

AGENDA

Fifth COBRA-TF User's Group Meeting (CTF-5)

Host Organization

NINE Nuclear and Industrial Engineering
Lucca, Italy

May 14-15, 2018

AGENDA

**Location – Real Collegio Palace – Piazza del Collegio, 13,
55100 Lucca (LU), Italy**

Day 1: 14 May 2018

Opening Session of SFR-UAM-4, CTF-5, and CANDU-TH Meetings – Workshop Room A (Closter B).

Chair: W. Giannotti

- 09:00 – 09:20 Welcome and opening remarks from NINE Nuclear and Industrial Engineering - W. Giannotti
- 09:20 – 09:30 Introductory remarks to OECD/NEA benchmark workshops – I. Hiil, J. Dyrda
- 09:30 – 09:40 Overview and status of the OECD/NEA SFR-UAM benchmark activities after the 3rd workshop – L. Buiron
- 09:40 – 09:50 Overview and status of CTF Users' Group activities – M. Avramova
- 09:50 – 10:00 Introduction to the OECD/NEA CANDU-TH benchmark – D. Novog

10:00 – 10:30 Coffee Break

The rest of the CTF-5 sessions continue to be in the Workshop Room B (Closter A)

Session 1 / Chair: Maria Avramova (NCSU)

- 10:30 – 10:50 Discussion of status and recent additions to the CTF UG – activities and coordination, common CTF version and GITHUB access – M. Avramova (NCSU)
- 10:50 – 11:20 CTF licenses and CTF UG – K. Ivanov (NCSU)
- 11:20 – 11:40 CTF FY17-18 development summary (CASL activities) – R. Salko (ORNL)

- 11:40 – 12:00 Overview of GRS activities with CTF – Y. Perrin (GRS)
- 12:00 – 12:30 CTF-Residual development progress – N. Porter (NCSU), V. Mousseau (SNL), M. Avramova (NCSU)
- 12:30 – 13:00 Implementation of a grid heat transfer hi2lo reconstruction capability into the thermal-hydraulics subchannel code CTF – R. Salko (ORNL)

13:00 – 14:00 Lunch

Session 2 / Chair: Yann Perin (GRS)

- 14:00 – 14:30 Development and assessment of CTFFuel – A. Toptan (NCSU), R. Salko (ORNL), M. Avramova, D. Kropaczek (NCSU), K. Clarno (ORNL)
- 14:30 – 14:40 More on CTFFuel development – A. Abarca and M. Avramova (NCSU)
- 14:40 – 15:10 Development and Validation of Full Core Thermal-hydraulic Code for PWR: Preliminary Work – L.M. Zhao (SimPop Information Technology Co., Ltd)
- 15:10 – 15:30 Summary of CTF VVUQ activities at NCSU - N. Porter (NCSU), V. Mousseau (SNL), M. Avramova (NCSU)
- 15:30 – 16:00 Uncertainty and sensitivity analysis in void fraction prediction with CTF-UPVIS of the PSBT and BFBT fuel models for transient cases - P. Hidalgo, A. Abarca, R. Miró (UPV)

16:00 – 16:30 Coffee Break

Session 3 / Chair: Diana Cuervo (UPM)

- 16:30 – 17:00 Effect of nuclear data on the DNBR prediction with subchannel code CTF - R. Mukin, D. Rochman, I. Clifford, A. Vasiliev, H. Ferroukh (PSI)
- 17:00 – 17:30 Sub-channel thermal-hydraulic analysis of VVER core sub-sets with CTF - I. Spasov, S. Mitkov, N.P. Kolev (INRNE)
- 17:30 – 18:00 CTF Assessment against CANDU bundle fuel sheath temperature data – G. Waddington (CNL)

Day 1 adjourn

Day 2: 15 May 2018

Session 4 / Chair: Robert Salko (ORNL)

- 09:00 – 09:30 Measurements of local two-phase flow parameters in fuel bundles at the Westinghouse FRIGG facility - Jean-Marie Le Corre (Westinghouse)
- 09:30 – 10:00 CFD-quality experimental database visualized with linear-accelerator driven X-ray CT/RTR and acquired with sensors to model boiling two-phase flow dynamics and to validate subchannel analysis – M. Furuya, A. UI, T. Arai, H. Takiguchi, R. Okawa (CRIEPI)
- 10:00 – 10:30 Thermal and hydraulic studies for validation of subchannel codes - D.A. Oleksyuk, L. L. Kobzar, D.R. Kireeva (NRC KI)
- 10:30 – 11:00 Coupled pin-by-pin COBAYA/CTF simulation of a VVER assembly - I. Spasov, N. Zheleva (INRNE), A. Sabater, S. Sanchez-Cervera, D. Cuervo, N. Garcia-Herranz (UPM), Y. Perin (GRS), J. Jimenez (KIT), G. Todorova, N.P. Kolev (INRNE)

11:00 – 11:30 Coffee Break

Session 5 / Chair: Kostadin Ivanov (NCSU)

- 11:30 – 12:00 Development activities to extend VERA-CS to MSR designs – R. Salko (ORNL)
- 12:00 – 12:30 Transient Monte Carlo - thermal hydraulic coupling using RMC & CTF – X. Guo, K. Li, S. Liu and K. Wang (REAL Group, Tsinghua University)
- 12:30 – 13:00 Defining a work plan and schedule for CTF UG activities – M. Avramova (NCSU)

Closing Discussions – all participants

Day 2 adjourn