



Your THD Leadership Team

We all thank you for joining THD and look forward to working with you to advance our field. Please don't hesitate to reach out to anyone on the leadership team with suggestions or if you'd like to get involved.

Officers

Chair

Seungjin Kim
seungjin@purdue.edu

Vice Chair/Chair-Elect

Kurshad Muftuoglu
kurshad.muftuoglu@ge.com

Secretary

W. David Pointer
pointerwd@ornl.gov

Treasurer

Chul-Hwa Song
chsong@kaeri.re.kr

Immediate Past Chair

DuWayne Schubring
dlschubring@ufl.edu

Executive Committee

(Terms Expiring June 2017)

Fan-Bill Cheung
Paolo Feroni
Donna Guillen
Jong Kim
Wade Marcum

(Terms Expiring June 2018)

Philippe Bardet
Xu Cheng
Jeffrey Lane
Bao-Wen Yang

(Terms Expiring June 2019)

Fatih Aydogan
Lane Carasik
Yassin Hassan
Elia Merzari

Standing Committees

Technical Program Chair

Elia Merzari

Honors & Awards Chair

Xiaodong Sun

Webmaster

Dillon Shaver



A Message from the Chair

Dear Colleagues,

It has been a great privilege and honor for me to serve Thermal Hydraulics Division (THD) as the Chair for 2016-2017 term. While I was serving on the Division, I must let you know that I felt lucky to have such dedicated members, always ready to help, in our Division. Thanks to you, our Division has been and continues to be one of the strongest professional divisions of ANS.

It is with great pleasure that I report that our Division membership has reached another record high of 1,251 members as of December 2016. This accounts for 11.8% of the total ANS membership and represents approximately 4% increase from 2015 membership. I am also quite encouraged to find that more than 30% of our Division's membership is comprised of young members including current students and recent graduates, who are the future of THD.

We are marching very well forward to have another successful year in Division's activities on technical meetings. In 2017 ANS Annual Meeting in San Francisco, we have more than 65 summaries made to the final program in 12 different technical sessions as of May 2017. During the conference, you will also find that our Division is co-sponsoring two sessions by teaming up with Mathematics and

Computation Division and Reactor Physics Division on *Current Verification and Validation Efforts of Multiphysics Packages* and on *Research and Test Reactors*, respectively. It is also exciting to see that NURETH-17, one of our flagship meetings, is well underway. As of May 2017, we have more than 1,000 abstracts submitted from more than 30 different countries for a total of 68 technical sessions, organized under 9 different Tracks. NURETH-17 will also host 15 special topics, 3 mini symposia and a workshop. During the NURETH-17 conference, Drs. Bestion, D'Auria and Dinh will be recognized as new NURETH Fellows for their outstanding contributions to numerous NURETH conferences since 1980.

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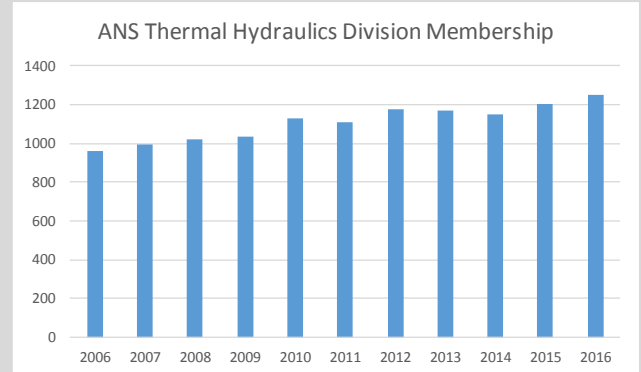
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Membership Committee Report

Membership of the ANS Thermal Hydraulics Division is tracked based on membership renewals and applications submitted between January 1st and December 31st. As of the end of last year, 1,251 society members have identified themselves as members of THD on their applications or renewals. This year as well, we are expecting to match or surpass the last year's record membership.

Continued membership support is vital to our division's activities. All members are encouraged to contribute to the THD-sponsored meetings and participate as division officers if they can. Familiarizing others who are not THD members with our activities and encouraging them to join is always welcome!

Kurshad Muftuoglu
Global Nuclear Fuel-Americas, LLC
THD Membership Committee Chair (2016-2017)
kurshad.muftuoglu@ge.com



Message From the Chair, cont.

NURETH-17 will be held in Xi'an, China from September 3 through 8 in 2017. As NURETH-17 is in its final stage in preparation, the THD Conference Screening Committee has received applications for NURETH-18 from prospective hosts, and the review of the applications is underway.

