

## **Program Committee Minutes**

American Nuclear Society – Thermal Hydraulics Division  
Program Committee Meeting  
Grand Sierra Resort, Reno, NV  
2:30 – 4:30 PM, Sunday, June 15, 2014  
Location: Crystal 2

**Attendees:** Chul-Hwa Song (KAERI), John Luxat (McMaster U), Kurshad Muftuoglu (GE-Hitachi), Yang Liu (Virginia Tech), Rui Hu (ANL), Jong Kim (KAIST/EPRI), Tommy Moore (Zachry Nuclear Engineering), Elia Merzari (ANL) – Vice Chair, Seungjin Kim (Penn State U), Xiaodong Sun (Ohio State U) – Chair, Hisashi Ninokata (Politecnico di Milano), Donna Guillen (INL), Sama Bilbao y Leon (Virginia Commonwealth U), Steven Arndt (NRC), Robert Martin (B&W), DuWayne Schubring (U Florida) – Secretary, David Aumiller (Bettis), Si Young Lee (SRNL), Piyush Sabharwall (INL), Wade Marcum (Oregon State U), Fatih Aydogan (U Idaho), Sabahattah Acras (U Idaho), Jon Jensen (SAES Pure Gas), Michio Murase (INSS), Paolo Ferroni (Westinghouse), Dave Pointer (ORNL), Igor Bolotnov (North Carolina State U), Huajian Chang (SNPTRD), Yassin Hassan (Texas A&M U), Fan-Bill Cheung (Penn State U), Jose Reyes (NuScale Power) [same order as Attachment A]

### **1. Opening (Sun)**

Prof. Sun opened the meeting at 2:31 pm.

### **2. Approval of Meeting Agenda (All)**

The draft agenda (Attachment B) was distributed. Prof. Schubring recommended the addition of item 11-a (NURETH 17). Dr. Aumiller moved to accept the revised agenda, seconded by Dr. S.Y. Lee, and the agenda (Attachment C) was approved unanimously.

### **3. Approval of Minutes from 2013 Winter Meeting (All)**

Minutes from the 2013 Winter Meeting were distributed electronically before the meeting, with additional copies distributed immediately before the meeting. Prof. Sun and Prof. Hassan requested the addition of Prof. Hassan to the attendees list. Dr. Merzari moved to accept the minutes as revised, seconded by Dr. Muftuoglu, approved without objection.

### **4. Session Status of 2014 ANS Annual Meeting in Reno, NV**

#### **4.1 General meeting (Sun/Merzari)**

- a) Submittal Statistics**
- b) Reviews**
- c) Session Assignments**

Prof. Sun distributed a summary of the submittals, reviews, and session assignments for the general meeting [Attachment D]. 22 papers were submitted, with 17 reviewers contributing 80 reviews. A total of 19 summaries will appear in the program, with 3 sessions (Experimental Thermal Hydraulics, Computational Thermal Hydraulics, and Thermal Hydraulics: General). For the final session, Dr. Aumiller was replaced by Dr. Meholic as co-chair.

Dr. Merzari notes that the procedure for the paper auction changed for this meeting, with calls made alphabetically to professional divisions. THD was therefore the last division called, with few options for rooms. Originally, 2 sessions were scheduled for Thursday, though negotiation with other divisions allowed for moving 1 session.

Dr. Muftuoglu reminded attendees of the need to complete reviews in a timely fashion to ensure timely session assignments.

#### **4.2 ATH'14 (Guillen)**

##### **a. Submittal Statistics**

##### **b. Reviews**

##### **c. Session Assignments**

Dr. Guillen read a summary of the submittals, reviews, and session assignments for the ATH meeting. Following the meeting, the document was provided for inclusion in the minutes [Attachment E]. The 65 submittals led to 58 accepted papers across 9 sessions. As a full paper session, detailed review was required, complicated by a number of papers longer than the 8-12 page limit. Guillen read the names and total number of reviews for each reviewer in the process.

Dr. Aumiller reiterated the importance of maintaining and improving paper quality for ATH '14 to increase the prestige of the meeting.

Prof. Cheung suggested best papers should be submitted to archival journals to advertise meeting quality.

Dr. Muftuoglu noted a 50% increase in papers relative to ATH '12.

