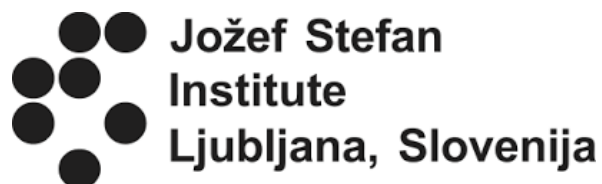




## Summer Workshop 2017

### Uncertainty and sensitivity in safety analysis

July 10 – 14, 2017



### ETSON JSP Summer Workshop 2017

The ETSON JSP Summer Workshop is an annual networking event of young professionals from Technical Safety Organizations. Technical program comprises presentations given by participants, interactive group work and moderated workshops on a specific topic.

The workshop encourages inter-cultural interaction, exchange of expert knowledge and good practices and provides to participants a good opportunity to spread their professional network.

Participation to the workshop is free of charge. Participants must be nominated by ETSON member organizations and should have basic knowledge of nuclear safety concepts and methodologies. Candidates are encouraged to contact local ETSON members. Information about the representative information is available at: <http://www.etson.eu/jsp>.

### Technical Tours

A technical visit to JSI TRIGA reactor with hot cell, ICJT exhibition, Reactor engineering division laboratory and to ARAO radioactive waste repository is scheduled for this year.

### Venue

The Workshop will be held at the Reactor Centre of the Jožef Stefan Institute near Ljubljana, Slovenia. Public transport from the Ljubljana city to the Reactor centre is available by the city and/or regional bus.

### Hotel Accommodation

Block bookings have been arranged in The City Hotel Ljubljana at discount prices guaranteed **till June 5**.

For July 9, welcome get together is planned at 19:00.

For further information, please contact  
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Reactor centre of the Jožef Stefan Institute in Brinje near Ljubljana

