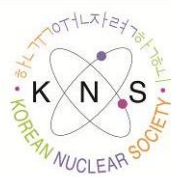


# WRFPM 2014

*2014 Water Reactor Fuel Performance Meeting/  
Top Fuel / LWR Fuel Performance Meeting*

14 – 17 September 2014, Sendai, Japan



## WRFPM 2014 – Call for papers

Pursuit of the world's highest level of nuclear safety

European, American and Asian country Nuclear Societies have jointly organized the Reactor Fuel Performance Meetings annually on a tri-annual rotational basis. AESJ, KNS and CNS have organized the WRFPM in Kyoto (2005), Seoul (2008) and Chengdu (2011). Following the successful LWR Fuel Performance Meeting 2013 in Charlotte, WRFPM 2014 will take place 14 – 17 September 2014, Sendai, Japan.

The WRFPM2014 Program Committee is calling for both oral and poster presentations in the following special program and tracks. Papers describing theoretical, analytical, methodological, empirical, and application research on fuel performance under various conditions in water-cooled reactors are welcomed. In the WRFPM 2014, the Program Committee features the special program considering the accident in the Fukushima-Daiichi NPP. Progress status and future challenges towards the decommissioning of Fukushima Daiichi NPP Units 1-4 will be presented in the plenary session preceding the special program.

### Special Program —Core melt and relocation in severe accidents—



It remains difficult to understand the melt progression and estimate the status inside the reactor of the Fukushima-Daiichi NPP. In order to overcome the difficulties and support efficient decommissioning works including removal fuel debris, experimental and analytical information is required regarding melt down of fuel bundle and control rod, relocation of molten materials, characteristics of fuel debris, fission products release from fuel pellets, etc. This special session collects excellent results from the related researches

and enhances discussions on subjects to be solved and solutions to the subjects.

### **Track 1: Fuel Performance, Reliability and Operational Experience**

- Fuel operating experience, reliability and performance
- High burnup fuels
- Waterside corrosion and hydriding
- Water chemistry and corrosion counter-measures
- MOX fuel performance
- Pool-side and hot cell examinations
- Irradiation experience in test reactors
- Fuel assembly distortion
- Mixed core operation
- Re-use after transportation/storage

### **Track 2: Advances and Innovation in Nuclear Fuel Technology**

- Advances in fuel design, processing and manufacturing
- Improved fuel pellet and cladding alloy development
- New fuel concepts and new material development such as accident tolerant fuel
- Improvements in MOX fuel design and manufacturing
- Innovative fuel concepts and new fuel designs for next generation reactors

### **Track 3: Transient and Accidents Related Issues**

- Transient fuel behavior and criteria (RIA, LOCA, ATWS, power ramps ...)

- Fuel safety-related issues
- Pellet-cladding interaction (PCMI/PCI/SCC)
- Transient fission gas release
- Cladding bursting, pellet fragmentation/relocation/dispersal during transient events
- Small and large scale fuel testing facilities
- Fuel behavior under extended loss of cooling, re-criticality

### **Track4: Fuel Cycle, Interim Storage and Transportation**

- Fuel characterization and performance for transportation and interim/long-term storage
- Criticality in back end processes
- Fuel behavior in dry containers, wet storage ponds and during transportation
- Fuel design optimization for recycle and disposal

### **Track 5: Science and Fundamental Aspects**

- Irradiation effects and micro-/nano-structural evolution in fuel and cladding materials
- Physical properties
- Modeling of fuel behavior under normal operation, transient, accident and back-end conditions
- Multiscale modeling
- Multi-physics coupling
- Modeling of water chemistry and corrosion
- Statistical analysis and numerical treatment of uncertainty

### **Abstract submission**

Authors should submit their one page abstract briefly describing the objectives, methods and main findings. The abstract should be written in English in the length 250-500 words (text only). Its submission should be made through the Abstract Submission System on our website by ~~February 21, 2014~~ **March 13, 2014**.

### **Abstract review**

The abstracts received will be peer reviewed under the auspices of the WRFPM 2014 Program Committee. Authors will be notified of paper acceptance by ~~March 28, 2014~~ **April 4, 2014**.

### **Important dates**

- Deadline for abstract submission: ~~February 21, 2014~~ **March 13, 2014**
- Author notification for acceptance: ~~March 28, 2014~~ **April 4, 2014**
- Deadline for draft paper submission: May 16, 2014
- Review of papers and author notification: June 16, 2014
- Deadline for final paper: July 25, 2014

**Visit our website for more information:** <http://web.apollon.nta.co.jp/WRFPM2014/>  
**Conference Secretariat:** [WRFPM2014@aesj.or.jp](mailto:WRFPM2014@aesj.or.jp)