



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
sxk86@psu.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

Xiadong Sun

Webmaster

Dillon Shaver



A Message from the Chair

Dear Colleagues,

It is a great privilege for me to deliver this message to you as the Chair of the Thermal Hydraulics Division (THD) for 2016-17 term. I would like to begin with sincere appreciation and thanks to all the members of THD for your continued support and dedication toward the success of our Division. In particular, I would like to express my special thanks to those who volunteer for our Division activities, including those who serve as paper reviewers, organize and chair technical sessions, and those who actively participate in various THD committee work. Thanks to you, our Division has been and continue to be one of the strongest professional divisions of ANS. As reported in previous newsletters, our Division membership has been growing steadily, such that it has increased approximately 7% over the last five years. In fact, as of December, 2015, we reached a record high in our membership with 1,203 members, which represented 11.5% of the total ANS membership. Our Division's growth is more impressive when we consider that ANS membership has suffered from more than 9% decrease during the same time

period. Additionally, it is quite encouraging to see that more than 15% of our Division's membership is comprised of student members, who are the future of THD.

Our Division's activities in technical meetings in 2016 are also quite impressive. During 2016 ANS Annual meeting in New Orleans, THD hosted 2016 Embedded Topical Meeting on Advances in Thermal Hydraulics (ATH '16). In total, we had more than 60 submissions presented in 13 different technical

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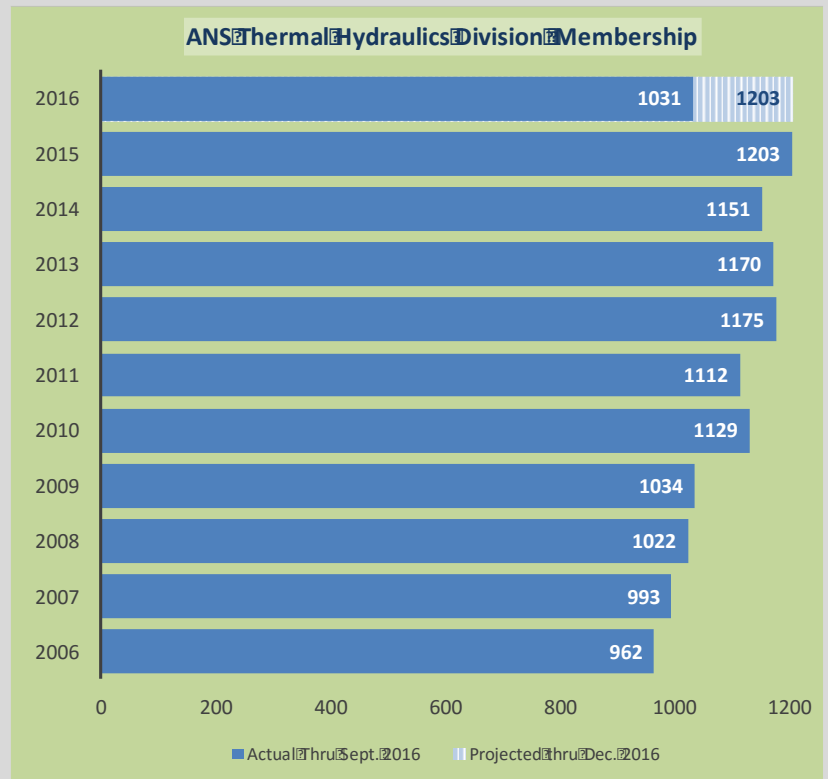
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Membership Committee Report

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 September, 1031 members have identified themselves as members of THD on their applications or renewals. We are well on our way to last year's record membership of 1203! Please remember that ANS dues funds are allocated to the Professional Divisions, including THD, based on the total membership at the end of December. If you have not yet renewed your membership for the coming year, please do so before the end of December. If you know someone who is not a member, please encourage them to join!

Kurshad Muftuoglu
GE Hitachi Nuclear Energy
2016-2017 Membership Committee Chair
kurshad.muftuoglu@ge.com



Message From the Chair, cont.

sessions. In October this year, 11th International Topical Meeting on Nuclear Reactor Thermal-hydraulics, Operation, and Safety (NUTHOS-11) was held in Gyeongju, Korea. In this meeting, there were 475 people registered from 34 different countries, which was a record high in NUTHOS history. We look forward to continued success in NUTHOS-12, which will be held in Qingdao, China in 2018. I am also excited to see that the preparation for NURETH-17 is well underway and will be held in Xi'an, China in September, 2017.

