

American Nuclear Society – Thermal Hydraulics Division
Program Committee Meeting
2021 ANS Winter *Virtual* Meeting
2:30 PM – 4:30 PM US Eastern Time, Sunday, November 28, 2021
Zoom:

<https://psu.zoom.us/j/99099482386?pwd=LzY3YkpBVkpwWGNCdnJlQZm9XUnJlQkQ09>

1. **Opening** (Bolotnov/Shaver)
2. **Approval of Meeting Agenda** (All)
3. **Approval of Minutes** from 2021 Virtual Annual Meeting (All)
4. **Update on THD Sessions for the ANS 2021 Hybrid Winter Meeting** (Bolotnov/Shaver)
 - a. General Meeting: Submittal Statistics, Reviews, and Session Assignments
5. **Update on THD Program for the Upcoming 2022 Annual Meeting** in Anaheim, CA (Bolotnov/Shaver)
 - a. General meeting: ATH'22 Embedded Topical, Announced Sessions, Deadlines/Submittal Status
6. **Planning for the Future 2022 Winter Meeting** in Phoenix, AZ (Bolotnov/Shaver)
7. **NURETH-19 Update** (Roelofs)
8. **THD Planning for ATH'22 Embedded Topical** (Sun/Pointer)
9. **NUTHOS-13 Update** (Sun/Yang)
10. **NURETH-20 Update** (Bajorek)
11. **Old Business** (All)
 - a. PC membership nominations: (Marcum/Bolotnov/Shaver)
12. **New Business** (All)

Attendees:

1. Opening

2. Approval of Meeting Agenda

Draft Meeting agenda provided (see **Attachment B**)

MOTION to approve: Elia Merzari

SECOND by: Donna Guillen

NO DISCUSSION

APPROVED UNANIMOUSLY

3. Approval of Minutes from 2021 Virtual Meeting

Draft minutes from 2021 Annual meeting (see **Attachment C**)

MOTION to approve: Donna Guillen

SECOND by: Elia Merzari

NO DISCUSSION

APPROVED UNANIMOUSLY

4. Update on THD session for ANS2021 Hybrid winter meeting

Dr. Dillon gave an update. There will be a total of 14 sessions (including 2 panels), 59 summaries were submitted, of which 2 were rejected after the second round of reviews. The number of submissions was lower than expected (probably because of the uncertainty associated to the Covid situation and the lack of a notification about extended deadline).

DISCUSSION

There was a question concerning the training and instructions for session chairs. Martin suggests that Piyush Sabharwall reaches out to Janet so that instructions can be sent out again. Dillon Shaver will forward the instructions again to all session chairs and panelist (**action**).

5. Update on THD Program for the upcoming 2021 Annual Meeting

Dr. Shaver reports that a general TH session is planned.

Dr. Sun comments that in the call for papers, there is a session for young professional competition.

Dr. Merzari mentions that there will be no general TH session in the ANS meeting. Both general TH session and competition will be in the ATH.

6. Planning for the future 2022 Winter meeting in Phoenix

Dr. Shaver introduces a discussion on the future 2022 Winter meeting. The following suggestions for special sessions are made:

- advanced reactor thermal-hydraulics (S. Sharma, P. Sabharwall)
- CFD and thermal-hydraulics of micro-reactors (A. Manera, D. Guillen)
- machine learning for nuclear thermal-hydraulics (A. Manera, I. Bolotnov)

The following suggestions for Panels are made:

- Advances in multiphase flow (F. Roelofs; **Action:** Dr. Roelofs will check with a colleague to take over the organization)
- Challenges in licensing (P. Sabharwall, E. Merzari)
- Experimental tests facilities and capabilities for HTGR (D. Guillen, P. Sabharwall, B. Wood)
- Integration of ML/AI in nuclear reactors TH (S. Sharma). **Action:** Dr. Sharma will reach out to HFI&C and Robotic Systems Divisions to explore interest in co-sponsoring the sessions

For the general session, the following responsibilities are assigned:

Computational TH (M. Abramova, G. Wang)

Experimental TH (Bao-Wen. Yang, T. Howard)

Two-phase flow and heat transfer fundamentals (X. Sun, S. Shi)

General TH (E. Merzari, J. Liao)

DISCUSSION

There was some confusion concerning the Young Professional Research competition and whether it will be included in the 2022 Winter Meeting.

Dr. Merzari clarifies that during the 2022 Winter meeting, there will not be any Young Professional Research competition, since this is included in the ATH conference instead.