Aumiller noted ANS-HQ financial incentives for efficient placement of the meeting on the calendar. A brief discussion of financial issues for embedded topicals followed, with no motions made.

Prof. Sun thanked the organizers of ATH '14.

Prof. Ninokata discussed the potential for the THD best paper award to come from ATH '14.

Cheung recommended that non-NURETH papers only be considered for best paper award if the "pool" of papers (number of papers submitted to THD meetings) was sufficiently high.

#### **5. 2014 ANS Winter Meeting Program in Anaheim, CA (Sun/Merzari)**

##### **a. Announced Sessions for Annual Meeting**

Attendees were directed to the recent THD newsletter for the full list of sessions in Anaheim. 6 paper sessions, 2 panel sessions, plus the YPTHRC will be included. The organizers of the YPTHRC (Prof. Marcum, Dr. Hu, and Prof. Bardet) were thanked for their efforts.

##### **b. Submittal Status**

No THD-specific information was available. A total of 140-150 summaries have been submitted to the November meeting.

### c. Panel Sessions

Panelists must be confirmed by July 14. Dr. Aumiller noted that up to 5 invitations (from the Division Chair) may be made per panel; these invitations allow for free one-day registration for panelists regardless if they are ANS members or not.

## 6. 2015 ANS Annual Meeting Program in San Antonio, TX (Sun/Merzari)

A lengthy discussion on potential sessions led to the following 8 sessions in the roster for the next Annual Meeting.

1. General Thermal Hydraulics (J. Luxat and K. Muftuoglu, and E. Merzari)
2. Computational Fluid Dynamics Verification and Validation (Y. Hassan, H. Ninokata, and D. Pointer)
3. Advanced System Code Development and Analysis (F. Aydogan and D. Aumiller)
4. Experimental Thermal Hydraulics (W. Marcum and P. Sabharwall)
5. Computational Thermal Hydraulics (I. Bolotnov and D. Guillen)
6. Thermal Hydraulics in Non-traditional Nuclear Applications (S. Y. Lee)
7. Thermal Hydraulics Education [Panel] (S. Bilbao y Leon and D. Schubring)
8. Two-phase Flow (Y. Liu, S. Kim, and F.B. Cheung)

Organizers of new sessions were reminded to provide 100 word summaries. Reviewers are asked to note, during the review process, any summaries submitted to an inappropriate session for reassignment.

## 7. NUTHOS-10 Update (Ninokata)

Prof. Ninokata reminded the attendees of the location and date of the meeting. 300 abstracts were submitted, with full paper review now underway (submission deadline in late June). Given 3 reviews per paper, the number of reviews is on the order of 1000. Invitations to keynote speakers have been distributed.

(Following the meeting, Dr. Michio Murase, on behalf of the NUTHOS-10 Technical Program Chair, Prof. Akira Yamaguchi, indicated that there will be 2 reviews per paper.)

Planning for NUTHOS-11 is in the early stages. It is expected that the meeting will occur in South Korea.

The liberalization of rules regarding foreign Class I meetings were noted and the implications of this change on NUTHOS were briefly discussed.

**ACTION ITEM:** The ad hoc committee of Prof. J Kim, Prof. Ninokata, and Prof. Chao are to contact the Korean Nuclear Society for the purposes of having a recommendation for the NUTHOS-11 host to be considered by the THD Conference Selection Committee and THD Executive Committee.

Prof. Cheung requested clarification on the THD role in NUTHOS and the status of NUTHOS vs. ATH as the THD #2 meeting (behind NURETH).

Dr. Aumiller noted that standalone conferences have potential financial liability. He noted that it was stated in the PDC workshop that as a result of poor attendance at ICAPP, ANS needed to schedule additional conferences in Charlotte to fulfill the hotel contract.

#### **8. NURETH-16 Update (Merzari/Sun)**

The call for papers has been distributed, including through the recent THD newsletter. Prof. Sun will finalize TPC membership in the next few weeks. There have been frequent organization meetings, including a 7 am Tuesday meeting planned at this meeting. All THD-PC members were invited to attend. The Art Institute of Chicago is expected to host the banquet; final negotiations are in progress. Sponsorships are available for purchase by contacting Dr. Keith Bradley (ksbradley@anl.gov). Abstract submissions will open August 1. A 14-page limit will be enforced, with page charges for papers exceeding this. Abstract review will be a cursory review for planning purposes and will close in mid-November, with notification of acceptance in late 2014. A full paper draft will be due in February, with reviews complete by April, and final camera-ready manuscripts required by May 31. The organizers are open to suggestions for new sessions or workshops. Best papers will be referred to ANS journals. Due to the retirement of Dr. Tom Wei, Dr. Merzari has been added to the roster of Assistant Technical Progress Chairs.