I would like to ask THD community to help me congratulate Professor Nam Dinh of North Carolina State University for being selected as this year's Technical Achievement Award. He was recognized 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*". I also want to recognize and thank him for his kind donation of the monetary award to THD operational fund. Professor Dinh will deliver Technical Achievement Award Lecture on Monday, Nov. 7th during the 2016 ANS Winter Meeting. I also want to congratulate Mr. Wynne for being selected for this year's Best Paper Award for the paper he co-authored with M. Garza, K. Vierow, D. Aumiller, and M. Kyle.

As I close this letter, I would like to express my sincere gratitude once again to all THD members for making our Division strong. I look forward to your continued support and suggestions to further strengthen our Division. I hope to see you in 2016 ANS Winter Conference in Las Vegas. Thank you!

Seungjin Kim
The Pennsylvania State University
2016-2017 THD Chair
skim@psu.edu

Honors and Awards Committee Report

2016 THD Technical Achievement Award

The Technical Achievement Award is the highest award given by the THD. It is presented annually to a member of the THD in recognition of outstanding past or current technical achievement. It is based on a major contribution to the state of the art, an important publication, a major technical achievement, or a sustained record of accomplishment and technical excellence in the art or science of thermal hydraulics.

This year, we are pleased to recognize Dr. Nam Truc Dinh, Professor of Nuclear Engineering at North Carolina State University as the 2016 Technical Achievement Award winner. Professor Dinh is recognized 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 that will appear 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."

With TAA being an ANS National Award, Prof. Dinh will be formally recognized at the Opening Plenary Session, on Monday, November 7, 2016 at the upcoming ANS 2016 Winter Meeting.

2016 Best Paper Award

The Best Paper Award is given annually for the best full paper presented at one of the previous or current year's Division sponsored thermal hydraulics sessions or topical meetings. The award is made on the basis of originality, creativity, impact and scientific integrity.

Recommendations for the Best Paper Award come from chairs of technical meeting sessions and from members at-large (through the Program Committee Chair).

This year, the Best Paper Award was selected from among nominees from 2016 International Topical Meeting on Advances in Thermal Hydraulics (ATH'16). The 2016 THD Best Paper Award winner is:

"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 ATH'16, held as an embedded topical to the 2016 ANS Annual Meeting in New Orleans, Louisiana, June 12–16, 2016.

THD Award Ceremony and TAA Lecture

Recipients of the THD awards will be honored at the THD Award Ceremony, which will be held in Room Octavius 15 & 16, immediately following the Monday afternoon panel, "In Memory of



Dr. Nam Truc Dinh, the 2016 Technical Achievement Award winner.

Salomon Levy on his Technical Contributions to the Advancements of Thermal-Hydraulics" at this year's ANS Winter Meeting. During this event, Professor Dinh will honor us with the TAA Lecture, "Thermal-hydraulics in LWR Severe Accidents: State of the Art, Challenges and Perspectives."

I would like to take this opportunity to thank the THD Honors and Award Committee members for their dedicated work! Please also join us in congratulating all the THD award recipients and enjoy the TAA lecture, November 7. Congratulations to all our 2016 honorees!

*Xiaodong Sun
The Ohio State University
2016-2017 Honors and Award
Committee Chair
sun.200@osu.edu*

Technical Program Committee Report

The strong THD presence at the ANS national meetings continues after a positive 2016 ANS Annual Meeting where a total of 18 summaries were presented at three THD-sponsored sessions in addition to the embedded topical meeting Advances in Thermal Hydraulics 2016 (ATH'16) comprising 43 papers in a total of ten technical sessions. Moreover, the 11th International Topical Meeting on Nuclear Thermal Hydraulics, Operation and Safety (NUTHOS-11) has been held on October 9-14, 2016 in Gyeongju, Republic of Korea. The conference was sponsored by Korean Nuclear Society (KNS) and co-sponsored by ANS in cooperation with other international nuclear societies. It was a very successful conference with record number of papers (about 350) and attendees (over 475) for a NUTHOS meeting.

The interest and participation to the technical sessions organized by our division have again reached a record level at the upcoming 2016 ANS Winter Meeting where a record number of sessions and papers 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,

At the 2016 Winter Meeting in Las Vegas, NV, THD is in fact organizing a total of sixteen (16) contributed summary sessions, three (3) panel sessions and a session dedicated to the Technical Achievement Award lecture. A total of 110 summaries were submitted, out of which, based on the reviewer recommendations, a total of 92 summaries are expected to be presented at this Winter Meeting.

