



ETSON JSP SUMMER WORKSHOP 2015

The Summer Workshop is a networking event to bring together young nuclear experts from Technical Safety Organisations and create an environment where all participants will work together on a specific topic. This year's topic is "Material Properties Aspects in Nuclear Safety". The presentations and workshops are given by the participants themselves, allowing them to learn from each other and providing them a network of contact persons in their own branch of nuclear safety. A technical visit to Hot Laboratory Division (AHL) and the Swiss Light Source (SLS) is scheduled on Thursday

Participants should have basic knowledge of nuclear safety and technology and must be nominated by their institutions.

The workshop is organized by the following laboratories within the NES department:

- LTH General Organization
- LRS Local Organization
- LNM Technical Program support



VENUE

The workshop will be held at Paul Scherrer Institute in Villigen PSI Switzerland.

Participation to the Summer Workshop is free of charge but prior approval from the JSP representative of your institution is required. You can find the representative information at:

<http://www.etsos.eu/Initiatives/Pages/JSP.aspx>

Participants will have to make their own travel arrangements to Switzerland and are encouraged to stay at the Traffo Hotel in Baden (155 CHF/night, breakfast included). The hotel is located ca. 30 min away from PSI.

A visit to Zurich is scheduled on Thursday 27th.

For information about the workshop contact:

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SUMMER WORKSHOP
2015

**MATERIAL PROPERTIES
ASPECTS IN NUCLEAR
SAFETY**

24TH–28TH AUGUST 2015

AT PAUL SCHERRER INSTITUTE
VILLIGEN PSI,
SWITZERLAND



PAUL SCHERRER INSTITUT



MATERIAL PROPERTIES ASPECTS IN NUCLEAR SAFETY

ETSON JSP summer workshop 2015 in PSI, Switzerland, August

	Sunday 23 rd	Monday 24 th	Tuesday 25 th	Wednesday 26 th	Thursday 27 th	Friday 28 th
9:00–11:00		<p>Welcome speech Nuclear Energy and Safety Research Department (NES) presentation (M. Zimmerman, PSI)</p> <p>Laboratory for Nuclear Materials (LNM) presentation (M. Pouchon, PSI)</p> <p>Junior Staff Program @ NES (JSP/NES) (D. Papini, PSI)</p> <p>General presentations by ETSON members (ETSON, all)</p>	<p>Topic: Aging and Licensing (Chair A. Lazaar, GRS)</p> <p>Regulatory approach in aspect of radiation embrittlement (P. Borodkin, SEC NRS) Material degradation mechanism (T. Šoltés, VUJE) Vibration aging and seismic resistance of equipment with assessment of nuclear safety (A. Horniakova, VUJE) Licensing of nuclear fuel with higher enrichment in Slovakia (M. Závodský, VUJE)</p>	<p>Topic: Corrosion and hydrogen impact during normal operation (Chair J. Depuydt, Bel V)</p> <p>Fuel rod design, Hydrogen cracking and fracture parameters for Zirconium alloy, Operating Experience with Fuel Elements in German NPPs, Material research for selected GIV nuclear reactors (A. T. Tran Quang, Bel V; M. Elmas, GRS; R. Janulionis, LEI)</p>	<p>Technical visit Hot lab + SLS</p>	<p>Topic: Corrosion and hydrogen impact during accidents (Chair F. Fidaly, IRSN)</p> <p>Oxidation during SA (L. Fernandez-Moguel, PSI) Oxydation effects on dislocation - based plasticity modelling (N. Grilli, PSI & F. Boldt, GRS) Methodology of cladding failure due to LOCA (S. Bebjack, VUJE)</p>
11:00–11:30		Coffee break	Coffee break	Coffee break		Coffee break
11:30–12:30		<p>Topic: Impact of radiation on materials (Chair M. Chollet, PSI)</p> <p>Radiation-induced phenomena in materials in reactor environment: a general overview (F. Russo, Bel V) Irradiation creep and growth of zirconium alloys (S. Huotilainen, VTT)</p>	<p>Topic: RPV & Containment (Chair, D. Van Nuffel, Bel V)</p> <p>Reactor vessel flaws at the Doel 3 and Tihange 2 Belgian NPPs: An overview (D. Van Nuffel, Bel V)</p>	Fuel rod design, ...(continuation)		<p>Scenario case (Join presentation)</p>
12:30–14:00		Lunch	Lunch	Lunch	Lunch	Lunch
14:00–15:30		<p>Impact of radiations on UO₂ fuel from a microstructural point of view (M. Chollet, PSI) Flammability of radiation degraded extractant based on light hydrocarbon diluents for SNF reprocessing (A. Rodin, SEC NRS) Radiation damage on ITER beryllium tiles: an overview (F. Viro, IRSN)</p>	<p>Results from research of the behaviour of WWER-1000/V-302/V-338 containment and tendons under a combination of MDBA and OBE loads (Liashenko, SSTC) Containment of French NPP : design, monitoring and behavior assessment in accidental conditions (N. Pfeiffer, IRSN & J. Clement, IRSN)</p>	<p>Corrosion part 1: Corrosion in nuclear facilities: operating experience and state of the art (I. De Curieres, IRSN; L. De Almeida, IRSN)</p> <p>Corrosion part 2: Operating experience feedback concerning corrosion and chemical interaction of materials (J. Depuydt, Bel V)</p>	<p>Visit to Zurich</p>	<p>Final remarks Conclusions Feedback + departures Delegates meeting</p>
15:30–16:00	Arrivals	Coffee break	Coffee break	Coffee break		Coffee break
16:00–17:00	Arrivals	<p>Cladding integrity during and after intermediate storage: a scientific and technical overview (S. Valance, PSI)</p>	<p>Practical exercise</p>	<p>Pop quiz</p>		
Evening	Apèro				Dinner	