Prof. Sun paused the meeting momentarily to note that Winter 2014 reviews will be opened not later than June 23.

#### **9. ICAPP'14 Update (Muftuoglu/Sun)**

No further discussion occurred on THD co-sponsorship of this meeting. Dr. Hu noted approximately 100 papers on THD topics appeared in ICAPP, with TH topics frequently appearing in meetings in which THD is not directly involved.

#### **10. Old Business (All)**

##### **a. EC action on PC motions from 2013 ANS Winter Meeting (new PC members, NPC representative)**

The new PC members and NPC representative were approved by the EC.

Two new members of the PC were nominated: Prof. Aydogan (U Idaho), nominated by Dr. Muftuoglu, and Prof. Manera (U Michigan), nominated by Prof. S. Kim. A motion was made by Muftuoglu, seconded by Prof. Luxat, and approved without objection to recommend their inclusion on the PC to the EC.

Prof. Sun also requested PC (and EC) approval to bless an issue of Nuclear Engineering and Design, dedicated to the work of Dr. Zuber. This was referred to the EC meeting without a formal vote.

Sun noted that the potential for removing members as the 50 member cap is approached.

#### **11. New Business (All)**

##### **a. NURETH 17 (Schubring)**

Prof. Schubring recommended beginning the discussion on NURETH 17 citing. The normal NURETH rotation would set the meeting in the Asia/Pacific region. Schubring

recommended that the traditional rotation – decided decades ago – be reconsidered and either modified or reaffirmed, based on significant changes in THD membership since the founding of the NURETH series.

Prof. Cheung recommended that Asia/Pacific locations not be excluded from NURETH 17, based on maintaining NURETH as the THD (and TH) flagship conference.

Prof. Sun indicated that Dr. Lee and Prof. J. Kim will lead drafting of the NURETH 17 call for proposals.

J. Kim argued that the traditional rotation be continued, based on a history of past success.

All involved agreed to refer further discussion to the EC meeting.

Sun suggested targeting a September or October 2014 release for the CFP, which would require a decision on geographical preference at the June meeting.

With NURETH 17 discussion tabled until the EC, several topics were brought up from the floor.

Dr. Merzari thanks reviewers again and reminded them to be aware of potential conflicts of interest.

Dr. Aumiller discussed highlights from the division chairs' meeting with ANS President Hoffman. The liberalization of Class I international meetings was noted. Hoffman indicated that the registration fees, a long concern at THD meetings, were compared to other societies and found to be reasonable. However, Aumiller noted that other societies do not have page charges and that the raw data were not provided, though this was established as PDC action item for Hoffman. Prof. Sun noted that the same issues were discussed in the National Program Committee meeting, with topical meetings (smaller attendance) typically more expensive.

Dr. Merzari moved to adjourn.

The meeting was adjourned at 4:28 pm.

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Name	Affiliation	E-mail	Phone
Chul-Hwa Song	KAERI, Korea	chsong@kaeri.re.kr	+82-10-4076-6151
JOHN LUXAT	McMASTER U.	luxatj@mcmaster.ca	(905) 525-9140 ext 24670
KURSHAD MUFTUOGLU	GE Hitachi Nuclear Energy	kurshad.muftuoglu@ge.com	+1.412.480.2067 (M)
Yang Liu	Virginia Tech	liu130@vt.edu	540-231-8068
Rivi Hu	ANL	rhu@anl.gov	630-252-1461
Jung Kim	KAIST/EPRI	heim@epri.com	650-855-2204
Tommy Moore	Zachry Nuclear Engineering	thomas.moore@americanel.com	509-943-0861 x302
Elio Perzari	ANL	emerzari@anl.gov	630-257-6637
Seungjin Kim	Penn State	skim@psu.edu	814-867-1783
Xiaodong Sun	Ohio State Univ.	SUN.208@OSU.EDU	614-247-7646
Hisashi Ninokata	Politecnico di Milano	hisashi.ninokata@polimi.it	
Donna Guillen	INL	Donna.Guillen@inl.gov	208-526-1744
SAMA BILBAO LEON	VCU	SBILBAO@VCU.EDU	804.549.3744
STEVEN ARNDT	NRC	stevn.arndt@nrc.gov	301-415-6502
W. J. Martin	vpmartin@babcock.com		434-316-7549