ANS Winter Meeting Technical Sessions

November 6 – 10, 2016
Las Vegas, NV

- Computational Thermal Hydraulics [Mon. 1:00 pm]
- In Memory of Salomon Levy on His Technical Contributions to the Advancements of Thermal Hydraulics—Panel [Mon. 1:00 pm]
- Technical Achievement Award Lecture [Mon. 3:35 pm]
- Challenges in Computational Tools for Reactor Thermal Hydraulics—Panel [Tues. 8:00 am]
- Toward a Longer-Life Core: Thermal-Hydraulic Simulations and Experiments of Deformed Fuel Assemblies [Tues. 8:00 am]
- General Thermal Hydraulics—I [Tues. 1:00 pm]
- The Nuclear Energy Advanced Modeling and Simulation Program—Panel [Tues. 1:00 pm]
- Severe Accident Modeling and Experiments for Advanced Reactor Safety [Tues. 1:00 pm]
- Two-Phase Flows—I [Tues. 1:00 pm]
- Experimental Thermal Hydraulics—I [Wed. 8:00 am]
- Large Eddy Simulation and Direct Numerical Simulation [Wed. 8:00 am]
- Subchannel Thermal-Hydraulic Analysis—I [Wed. 8:00 am]
- Uncertainty, Scaling and Global Sensitivity Methods in Thermal Hydraulics [Wed. 1:00 pm]
- Young Professional Thermal-Hydraulics Research Competition—I [Wed. 1:00 pm]
- Two-Phase Flows—II [Wed. 4:30 pm]
- Young Professional Thermal-Hydraulics Research Competition—II [Wed. 4:30 pm]
- Experimental Thermal Hydraulics—II [Thurs. 8:00 am]
- General Thermal Hydraulics—II [Thurs. 8:00 am]
- Subchannel Thermal-Hydraulic Analysis—II [Thurs. 8:00 am]
- Thermal-Hydraulics of Severe Accidents [Thurs. 9:20 am]

Again, let us take this opportunity to thank the session organizers and reviewers for their wonderful efforts: 337 reviews were completed for this Winter Meeting (on average, over 3 reviews per paper). These sessions, in chronological order, are:

Among this reach program offering, we emphasize the **in-memoriam session dedicated to Salomon Levy on Monday afternoon (1 pm)**. This session honors the many contributions to the art and science of Thermal-hydraulics of the late Dr. Salomon Levy as well as his leadership service to the American Nuclear Society. Dr. Levy was one of

the founding leaders of the Thermal-hydraulic division as its second chair (1985-1986). He was also the third recipient of the Technical Achievement Award (1987), the highest award bestowed by the division. The panel session will include presentation from early leaders of the Thermal-hydraulic division who had personal, first-hand knowledge of Dr. Levy and his many achievements. These include Jong Kim (KAIST), Bill Sha (Retired), Robert Henry (Fauske and Assoc), Fred Moody (Retired), Hans Fauske (Fauske and Assoc.) and Ed Fuller

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(Retired). Prof. Bal-Raj Sehgal will also give a brief speech. Following the in-memoriam session we will have the traditional **Technical Achievement Award lecture** delivered by Prof. Nam T. Dinh titled "Thermal-Hydraulics in LWR Severe Accidents: State of the Art, Challenges and Perspectives".

We note that in addition to the regular sessions, THD will also co-sponsor the 8th International Topical Meeting on High Temperature Reactor Technology (HTR2016). The meeting will comprise 134 full papers, presented in 41 sessions at. More than 60 reviewers helped to insure that only high quality papers were accepted.

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 future information. Abstracts are due November 15th 2016.

In Las Vegas, at the 2016 ANS Winter Meeting, the THD Program Committee meeting will be held on Sunday November 6th, 2016, starting at 2:30 p.m. in room Neapolitan 2. 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 and 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
2016-19 THD Technical Program
Committee Chair
emerzari@anl.gov

Igor Bolotnov
North Carolina State University
2016-19 THD Assistant Technical
Program Committee Chair
igor_bolotnov@ncsu.edu

NURETH-17
abstracts are due
November 15!