Special thanks are due to THD members who helped us identify our Division's Nuclear Grand Challenges (NGC) as part of the NGC Campaign led by the current ANS president Dr. Andy Klein. Since the start of the campaign in August 2016, a total of 43 THD NGCs have been proposed by the members. After rigorous vetting and down-select processes, top 3 THD NGCs were submitted to ANS Headquarter in March this year. As a result, I am happy to report that two of the final national NGCs are closely related to what our Division proposed, namely: "Accelerate utilization of simulation and experimentation" and "Expedite licensing and deployment of advanced reactor design." I would like to take this opportunity to thank those who actively participated in this important activity.

I am particularly happy to report that THD Honors and Awards Committee selected Dr. Dave Aumiller and Dr. Paolo Ferroni for *Excellence in Review Award* and *Excellence in Review Mention*, respectively. These awards have been established to recognize THD scholars who have made exceptional review service to our Division and for their exceptional review qualities. As all of us know, performing high quality review is one of the key contributions that members can make and is directly related to maintaining integrity of THD meetings. In view of this, both Drs. Aumiller and Ferroni highly deserve the recognitions. Congratulations!

Finally, I would like to welcome newly elected THD officers for 2017-2018 term: Chair, Dr. Kurshad Muftuoglu; Vice Chair, Dr. David Pointer; Secretary, Dr. Chul-Hwa Song; and Treasurer, Dr. Wade Marcum. I would also like to welcome new and re-elected THD Executive Committee members: Drs. John Luxat, Hisashi Ninokata, Yang Liu, Annalisa Manera, and Piyush Sabharwall. I thank them, in advance, for their service.

As my term as a Chair ends in June, I would like to express my sincere appreciation and thanks to you again for continued support and dedication toward the success of our Division. I assure you that as long as THD has members like you, it will remain strong and continue to excel. I will look forward to contributing myself to the Division as a member and hope that we all continue to show our support to further strengthen our Division. I hope to see you in San Francisco in June at 2017 ANS Annual Conference. Thank you very much!

Seungjin Kim
2016-2017 THD Chair
School of Nuclear Engineering
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Honors and Awards Committee Report

2016 THD Technical Achievement Award

The recipient of the 2016 Thermal Hydraulics Division Technical Achievement Award (TAA) was Professor Nam Truc Dinh, Professor of Nuclear Engineering at North Carolina State University. He received this award for his outstanding contributions to the areas of reactor severe accident phenomenology and management strategies, advanced reactor analysis method development, critical heat flux, among many others, as indicated by the citation appeared on his award plaque, "For his research on thermal-hydraulics modeling, experimentation, and validation, that contributed to the development of effective severe accident management strategies for Generation II and III Light Water Reactor designs." During the THD award ceremony/TAA Lecture session held at the 2016 ANS Winter Meeting, Professor Dinh delivered a lecture entitled "Thermal-hydraulics in LWR Severe Accidents: State of the Art, Challenges and Perspectives."

The TAA is the highest award of the THD and we ask for nominations. The deadline for the next submission is

August 1, 2017. The details including the award form can be found at <http://thd.ans.org/awards/> and <http://www.ans.org/honors/awards/award-techachieve/>.

2016 Best Paper Award

In addition to the Technical Achievement Award, THD also selected a Best Paper award for 2016: "Air-Water and Steam-Water Onset of Flooding Data at Variable Pressure in a Large Diameter Tube" by N. Wynne, M. Garza, K. Vierow, D. Aumiller and M. Kyle, published in the Proceedings of the 2016 International Topical Meeting on Advances in Thermal Hydraulics (ATH'16), an embedded topical to the 2016 ANS Annual Meeting in New Orleans, Louisiana, June 12–16, 2016. The Best Paper award was presented at the THD award ceremony/TAA Lecture session held at the 2016 ANS Winter Meeting.

2017 NURETH Fellows

The NURETH Fellow was established by THD to recognize scholars who made "outstanding contribution to numerous International Topical Meetings on Nuclear Reactor Thermal-Hydraulics (NURETH) since 1980." 27 NURETH

Fellows were recognized at NURETH-15 held in Pisa, Italy in 2013. This year, THD selected Dr. Dominique Bestion, Dr. Francesco D'Auria, and Dr. Nam Dinh as new NURETH-16, who will be recognized at NURETH-17, to be held in Xi'an, China from September 3 through 8, 2017. Please join us to congratulate our new NURETH Fellows.

