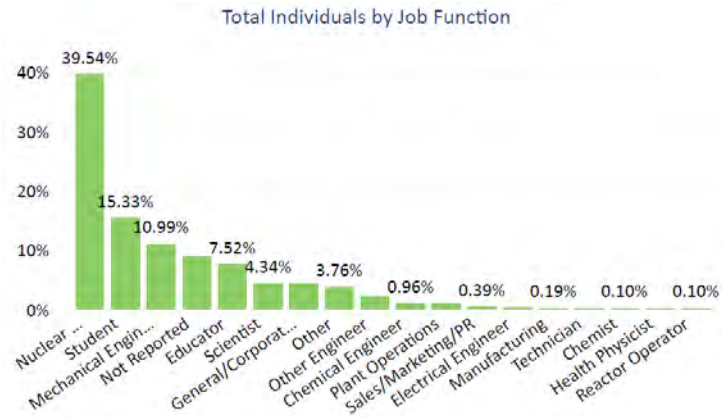
Membership report

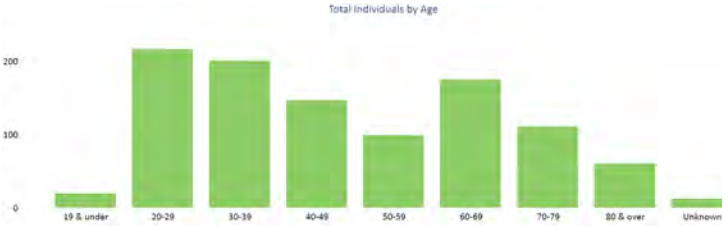
THD membership currently sits at 1037 at the end of first week of May 2025. As can be seen from the plot attached, Membership has been on ‘steady state’ trend so far in 2025 and is currently at the higher side in several years. This suggests positive momentum and renewed interest or effectiveness in member acquisition and retention. In this new letter, we have also included the analysis of the membership data based on their professional roles (job function). As we can see almost 39.5% of the member identify themselves as Nuclear engineer and 15% as students while 11% identify as Mechanical Engineer.

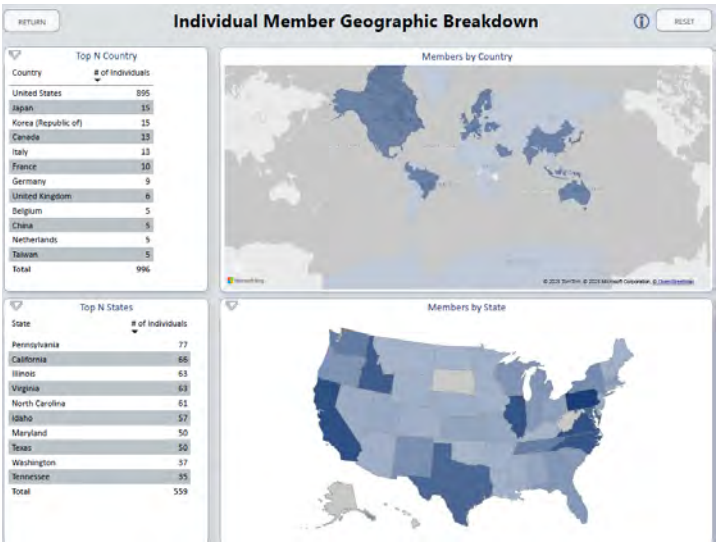
This also reflects the interdisciplinary nature of THD workforce. We have also included the age distribution graph of Members which is categorized into different age groups, reflecting generational representation within the division. Members span all age groups, with the highest concentrations between 20–49 years.

It is good to see this trend as young engineers and students represent the future of the division, and their involvement with THD will be crucial to success moving forward. We have also analyzed the geographical distribution of the membership. Since the last newsletter, the split between members from the United States and international members has remained about the same with the United States being the largest (895 members). ANS has clearly reached an international audience and our international members are encouraged to invite new members to meetings.









While these visual summaries (graph) give a comprehensive snapshot of the composition, evolution, and demographics of THD membership as of May 2025, these graph analysis trends also reflect both the strengths and challenges. Stability in membership and diversity across job functions are positive indicators for THD, while demographic and geographic data may highlight areas where outreach or retention efforts could be further improved to ensure the division's future growth.

To all members, if you are interested in becoming more involved with the Thermal Hydraulics Division, please reach out or attend an executive committee meeting at the next conference. These meetings are open to all and your feedback on any discussions would be much appreciated.

Subash L Sharma,
Membership Committee Chair

Financial Report

The financial status of the division continues to remain strong. Overall, we saw a net income of over $1500 in 2024 for the general division fund. Table 1 summarizes the current budget, including additional spending authorized by the Executive Committee to support a THD social event during the Chicago meeting.

Table 1: Current THD Budget

	2024 Proposed	2024 Actual	2025 Proposed	2025 actual as of 5/01/25
Balance Forward	$94,907	$94,907	$94,657	$96,459.00
Budget Funds				
Member Dues Allocation	$1,500	$1,442	$1,442	$355.00
Division Income	$3,000	$3,890		
Other				$1,000.00
Total Income	$4,500	$5,332	$1,442	$1,355.00
Budget Expenses				
Awards & Plaques	$1,250	$780	$1,250	$766.00
National Meeting Costs				
Topical Meeting Costs				
Division Officer Expenses				
Student Support	$3,000	$3,000	$3,000	$3,000.00
ANS Scholarships/DIA grants	$500		$1,000	$1,000.00
YMG Support				
Other Expenses			$3,000	$1,496.56
Total Expenses	$4,750	$3,780	$8,250	$6,262.56
Net	($250)	$1,552	($6,808)	($4,907.56)
Total Year End Funds	$94,657	$96,459	$87,849	$91,551.44

Due to our strong financial position, we are investigating the possibility of establishing an endowed fund for student support. Student support represents the division's largest consistent expense. These funds are usually used to support the annual student conference or for the ANS travel program, which subsidizes student travel to ANS conferences. Historically, the division spends between $2000 and $4000 annually on student support. By establishing an endowed fund, the division will receive interest income annually which will offset the expected spending. This will ensure the Thermal Hydraulics Division remains in a strong financial position and allows us to support students long into the future.

Details are expected to be presented to the Executive Committee at the upcoming Summer Meeting.

Table 2 shows all five award funds. All awards and scholarships remain in good standing with enough interest income expected to cover any disbursed awards. Of note, both the Hochreiter and Esposito Scholarships are in an exceptionally strong standing compared to the disbursed award amount.

Table 2: Award funds

Award	TAA	Service	Hochreiter	Esposito	Seghal
Balance 12/31/2023	**$48,480**	**$20,816**	**$ 79,430**	**$74,199**	**$20,132**
Income					
Investment	$ 4,712	$ 2,023	$ 7,721	$ 7,212	$ 1,957
Other					
Total Income	$ 4,712	$ 2,023	$ 7,721	$ 7,212	$ 1,957
Expenses					
Awards			$ (3,000)	$ (3,000)	$ (2,000)
Plaques	$ (221)	$ (118)			$ (118)
other expenses					
Net change	$ 4,491	$ 1,905	$ 4,721	$ 4,212	$ (161)
Total Funds 12/31/2024	**$52,971**	**$22,721**	**$ 84,151**	**$78,411**	**$19,971**

Treasurer: Dillon Shaver