The deadline for submissions to the Young Professional Competition is set for **January 3, 2021**. Therefore, a call for submissions should be emitted promptly (**action**)

DECISION: Young Professional Competition will only be included in ATH. **Action:** Dr. Sun will contact Dr. D. Pointer and connect with the ANS standing organizers to make sure the call for contributions is sent out asap.

A total of 7 sessions and 3.5 panels are planned.

7. Update on NURETH 19

Dr. Roelofs reported about the NURETH-19 conference. A total of 1020 abstracts were received, and 720 full papers were submitted. The review is on-going. The final paper submission deadline is set for Dec 15, 2021.

A total of 14 keynotes have been arranged. The poster competition deadline has been extended to **Dec 15, 2021**. The deadline for submissions to the movie competition is also set to **Dec 15, 2021**.

In addition, 6 workshops has been confirmed.

Special sessions have been organized for Prof. Prasser, Seghal Award (Prof. Merzari), for the TAA (Prof. Podowski), and for the European Sustainable Nuclear Initiative.

Sponsoring: sponsoring letter and leaflet have been available since a relatively long time. Some sponsoring from EU companies is already in place. No sponsoring is available yet from US and Asia.

With concerning with the conference modality, as from September 2021 the intention is to have NURETH19 as a live event. Non-EU attendees would be allowed to shift to a virtual attendance about 6-8 weeks before conference, but the registration fee would not change.

Meanwhile, the number of covid cases has increased across the EU. The NURETH-19 organization has sent out a survey concerning the conference modality:

600 responses have been collected: 50% plan to attend in person (30% from EU, 20% from outside EU), 30% plan to attend virtually, 15% is unsure, 5% will not attend.

The financial risk will have to be carried by organizers. The results of the survey will be taken into account. A final decision is expected for December. While an in-person meeting is the preferred modality, one has to remain realistic with regards to the developments of the covid situation.

Alternative option considered: hybrid with 2.5 days in person, 2 live stream and 2.5 day virtual meeting

8. THD planning for the ATH'22 embedded topical (X. Sun)

Dr. Sun updated on the ATH'22 conference. No report was prepared. The call for paper has been shared and is online since mid July 2021. The deadline for full papers submission is set for **Jan 3, 2022**.

Summaries for general session and for the Young Professional Competition are due on **March 15, 2022**.

DISCUSSION

Dr. Merzari stresses the importance of advertise right away that there would be only a minimal extension to the deadlines, since the conference is already quite close.

Selected papers will be published in special issue of Nuclear Technology. Several Special sessions are planned.

9. NUTHOS 13 Update

Dr. Sun reported that the organizers of NUTHOS-13 were contacted for an update. The conference is going to be held in September 5-9, 2022 in Taiwan. There was a referendum in Taiwan about the operation of NPPs and the NUTHOS-13 organizers have been very busy with the referendum. The theme of the conference is advanced and sustainable development of nuclear energy. The deadline for abstract is Nov 30, 2021. No information was received about the number of abstracts received.

DISCUSSION

Dr. Merzari asks for a list of keynotes. Dr. Sun believes that the invitations have been submitted, but he has not received any information about the current status.

10. NURETH-20 Update (Bajorek)

Dr. Bajorek reports about the organization of the NURETH-20 conference. No presentation was ready for the meeting. The conference is planned for Aug 19-23, 2023 in Washington DC. Dr. Bajorek will visit the venue this week. The leadership team has been put together over the summer and is finalized.

The call for paper is planned to go out in Aug 1, 2022. There will be a number of sessions (on microreactors, advanced reactors, ML/AI, areas that are becoming increasingly important in the field). The organization is still keeping the hybrid option open.

Organization meetings are already taking place. John Kelly is helping as part of the local sessions and he is scouting for technical and social tours.

Dr. Merzari reports that the contract with the hotel has already been signed (\$117/night, which is an excellent rate for Washington DC). A pre-approval by ANS has already been provided.

DISCUSSION

A discussion about the cost of the hybrid option has followed during the meeting. Opinion is that the cost of a full hybrid meeting is approximately double the cost of a regular in-person conference, because of the costs associated to place a camera in each room, etc. Therefore, the option considered is to have only a limited number of sessions (plenary/keynote sessions) as hybrid.

11. Old business

PC membership nomination

Dr. Shaver reminds that nominations should be submitted to him and Dr. Bolotnov.

Dr. Bolotnov also suggests that potential nominees request to be added in the list of reviewers for TH ANS meetings, as this would be a natural way to be nominated as PC members.

NO DISCUSSION

12. New business

Dr. Shaver solicits topics for new business. No comments.

MOTION: Merzari motions to adjourn.

SECOND: Sharma seconds.

MOTION CARRIES UNANIMOUSLY