Submit yours today
at

<http://nureth17.com>

Young Members Group Liason Report

This year's annual "Young Professional Thermal Hydraulics Research Competition" is going to be held at the upcoming 2016 ANS Winter Meeting in Las Vegas Nevada this November. The competition features presentations specifically from young researchers who meet the YMG requirements. The competition is split between two sessions occurring on Wednesday, November 9th at 1:00pm and 4:30pm, it features 9 participants from both academia and the national labs. Dr. Rui Hu (rhu@anl.gov) is the session organizer with Dr. Paolo Ferroni (ferronp@westinghouse.com) and Dr. W. David Pointer (pointerwd@ornl.gov) serving as co-chairs. For the first time, this competition will award a \$500 monetary prize to the participant which scores the highest by the judging panel. Details on the participants and their topics can be found in the official program for the ANS Winter Meeting (<http://www.ans.org/meetings/file/682>).

The Young Members Group (YMG) is a technical group of the American Nuclear Society (ANS). YMG provides young professionals with opportunities to expand their technical knowledge and network with internationally recognized authorities and industry leaders. Part of YMG's mission is to collaborate with other Divisions and Groups in developing technical and non-technical content of particular interest to young professionals for topical and national meetings (for more information on YMG's mission check <http://ymg.ans.org>).

All regular ANS members 35 years old or younger, or within 5 years of their last degree are YMG members. Moreover, all ANS graduate students are members of the group as well.

Alex Abboud
Idaho National Laboratory
2016-2017 THD Young Members Group Liason

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.

For the 2017-18 ANS year, the nominating committee will propose the following slate of candidates for the Executive Committee and Division Officers:

- Chair - Kurshad Muftuoglu
- Vice-Chair/Chair-Elect - W. David Pointer
- Secretary - Chul-Hwa Song
- Treasurer - Wade Marcum
- Executive Committee (5 at large)
 - John Luxat
 - Annalisa Manera
 - Hisashi Ninokata
 - Piyush Sabharwall
 - Yang Liu

The official nominations come from the Executive Committee. This matter will be discussed at the Las Vegas meeting.

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)

For the honors and awards committee, Fan-Bill Cheung will be nominated to fill the seat opened by Michael Corradini, whose term expires in June 2017.

Finally, John Luxat will be nominated to replace Jong Kim as the chair of the Conference Selection Committee.

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
2016-17 THD Nominating Committee Chair
dlschubring@ufl.edu

17th International Topical Meeting on Nuclear Reactor Thermal Hydraulics
Xi'an, Shaanxi, China, Sept. 3-8, 2017

NURETH-17

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

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

X. Sun (OSU), Chair
S. M. Bajorek (US NRC)
J. Buongiorno (MIT)
B. D. Chen (NPIC)
X. Cheng (KIT)
M. L. Corradini (UW)
R. O. Gauntt (SNL)
S. Y. Jiang (THU)
S. Kim (PSU)
T. Kunugi (KU)
S. Y. Lee (SRNL)
J. Luxat (McMaster U.)
R. P. Martin (B&W)
K. Muftuoglu (GE)
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)

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.

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 scholarship/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 and income from conferences hosted by the division. The scholarship/awards account has primarily been funded by generous donations from the organizers of conferences supported by the division.

Spending through the end of September 31, 2016 was limited to \$1,129 for YPC best paper award (\$129) and for student travel support (\$1,000). Anticipated spending as of December 31, 2016 would be \$500 for student travel support and \$1500 for student support to award 10 students, \$150 each for those who "presented a paper in a Winter Meeting THD session or a THD track session in the embedded HTR topical meeting. The spend limit for 2016 is \$4,174.

Chul-Hwa Song
Korea Atomic Energy Research
Institute (KAERI)
2016-17 THD Treasurer
chsong@kaeri.re.kr

	Budget	Actual Thru Sept. 30, 2016
Balance forward from 2015		
Includes Meeting revenue of \$30,996 from NURETH-16	\$16,794	\$47,128
2016 Income	\$3,800	\$4,174
Revenue from 2016 member allocation	\$2,300	\$1,784
Revenue from ATH'15 meeting	\$1,500	\$2,390
2016 Expenses	\$4,400	\$1,129
Awards and Plaques		
to support YPC Best Paper Award	\$500	\$129
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

November 2016
 ANS Thermal Hydraulics
 Division Newsletter
 (Issue No. 29)

Dave Pointer, Editor

<http://thd.ans.org>



American Nuclear Society
 Thermal Hydraulics Division