2017 Excellence in Review Award

The newly established Excellence in Review award by THD recognizes exceptional reviewers for the Division at ANS meetings, THD sponsored or co-sponsored topical meetings, and in general reviewing service to the Division. The Program Committee chair and assistance chair of THD, technical program chairs of meetings held with THD sponsorship or co-sponsorship in the previous three years (at the time of nomination) are eligible to nominate candidates for this award. THD selected Dr. David Aumiller for its inaugural Excellence in Review award and Dr. Paolo Ferroni for Excellence in Review Honorable Mention in recognition of their reviewing service to the THD and the exceptional quality of their reviews. Dr. Aumiller and Dr. Ferroni will be recognized at the THD award ceremony for its first Excellence in Review award, to be held in Room Pacific Concourse, immediately following the THD Monday afternoon session, "Two-Phase Flow and Heat Transfer Fundamentals" at the ANS 2017 Annual Meeting in San Francisco. Please join us to congratulate our outstanding reviewers.

I would like to take this opportunity to thank the THD Honors and Award Committee members for their dedicated work! Congratulations to all our honorees!

*Xiaodong Sun
University of Michigan
THD Honors and Award Committee Chair
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Dr. Nam Truc Dinh (middle) receiving the award plaque from Dr. Seungjin Kim (left) and Dr. Xiaodong Sun (right) at the Technical Achievement Award ceremony.

Technical Program Committee Report

The strong THD presence at the ANS national meetings continues after a positive 2016 ANS Winter Meeting where a total of 92 summaries were presented at twenty THD-sponsored sessions. The interest and participation to the technical sessions organized by our division have again reached a record level at the upcoming 2017 ANS Annual Meeting where a record number of sessions and papers for an annual meeting will be presented. Thanks to the support of the session organizers, contributing authors and panelists, and reviewers, the program committee has put together another exceptionally strong arrangement of sessions for the meeting. These sessions are shown in chronological order in the insert above.

Among this rich program offering, we emphasize the two cosponsored sessions on Tuesday morning: A session on “Current Verification and Validation Efforts of Multiphysics



Dr. Fredrick Moody presenting at the S. Levy Memorial Session, at Las Vegas, November 2016.

ANS Annual Meeting Technical Sessions

June 11-15, 2017
San Francisco, CA

- Two Phase Flow and Heat Transfer Fundamentals [Mon. 1:00 pm]
- Advances in CTF and Multiphysics Coupling [Tues. 8:00 am]
- Current Verification and Validation Efforts of Multiphysics Packages (MCD) [Tues. 9:40 am]
- Research and Test Reactors (RPD) [Tues. 8:00 am]
- Experimental Thermal-Hydraulics: High Resolution Experiments—I [Tues. 1:00 pm]
- Experimental Thermal-Hydraulics—II [Wed. 8:00 am]
- Thermal-Hydraulics: General—I [Wed. 8:00 am]
- Computational Thermal-Hydraulics: Computational Fluid Dynamics—I [Wed. 1:00 pm]
- Thermal-Hydraulics: General—II [Wed. 4:30 pm]
- Large Eddy Simulation and Direct Numerical Simulation [Wed. 4:30 pm]
- Thermal-Hydraulics of Advanced Reactor and Fuel Concepts [Thurs. 8:00 am]
- Computational Thermal-Hydraulics—II [Thurs. 1:00 pm]

Packages” co-sponsored by MCD and a session on “Research and Test Reactors” co-sponsored by RPD. We also note that, following the Monday afternoon session, the award ceremony for the first **THD Excellence in Review Award** will take place. Please join us to congratulate our outstanding reviewers.

The 17th Internal Topical Meeting on Nuclear Reactor Thermal Hydraulics (NURETH-17) will be held in Xi’an, China on September 3-8, 2017. Please see the conference website <http://nureth17.com> and a related article in this Newsletter for more information. Deadline for submission has already passed and over 683 full papers have been received, marking this conference as one of the largest thermal-hydraulics conference to date. We hope to see you in Xi’an for what promises to be an exciting conference.

Moreover, do not forget that the submission website is open for the ANS Winter Meeting 2017, which will be held in Washington, DC at the Marriott Wardman Park hotel between October 29 and November 2,

2017. THD is again offering a vibrant program with twelve sessions (with two panels). We will also hold our young professional thermal-hydraulics research competition. Do not forget to submit papers at <http://epsr.ans.org/meeting/?m=149>.

