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8 February 2021

**NUCLEAR ENERGY AGENCY
NUCLEAR SCIENCE COMMITTEE**

Working Party on Scientific Issues and Uncertainty Analysis of Reactor Systems

**Second Meeting of the Expert Group on Reactor Core Thermal-Hydraulics and
Mechanics (EGTHM)**

AGENDA

**16 February 2021
NEA Headquarters, Boulogne-Billancourt, France**

Ian Hill
Email: ian.hill@oecd-nea.org
Tel.: +33 (0) 1 73 21 29 00

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OECD/NEA NUCLEAR SCIENCE COMMITTEE

**Working Party on Scientific Issues and Uncertainty Analysis of Reactor Systems (WPRS)
Second Meeting of the Expert Group on Reactor Core Thermal-Hydraulics and Mechanics
(EGTHM)**

16 February 2021 (13.00-17.30)

Remote Meeting

AGENDA

1. 13h00: Welcome and Introduction of participants (Secretariat, Co-Chairs)
2. 13h10: Approval of the agenda + Approval of summary + Actions
(NEA/NSC/WPRS/DOC(2020)4) (Secretariat)
3. 13h15: NEA Information, Dissemination, Restructuring (NEA Secretariat)
4. 13h30: Status of EGTHM activity and future organization (Co-Chairs)
5. 13h45: TIETHYS (U. Rohatgi)
6. 14h10 *Preservation of experimental data, effort.* (A. Petruzzi)
7. 14h25: Discussion State-of-the-art report on reactor core thermal-hydraulics and multi-scale modelling and simulation and experimental data requirement (Skeleton report outline)
(M. Avramova)
8. 14h40 Hi2Lo Multiscale thermal-hydraulics activities (Y. Hassan)
- 10 minute break**
9. 15h15: New proposals
• *Extension of TIETHYS for core T/H Metadata for V&V* (A. Petruzzi)
10. 15h25: Machine Learning in T/H
• Overview of Machine Learning T/H activities in Europe (I. Clifford)
• Uncertainty Quantification of Machine Learning Models in Thermal-Hydraulics Applications (X.Wu)
11. 16h05: Links to Other Activities
• Overview of T/H R&D topics of ENEA (F. Lodi)
• WGAMA Update (M. Adorni)
• IAEA update (T. Jevremovic)
12. 16h55: Ongoing WPRS benchmarks

- LMFR Core TH Benchmark to be consistent with the NRC sponsored project (Liquid Metal Fast Reactor (LMFR) Core Thermal-Hydraulic (TH) Benchmark for Verification, Validation, and Uncertainty Quantification of Sub-Channel and Computational Fluid Dynamics Codes

(M. Avramova)

- McMaster CTH

(D. Novog)

13. *17h25*: Review of actions from the meeting

(NEA secretariat)

14. *Date* and place of the next meeting

15. *Any* other business