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Name	Affiliation	E-mail	Phone
DwWayne Schubring	VF-Florida	dlschubring@vf.edu	352-392-1401 x 314
David Amiller	BNRC	David.Amiller@unpp.gov	912-476-6687
Si Young Lee	SRNL	Si.Lee@srnl.doe.gov	803-725-8462
Piyush Sabharwal	INL	Piyush.Sabharwal@inl.gov	208-526-6494
Wade Marcum	Oregon State University	wade.marcum@oregonstate.edu	541-737-3018
Fatih Aydogan	University of Idaho	fatih@uidaho.edu	412-818-2067
Sabharatth ARBAS	University of Idaho	sabbaras@uidaho.edu	208-533-8142
Jon Jensen	SAES Pure Gas	Jensjbn4@isu.edu	208-244-9227
Michio Murase	Institute of Nuclear Safety Sys	murase@inss.co.jp	181-770-37-9110
PAOLO FERRONI	WESTINGHOUSE	FERRONP@WESTINGHOUSE.COM	724-940-8313
DAVE POINTER	ORNL	POINTERWD@ORNL.GOV	865-241-4472
Igor Bolotnov	NCSU	igor_bolotnov@ncsu.edu	518-542-8939
Huajian CHANG	SNPTRD	changhj@tsinghua.edu.cn	86-13522555678
Yassin Hassen	Texas A&M Univ.	y-hassen@tamu.edu	979 218 4417
F. Bee Cheng	Penn State Univ	FXC4@psu.edu	814-863-4261
JOSE' REYES	NWSCALE POWER	JReyes@NWSCALEPOWER.COM	(541) 207-5081

## **PROPOSED AGENDA (Draft)**

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8. NURETH-16 Update (Merzari/Sun)
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11. New Business (All)



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  - a. NURETH 17 (Schubring)

## ANS 2014 Annual Meeting, Reno, NV

X. Sun and E. Merzari

We have received a total of 22 summaries submitted to the proposed sole General Thermal Hydraulics session. Our THD reviewers again did a great job to review these summaries despite of a relatively narrow time window in which we had to complete the review.

Reconciled review recommendations for the summaries are as follows: One of these summaries were accepted (A) without further comments; 17 were accepted with revisions (A/R); three were rejected unless revised (R/R); and one summary was rejected.

1	Accepted (A)
17	Accept with Revisions (A/R)
3	Reject Unless Revised (R/R)
1	Rejected (R)

After another round of rigorous review process for those R/R summaries, a total of 19 summaries made to final program of the conference.

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

Summaries	# of reviews
4	2 reviews
4	3 reviews
10	4 reviews
4	5 reviews
<hr/>	
Total	22
	80 reviews

There were 80 review recommendations that needed to be coordinated from 17 reviewers. Reviewer participation was very good for this meeting. Overall it showed a good participation since many members were devoting their time to ATH'14 paper review. The reviewers' support is much appreciated. Most recent reviewer participations were as follows:

Reno	80 reviews from	17 reviewers (General meeting)
D.C.	284 reviews from	29 reviewers
Atlanta	137 reviews from	23 reviewers
San Diego	129 reviews from	22 reviewers
Chicago	116 reviews from	17 reviewers
D.C.	179 reviews from	22 reviewers
Hollywood	148 reviews from	14 reviewers
Las Vegas	181 reviews from	20 reviewers
San Diego	102 reviews from	21 reviewers
D.C.	135 reviews from	22 reviewers
Atlanta	191 reviews from	25 reviewers
Reno	73 reviews from	11 reviewers
Anaheim	89 reviews from	19 reviewers.