- 19a. Thermal Hydraulic Collaborations in Industry, Academia and Labs (P)
- 19b. Thermal Hydraulics in Non-Power Applications
- 19c. Thermal Hydraulics of Advanced Reactors
- 19d. Computational Thermal Hydraulics
- 19e. Thermal Hydraulics for Nuclear Space Applications (P)
- 19f. Showcase of Thermal-Hydraulics Experimental Capabilities in the U.S.
- 19g. Severe Accident Modeling and Experiments for Advanced Reactor Safety
- 19h. Two-Phase Flow Fundamentals
- 19i. Experimental Thermal Hydraulics
- 19j. Computational Thermal Hydraulics
- 19k. General Thermal Hydraulics

In San Francisco, at the 2017 ANS Annual Meeting, the THD Program Committee meeting will be held on Sunday June 11th, 2017, starting at

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NURETH-17

September 3 - 8, 2017
Qujiang Int'l Conference Center
Xi'an, China

www.nureth17.com

Technical Program Committee Report, cont.

2:30 pm in room Pacific I. Anyone interested in the program committee activities is invited to participate.

Finally, we would like to express our gratitude to all of the colleagues who devote your time to the Division's activities. Thanks to your dedicated efforts, we are able to put together strong programs at many meetings. These meetings remain as the prominent venue for scientific information exchange in the thermal-hydraulics community. As always, we would like to encourage our members to actively participate by attending our meetings, submitting papers/summaries, volunteering to organize sessions, and supporting the peer-review of the papers. We look forward to many more successful years.

Elia Merzari,
Argonne National Laboratory
THD Program Committee
Chair (2016-2019)

Igor Bolotnov,
North Carolina State University
THD Program Committee
Assistant Chair (2016-2019)

PCChair@thd-ans.org



Important Dates

Abstract Submission Deadline:
Nov. 15, 2016

Abstract Acceptance Notification:
Dec. 15, 2016

Full-Length Paper Submission:
Jan. 16, 2017

Full Paper Acceptance Notification:
Mar. 31, 2017

Final Paper submission:
May 15, 2017

The proceeding materials will be published electronically and distributed as a flash drive. NURETH-17 paper submissions are limited to no more than 14 pages and supplemented with a file size limit of less than 10MB. Papers which are recommended by TPC will be published in a special edition journal focused on nuclear engineering.

About the Meeting

Nuclear Reactor Thermal Hydraulics (NURETH) represents a series of international forums organized and sponsored to assemble expertise in the field of reactor thermal-hydraulics and related topical areas. The Chinese Nuclear Society (CNS) and Xi'an Jiaotong University (XJTU) are pleased to host the 17th International Topical Meeting on Nuclear Reactor Thermal Hydraulics (NURETH-17) in Xi'an, Shaanxi, China, on September 3–8, 2017.

Conference Website

<http://www.nureth17.com/>

Honorary Chair

S. G. Wang (President, XJTU)

Honorary Co-Chair

N. E. Todreas (MIT)

General Chair

G. X. Li (President, CNS)

General Co-Chairs

F. B. Cheung (PSU)

J. H. Kim (KAIST)

Technical Program Chair

B. W. Yang (XJTU)

Technical Program Co-Chairs

Y. A. Hassan (TAMU)

H. Ninokata (POLIMI)

Assistant Technical Program Chairs

D. L. Aumiller (Bechtel)

Y. P. Huang (NPIC)

J. Q. Shan (XJTU)

Int'l Steering Committee

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J. Buongiorno (MIT)

B. D. Chen (NPIC)

X. Cheng (KIT)

M. L. Corradini (UW)

R. O. Gauntt (SNL)

S. Y. Jiang (THU)

S. Kim (Purdue U.)

T. Kunugi (KU)

S. Y. Lee (SRNL)

J. Luxat (McMaster U.)

R. P. Martin (B&W)

K. Muftuoglu (GNF)

K. Okamoto (UT)

C. H. Song (KAERI)

Y. F. Sun (NPIC)

D. L. Wang (CNS)

H. Zhao (CGN)

Organizing Committee

Y. Di (XJTU)

P. Z. Gao (HEU)

R. Hu (ANL)

X. J. Liu (SJTU)

E. Merzari (ANL)

L. X. Shen (CNS)

Y.Q. Yu (ANL)

Bin Zhang (XJTU)

Nominating Committee Report

The THD nominating committee for this year is composed of Seungjin Kim, Kurshad Muftuoglu, and DuWayne Schubring (chair). The goal of this committee is to nominate members for division committees, including division officers.

