

AGENDA

OECD/NEA Benchmark for Uncertainty Analysis in Modelling (UAM) for Design, Operation, and Safety Analysis of LWRs - Twelfth Workshop (LWR-UAM-12)

Host Organization

NINE Nuclear and Industrial Engineering

Lucca, Italy

May 16-17, 2018

Location – Real Collegio Palace – Piazza del Collegio, 13,

55100 Lucca (LU), Italy

Day 1: May 16, 2017

The Opening Session of LWR-UAM-12, MPCMIV, C5G7-TD-3, and Rostov-2 Workshops/Meetings will be in Workshop Room A (Closter B).

Chair: A. Petruzzi

09:00 – 09:10 Welcome and opening remarks from NINE Nuclear and Industrial Engineering – A. Petruzzi

09:10 – 09:20 Introductory remarks to OECD/NEA benchmark workshops – I. Hill, J. Dyrda

09:20 - 09:30 Overview and status of the OECD/NEA LWR-UAM benchmark activities after the 11th workshop – K. Ivanov

09:30 – 09:40 Overview and status of the OECD/NEA C5G7-TD benchmark activities after 2nd workshop – J. Hou

09:40 - 09:50 Introduction to the OECD/NEA MPCMIV benchmark – A. Petruzzi

09:50 - 10:00 Introduction to the OECD/NEA Rostov-2 benchmark – M. Avramova

10:00 – 10:30 Coffee Break

The rest of the LWR-UAM-12 sessions will continue to be in Workshop Room A (Closter B).

Session 1 Chair – M. Avramova

10:30 - 10:55 Status and results of the IAEA HTGR UAM Coordinated Research Program (CRP) – F. Reitsma, M. Krause

10:55 - 11:20 Overview and status of OECD/NEA EGMPEBV activities – T. Valentine

11:20 - 11:45 From PREMIUM to SAPIUM: towards a systematic approach for input uncertainty quantification – J. Baccou, J. Zhang

NEA/NSC/DOC(2018)?

11:45 – 12:10 The WGFS RIA fuel rod code benchmark phase III – N. Trégourès, J. Zhang, M. Cherubini

12:10 – 12:35 UAM Glossary: Status and Updates – P. Bokov

12:35 – 13:00 Overview of SCALE activities – B. Rearden

13:00 – 14:00 Lunch

Session 2 Chair – T. Kozlowski

14:00 – 14:25 Generation of covariance matrix based on updated nuclear data library using NJOY – K. Ni, K. Zeng, J. Hou

14:25 – 14:45 Overview and preparation of final report for Phase I exercises- J. Hou, K. Ivanov

14:45 – 15:10 Pin Cell Analysis Using SAMPLER and TSUNAMI-2D – M. Tucker, D. Novog

15:10 – 15:35 WIMS/PANTHER solutions to UAM Neutronics Exercises – B. Lindley

15:35 - 16:00 NINE Uncertainty Quantification of UAM Phase I - L. Lampunio and V. Parrinello

16:00 – 16:30 Coffee Break

Session 3 Chair – J. Hou

16:30 – 16:55 McCARD GPT Calculations for the UAM Phase I Benchmarks – H. Jin

16:55 – 17:20 UAM-LWR Phase 1 Results of UNIST Codes – D. Lee

17:20 – 17:55 Tsinghua/REAL contribution to Phase I TMI core physics by RMC – Q. Cheng, G. Shi, Y. Qiu, K. Wang

17:55 – 18:05 Status of Phase II exercises: Specification update - J. Hou, K. Ivanov, M. Avramova

18:05 – 18:30 Status of Phase II exercises: Results update J. Hou, K. Ivanov, M. Avramova

Day 2: May 17, 2018

Session 4 Chair – N. García-Herranz

09:00 – 09:30 Discussions of the interaction between Exercise II-1 and Exercise III-1 – C. Schneidesch, A. Boulore

09:30 – 10:00 Uncertainty Quantification of CTF for the UAM Benchmark - Nathan Porter, Maria Avramova, Vincent Mousseau

10:00 – 10:30 Wilks' Formula and Its Application to Computational Problems - Nathan Porter, Vincent Mousseau

10:30 – 11:00 New SCALE Capability for Uncertainty Quantification of the Kinetic Parameters - M. I. Radaideh, W. Wieselquist, M. Jessee, T. Kozlowski

11:00 – 11:30 Coffee Break

Session 5 Chair – W. Zwermann

- 11:30 – 12:00 Inverse Uncertainty Quantification using the Modular Bayesian Approach In the Presence of model Discrepancy - T. Kozlowski, X. Wu
- 12:00 – 12:30 Uncertainty Analysis of Thermal-Hydraulic Calculations of VVER-1000 Assembly - A. Tezbasaran, O. Celikten, M. Avramova, K. Ivanov
- 12:30 - 13:00 Multi-Physics Uncertainties Propagation in a PWR Rod Ejection Accident Modelling - Analysis Methodology and First Results – G. Delipei, J. Garnier, J-C Le Pallec, B. Normand

13:00 – 14:00 Lunch

Session 6 Chair – A. Sargeni

- 14:00 - 14:25 Proposal for Uncertainty Quantification of Oskarshamn-2 benchmark Phase III - T. Kozlowski
- 14:25 – 14:50 New capabilities of TXT2NTAB code for burnup calculation and uncertainty quantification – A. Labarile, C. Mesado, R. Miró, G. Verdú
- 14:50 – 15:10 Exercise III-1 TMI-1 case: specification and cross-section sets preparation - K. Zeng, J. Hou, K. Ivanov
- 15:10 – 15:35 Uncertainty quantification of UAM Exercise III-1 TMI-1 transient calculation using stochastic sampling method - K. Zeng, J. Hou, K. Ivanov, M. Jessee
- 15:35 – 16:00 Proposal of input uncertainties for the Phase III of UAM (Kalinin-3 Case) - I. Pasichnyk, S. Nikonov, K. Velkov

16:00 – 16:30 Coffee Break - Lounge Area

Session 7 Chair – A. Bouloré

- 16:30 – 16:55 Uncertainty Analysis for the Core Simulation of Cycle 1 of the BEAVRS Benchmark Problem – Y. Zheng
- 16:55 – 17:20 Uncertainty Quantification of isotopic densities in depleted fuel - S. Lahaye, J. Luo, P. Bellier, T. Huynh, A. Tsilanizara
- 17:20 – 17:40 Specification of system thermal-hydraulic case (Exercise III-2) - J. Hou, K. Ivanov
- 17:40 - 18:00 Proposal for Exercise III-2 test cases – R. Royer, M. Avramova, K. Ivanov
- 18:00 – 18:15 Joint ORNL/ANL proposal for hosting next year OECD workshop and CTF User's Group Meeting at ORNL – B. Rearden
- 18:15 - 18:30 Action items and schedule of benchmark activities, and plans. Conclusions and closing remarks – K. Ivanov