Following individuals contributed to the reviews of the summaries:

Ferroni, Paolo (10)  
 Baglietto, Emilio (9)  
 Merzari, Elia (9)  
 Aumiller, David (8)  
 Luxat, John (8)  
 Aydogan, Fatih (6)

Sun, Xiaodong (6)  
 Zou, Ling (4)  
 Cheung, Fan-Bill (3)  
 Lee, Si (3)  
 Liu, Yang (3)  
 Hu, Rui (2)

Kim, In Hun (2)  
 Lane, Jeffrey (2)  
 Marcum, Wade (2)  
 Riznic, Jovica (2)  
 Marshall, Theron (1)

THD has a total of 3 summary sessions for the general meeting at this annual meeting. These are:

**Monday**

Experimental Thermal Hydraulics: [Mon. p.m.]

**Wednesday**

Computational Thermal Hydraulics [Wed. p.m.]

**Thursday**

Thermal Hydraulics: General [Thur. a.m.]

<b>Session</b>	<b># of papers</b>	<b>Time Slot</b>	<b>Location</b>	<b>Chairs</b>
Experimental Thermal Hydraulics	7	Mon. 1:00 p.m.	Carson 3	P. Sabharwall, P. Ferroni
Computational Thermal Hydraulics	6	Wed. 1:00 p.m.	Carson 3	E. Merzari
Thermal Hydraulics: General	6	Thur. 8:30 a.m.	Carson 3	D. Aumiller L. Zou
<b>Total</b>	<b>19</b>			

**Additional Notes:**

- All paper presentations are 25 minutes each.
- Session chairs are to obtain the session sheets from the Speaker/Session Chair Desk and return the filled sheets after the sessions.

**Advances in Thermal Hydraulics (ATH'14)  
Embedded Topical Meeting  
American Nuclear Society 2014 Annual Meeting  
Reno, NV, June 15-19, 2014**

Technical Program Chairs: Donna Post Guillen and Horst-Michael Prasser  
Assistant Technical Program Chairs: Elia Merzari and Seungjin Kim

The Plenary session for ATH'14 was held on Tuesday morning June 17. The session was a tribute to the Legacy of Novak Zuber Memorial session, which kicked off the Embedded Topical Meeting with six invited speakers. The technical program consisted of nine technical sessions of 58 paper presentations in the following areas: Research Inspired by Novak Zuber; Computational Methods; Modeling, Verification & Validation; Thermal Fluids & Heat Transfer Applications; Two-Phase Flow; and Nuclear Reactor Plant Safety & Accident Management. A Proceedings DVD was compiled with the set of peer-reviewed papers and distributed to registered ATH'14 meeting attendees.

All papers were peer-reviewed by at least two reviewers. Each paper was 10 to 12 pages long. The reviewer pool consisted of 31 reviewers providing a total of 138 reviews as listed below. Many thanks to our dedicated reviewers for providing rigorous and timely reviews!

Reviewer Name		No. Reviews
David	Aumiller	18
Xiaodong	Sun	13
Elia	Merzari	11
Paolo	Ferroni	9
Donna	Guillen	8
Jovica	Riznic	6
Igor	Bolotnov	6
Ling	Zou	6
Seungjin	Kim	5
Donald	Todd	5
Robert	Martin	5
Fan-Bill	Cheung	4
John	Luxat	4
Annalisa	Manera	4
Micha	Prasser	4
Piyush	Sabharwall	3
Maria	Avramova	3
Rui	Hu	3
Fatih	Aydogan	3
Sonat	Sen	3
Philippe	Bardet	3
Yang	Liu	3
Steven	Arndt	2
Pradip	Saha	2
DuWayne	Schubring	2
Si Young	Lee	2
Wade	Marcum	2
Bao-Wen	Yang	2

Mike	Meholic	2
George	Mesina	1
Hisashi	Ninokata	1
In Hun	Kim	1

The reviewers scored the papers against the following criteria: (1) Originality of contribution, (2) Integration with other work in the field, (3) Correctness and completeness, (4) Premise logically presented and argued, and (5) Conclusions justified based on information. The breakdown of reviewer recommendations are:

Accept	Accept with Revisions	Reject Unless Revised	Reject	Total
13	37	8	2	60

Of the 58 papers accepted for presentation at ATH'14, nine were recommended for the Best Paper Award, In addition, the top scoring papers will be considered for publication in a Special Issue of Nuclear Technology.