



## COBRA-TF (CTF) User's Group (UG) Fourth Meeting (CTF-4)

Erlangen, Germany

May 8 – May 9, 2017

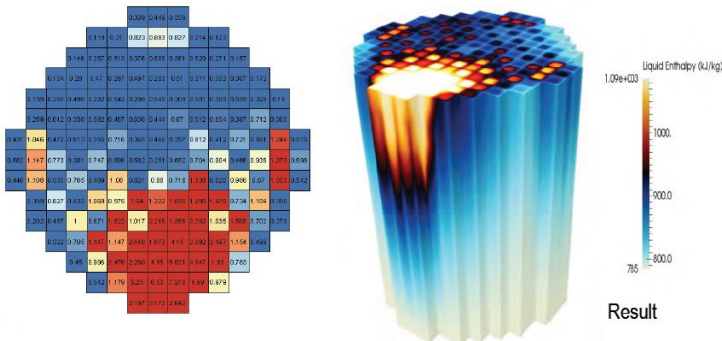
Hosted by

AREVA NP GmbH

The CTF-4 meeting will be held in conjunction with other meetings (in the same week), in order to facilitate coordination and sharing of work. The meetings concerned are:

- *May 8-9, 2017* – Third OECD/NEA Sodium Fast Reactor (SFR) Uncertainty Analysis in Modelling (UAM) benchmark workshop (SFR-UAM-3);
- *May 8-9, 2017* - Fourth COBRA-TF (CTF) User's Group (UG) Meeting (CTF-4);
- *May 10-12, 2017* – Eleventh OECD/NEA Light Water Reactor (LWR) Uncertainty Analysis in Modelling (UAM) benchmark workshop (LWR-UAM-11);
- *May 10 – May 11 (morning), 2017*– AER Working Group D meeting (VVER dynamics and safety);
- *May 11(afternoon) – May 12, 2017* - Second OECD/NEA C5G7 Time-Dependent (TD) Neutron Transport benchmark workshop (C5G7-TD-2).

A common registration webpage will be made available for the participants of SFR-UAM-3, CTF-4, LWR-UAM-11, AER-D, and C5G7-TD-2 workshops by the OECD/NEA.



COBRA-TF is a thermal-hydraulic simulation code designed for Light Water Reactor (LWR) vessel and core analysis. It uses a two-fluid three-field modeling approach. CTF is the shortened name given to the version of COBRA-TF being developed, improved, and maintained by the Reactor Dynamics and Fuel Modeling Group (RDFMG) at the North Carolina State University (NCSSU). In the last decade, CTF has been extensively developed and validated for

Pressurized Water Reactor (PWR), Boiling Water Reactor (BWR), VVER, Small Modular Reactor (SMR), Fast Breeder Reactor (FBR), and research reactor applications. The figure shows three-dimensional result of full core sub-channel analysis of a PWR MSLB transient. Currently the CTF is a state-of-the-art sub-channel code for reactor thermal-hydraulics bundle and core analysis and is a part of the US DOE CASL and EC NURES SAFE projects. The code can be run in serial or parallel modes and is being distributed via a code agreement to interesting parties.

CTF User Group (UG) is established to maintain the so-called “gold-standard” of CTF and provide unified and up-to-date code version supplemented with extended verification and validation suite, automated test matrix, and application guidelines. The Fourth COBRA-TF User's Group Meeting (CTF-4) will involve all interested users with objective to discuss on the progress in achieving a common version, and to review the contributions from different organizations to the common version (including code development, improvement, coupling with other models - multi-physics and multi-scale code systems, verification and validation, uncertainty quantifications, and applications). The information for CTF UG and CTF-4 UG meeting local organization (including hotels) is provided at: <https://www.ne.ncsu.edu/rdfmg/cobra-tf/>

### Contact information:

- CTF UG Coordinator and Chair of CTF-4 UG meeting: Prof. Dr. Maria Avramova ([mnavarmo@ncsu.edu](mailto:mnavarmo@ncsu.edu));
- CTF Code Agreement: Prof. Dr. Kostadin Ivanov ([knivanov@ncsu.edu](mailto:knivanov@ncsu.edu)).