In June 2017, the following members' terms expire from the Executive Committee:

Fan-Bill Cheung, Paolo Ferroni, Donna Guillen, Jong Kim, DuWayne Schubring (ex-officio, as immediate past chair).

At the November 2016 meeting, Fan-Bill Cheung is appointed by the EC as a member of the Honors and Awards Committee, filling the seat opened by Michael Corradini, whose term expires in June 2017. Additionally, EC appointed John Luxat as the chair of the Conference Screening Committee, replacing Jong Kim.

On behalf of the Nominating Committee, I wish to thank all of our new officers and committee members for agreeing to serve the division in the next years along with all those rolling off committees for their past service.

DuWayne Schubring
University of Florida
THD Nominating Committee Chair (2016-2017)
dlschubring@ufl.edu



ANS Thermal Hydraulics Division

2017 Election Results



Kurshad Muftuoglu
Chair

Principal Engineer, Global Nuclear Fuel
Adjunct Faculty, University of Pittsburgh



W. David Pointer
Vice Chair

Distinguished Nuclear CFD Engineer,
Reactor and Nuclear Systems Division,
Oak Ridge National Laboratory



Chul-Hwa SONG
Secretary

Vice President, Nuclear Safety Research
Department of KAERI



Wade R. Marcum
Treasurer

Associate Professor, School of Nuclear
Science and Engineering, Oregon State
University



Yang Liu
Executive Committee
Assistant Professor, Virginia
Tech



John Luxat
Executive Committee
Professor and NSERC/UNENE
Senior Industrial Research Chair
in Nuclear Safety Analysis
Director of the Centre for
Advanced Nuclear Systems,
McMaster University



Annalisa Manera
Executive Committee
Associate Professor, Department
of Nuclear Engineering and
Radiological Sciences,
University of Michigan



Hisashi Ninokata
Executive Committee
Professor, Department of
Energy, Politecnico di Milano
(POLIMI)



Piyush Sabharwall
Executive Committee
Research Staff Scientist, Nuclear
Science and Technology
Division, INL

Financial Report

Our division holds two separate accounts: one general and one scholarship/awards account (formerly referred as the endowment account). Spending from the general account is unrestricted up to the total value of the account, as long as the transactions are approved by the division executive committee. Spending from the awards account is restricted to ensure the long term availability of the fund to support the THD awards.

The general fund is supported by membership dues (referred as the Dues Revenue Allocation) and income from conferences hosted by the division dues (referred as the Meeting Revenue). The scholarship/awards account has primarily been funded by generous donations from the organizers of conferences supported by the division (referred as the Contribution Revenue).

The 2015 total year-end fund balance was \$47,128. In 2016, Prof. T.N. Dinh generously donated \$1,000 (TAA monetary award) to the scholarship/award fund. And the Korean Nuclear Society (KNS) also generously donated \$5,000 to the scholarship/award fund following the successful completion of NUTHOS-11, but this was deposited to the division account in Feb. 14, 2017. Spending through the end of December 2016 was limited to \$2,227 mainly for plaques and certificates as well as student travel support. The spend limit for 2016 is \$4,400. Since scholarship/award account balances are reported annually, no update of investment returns for the first half of 2017 is available. No expenses have been recorded to date for the first half of 2017, but \$1,000 will be disbursed to ANS headquarter for ANS Student Conference Support (\$500) and ANS Student Travel Support (\$500) in the first half of 2017 as usual.

*Chul-Hwa Song
Korea Atomic Energy Research
Institute (KAERI)
THD Treasurer (2016-2017)*

	Budget	Actual 12/31/16
Balance forward from 2015	\$47,128	\$47,128
2016 Income	\$3,800	\$8,778
Revenue from 2016 member allocation	\$2,300	\$2,378
Revenue from meetings	\$1,500	\$5,400
Contribution Revenue	-	\$1,000
2016 Expenses	\$4,400	\$2,228
Awards and Plaques to support YPC Best Paper Award	\$500	\$1,212
Student Support		
\$1000 to support ANS Student Travel Fund		
\$500 to support ANS Student Conference	\$3,400	\$1,000
\$2400 for THD Directed Student Travel Support		
Scholarship/NEED funding		
\$500 ANS directed scholarship fund	\$500	\$0
Other Expenses	-	\$16
Fund Balance	\$46,528	\$53,678

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K. Muftuoglu, Editor

<http://thd.ans.org/>



American Nuclear Society
Thermal Hydraulics Division