PART II: Topical presentation and discussion
6. On "New generation of computer codes in Nuclear Engineering".

Introduction

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This session is organized to create or to enhance common understandings among the EG members of the new trends or new features emerging in Data Bank's working area. This session is proposed as a follow up of the discussions on "Future of the Data Bank" in the previous EG meeting of last June.

Now we organize here a topical session in title of "New generation of computer codes in Nuclear Engineering". Data Bank intends to provide support for the development of the next generation code systems and general environment for nuclear analysis and design.

Today's code developments style and user community of codes are completely changed compared with before. The code expected by the user and user community is the one having more wide scope and more globally applicable fully supported by user-friendly, ergonomic software tools to perform their jobs like in one-stop-shop.

The need for next generation code systems for reactor physics and multi-physics simulations are recognized in the world. Also a major issue is the integration of stand-alone computer codes (or modules) solving problems in different disciplines: (e.g. nuclear physics, radiation transport, reactor physics, thermal-hydraulics, thermal-mechanics and fuel behaviour) into a system that facilitates modelling and analysis for engineers and physicists.

Here we invite three distinguished speakers in each continent for the presentation at the front line of the developments for the simulations and codes integrations.

From Dr. Paul TURINSKY (NCSU), front line talk on the view of Advanced Modeling and Simulation Capability in Nuclear Engineering, from Dr. Christian CHAULIAC (CEA), "NURESIM: A European Platform for Simulation of Nuclear Reactors, i.e., European Views, and from Dr. Kenji YOKOYAMA (JAEA), "Current Status of Neutronics Code System in Japan" i.e., Japanese view.

And we would like to make some recommendations to continue support such works through the discussions.

AS you know well, the Data Bank, with a large legacy of computer codes developed in member countries and with the assignment to maintain them and disseminate them, has a role to play in catalyzing these new developments. So through the topical discussions we would like to explore the possibility to organize a Workshop on Next Generation Computer Codes for Nuclear Engineering to be held under the aegis of the Data Bank in the future.