|             | Monday  | Tuesday   | Wednesday  | Thursday  | Friday   |
|-------------|---|---|--|---|--|
|             | <p><b>OPENING</b></p> <p>Welcome speech<br/><i>JSI</i></p> <p>ETSON organization and award<br/><i>S. Lavergne, IRSN</i></p> <p>General presentations by ETSON members<br/><i>T. Arnold, AMEC Foster Wheeler</i><br/><i>F. Russo, BelV</i><br/><i>A. Cervone, ENEA</i><br/><i>A. Lazaar, GRS</i><br/><i>J.J. Ingremeau, IRSN</i><br/><i>M. Uršič, JSI</i><br/><i>G. Arbaev, SEC NRS</i><br/><i>I. Iarmosh, SSTC NRS</i></p>  | <p><b>PROBABILISTIC SAFETY ASSESSMENT</b><br/><i>Chair: O. Kukhotskiy, SSTC NRS</i></p> <p>Treatment of Uncertainties in Risk-Informed Decision Making<br/><i>O. Kukhotskiy, SSTC NRS</i></p> <p>Analysis of additional risks associated with tornado impact on NPP building structures<br/><i>P. Matchenko, SSTC NRS</i></p> <p>Insights of sensitivity analyses performed for internal hazards<br/><i>A. Malkhasyan, BelV</i></p> | <p><b>TECHNICAL VIST AT THE REACTOR CENTER (ARAO radioactive waste repository)</b></p> | <p><b>TECHNICAL VISTS AT THE REACTOR CENTER (TRIGA reactor with hot cell, ICJT exhibition, Reactor engineering division laboratory)</b></p>   | <p><b>BEST ESTIMATE APPROACH</b><br/><i>Chair: T. Kaliatka, LEI</i></p> <p>Application of the GRS-Method for the determination of uncertainties in German PWR-accident analysis<br/><i>V. Koppers, GRS</i></p> <p>A new statistical approach to the LOCA-Analysis using the Best Estimate Plus Uncertainty (BEPU)-Method<br/><i>S. Palazzo, GRS</i></p> <p>Application of best estimate approach for the different nuclear fission and fusion facilities<br/><i>T. Kaliatka, LEI</i></p> |
| 09.00–10.30 |   |   |  |   | <p><b>MINI-WORKSHOP (organized by GRS and LEI)</b></p>   |
| 10.30–11.00 | Coffee break  | Coffee break  | Coffee break   |   | Coffee break   |
|             | <p><b>INVITED</b><br/><i>Chair: M. Uršič, JSI</i></p> <p>Uncertainty in probabilistic safety assessment<br/><i>dr. A. Volkanovski, JSI</i></p> <p>Uncertainty quantification of loss of coolant accident deterministic safety analysis<br/><i>dr. A. Prošek, JSI</i></p>  | <p><b>PROBABILISTIC SAFETY ASSESSMENT</b><br/><i>Chair: O. Kukhotskiy, SSTC NRS</i></p> <p>Treatment of Uncertainties in PSA for Aging Facilities<br/><i>T. Arnold, AMEC Foster Wheeler</i></p> <p><b>SEVERE ACCIDENTS</b><br/><i>Chair: A. Lazaar, GRS</i></p> <p>Uncertainty and sensitivity analysis on a COCOSYS-AIM calculation of the PHEBUS test FPT1<br/><i>S. Beck, GRS</i></p>  | <p><b>MINI-WORKSHOP (organized by JSI)</b></p>   |   | <p><b>MINI-WORKSHOP (organized by GRS and LEI)</b></p>   |
| 11.00–12.30 |   |   |  |   | CLOSURE  |
| 12.30–13.30 | Lunch   | Lunch   | Lunch  | Lunch   | Lunch  |
|             | <p><b>DATA EVALUATION</b><br/><i>Chair: V. Radulović, JSI</i></p> <p>Statistical Setpoint Study for safety critical instrumentation<br/><i>Z. El Hadhri, Bel V</i></p> <p>Nuclear data uncertainty analysis with the GRS Code XSUSA<br/><i>F. Bostelmann, GRS</i></p> <p>Mathematical aspects of nuclear data covariance matrix preparation - an example of delayed neutron data<br/><i>S. Tarride, JSI</i></p> <p>Validation of nuclear cross-sections through activation measurements at the JSI TRIGA reactor<br/><i>V. Radulović, JSI</i></p> | <p><b>REACTOR CORE</b><br/><i>Chair: A. Lazaar, GRS</i></p> <p>Accounting of uncertainties in nuclear safety assessment for nuclear fuel handling systems, using SERPENT<br/><i>S. Sinegribov, SEC NRS</i></p> <p>STRIGA - Multipurpose tool for TRIGA research reactors<br/><i>D. Čalić, JSI</i></p>   | <p><b>Tour to Ljubljana</b></p>  | <p><b>SAFETY ANALYSIS</b><br/><i>Chair: G. Arbaev, SEC NRS</i></p> <p>Uncertainty in code qualification<br/><i>J.J. Ingremeau, IRSN</i></p> <p>The uncertainty evaluation in the framework of the safety analysis calculations for the nuclear installations<br/><i>D. Yashnikov, SEC NRS</i></p> | <p><b>DEPARTURES</b></p>   |
| 13.30–15.00 |   |   |  | <p><b>MINI-WORKSHOP (organized by SEC NRC)</b></p>  |  |
| 15.00–15.30 | Coffee break  | Coffee break  |  | Coffee break  |  |
|             | <p><b>CLEARANCE AND WASTE MANAGEMENT</b><br/><i>Chair: F. Russo, Bel V</i></p> <p>Clearance measurements and methodologies<br/><i>F. Russo, Bel V</i></p> <p>Sensitivity of Safety Analyses for Radioactive Waste Management with Respect to Uncertainties of their Radionuclide Inventory<br/><i>I. Iarmosh, SSTC NRS</i></p> <p>IRSN feedback on uncertainty and sensitivity issues concerning transport of radioactive material waste<br/><i>M. Debruyne, IRSN</i></p>   | <p><b>COMPUTATIONAL FLUID DYNAMICS</b><br/><i>Chair: M. Draksler, JSI</i></p> <p>Application of the OSE method for uncertainty and sensitivity analysis of CFD simulations<br/><i>M. Tekavčič, JSI</i></p> <p>Statistical uncertainty in CFD – Application to DNS and LES<br/><i>C. Flageul and M. Draksler, JSI</i></p>  |  | <p><b>MINI-WORKSHOP (organized by SEC NRC)</b></p>  |  |
| 15.30–17.00 |   |   |  |   |  |
| Evening     | Free  | JSP REPRESENTATIVES' MEETING  | Dinner   | Free  |  |