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Knowledge and Training*



Invitation and Seminar Schedule

Zirconium Alloy Technology (ZIRAT),
LWR Chemistry and Component Integrity (LCC)



Welcome To Our Annual Seminars

We are pleased to announce the arrangements for the ZIRAT29 and LCC20 Seminars that will take place in Spain.

These seminars are open to all current ZIRAT29 and LCC20 members:

- The LCC20 and ZIRAT29 seminars will be hosted by Iberdrola Generacion Nuclear in Madrid and will be held on the Iberdrola Campus in San Agustin de Guadalix. This is the same place as the ZIRAT28/LCC19 seminar location in 2024.
- » The LCC20 Seminar will be held on May 6-8, 2025.
- » Up to eight (8) persons employed by a LCC20 Member organisation can attend the LCC20 Seminar.
- » The ZIRAT29 Seminar will take place on May 6-8, 2025.
- » Up to eight (8) persons employed by a ZIRAT29 Member organisation can attend the ZIRAT29 Seminar.



LCC20 Seminar Presentations



The following LCC20 Reports will be presented at the LCC20 seminar in Madrid, Spain, May 6-8, 2025:

- **Zn chemistry in PWRs, VVERs and BWRs by Juande Sanchez** covering the following topics:
 - The development of zinc technology for BWR/PWRs applications
 - Effect of Zinc on IGSCC
 - Effectiveness of zinc injection in controlling shut down dose rates
 - Effects of Zn addition on fuel performance
 - Use of Zn addition in new plants HFT
 - Impact of Zn additions on radwaste production
 - VVER experience
 - New results
 - » BWRs
 - » PWRs
 - Conclusions
- **Fuel Reliability Assessment through Radiochemistry and Poolside Examinations** by Peter Rudling covering the following topics:
 - Fuel Reliability
 - Fission product release from failed fuel to coolant
 - Secondary degradation of failed fuel
 - Online assessment of fuel reliability using radiochemistry and poolside inspection techniques
 - Fuel reliability improvements

Presentation without Reports will be prepared within the LCC20 Programme as follows:

Presentations by:

- ***François Cattant,***
 - Fontevraud X conference highlights.
 - PWRs operation and maintenance - Raw water systems.
[This report was furnished under the LCC19 programme, please see sample »](#)
- ***Mattias Olsson***
 - Gamma spectrometry for the detection, follow-up and removal of failed fuel – applications and experiences from Forsmark (BWR)
- ***Jiří Rapouch***
 - Outlines of water chemistry for Czech VVER



ZIRAT29 Seminar Presentations



The following ZIRAT29 Reports will be presented at the ZIRAT29 seminar in Madrid, Spain, May 6-8, 2025:

- **Loss of Coolant Accident, LOCA**
 - *Peter Rudling and Martin Ševeček*
 - Principles of reactor safety
 - Description of the physical phenomena occurring during a LOCA transient
 - LOCA testing methodologies
 - *Nicolas Waeckel*
 - LOCA Safety acceptance criteria and their background
 - Update of the LOCA acceptance criteria
 - *Martin Steinbrück*
 - LOCA acceptance criteria for ATF
 - *Marek Stepniewski*
 - Computer codes for LOCA analysis
 - LOCA safety analysis
 - *Martin Ševeček*
 - LOCA in Small Modular Reactors
- **Dry storage:**
 - *Peter Rudling*
 - Thermal creep deformation mechanisms
 - Thermal creep testing
 - Effect of material condition and composition
 - Self-limiting characteristic of thermal creep in fuel rods-Allowable diametral strain and creep rupture
 - Licensing limits in various countries
 - Conclusion

Presentation without Reports will be prepared within the ZIRAT29 Programme as follows:

- *Martine Yrieix at Blat*
 - PWR Zirconium alloys – In pile corrosion and Hydrogen Pick-Up: Which effects on materials behaviors ?
 - GENIV reactors – Cladding and structural materials challenges: an overview
- *Sten Lundberg*
 - Cycle planning and nuclear operation of LWRs (BWRs, PWRs and VVERs)
- *David Schrire*
 - Time-at-temperature/post-CHF (Critical Heat Flux)
- *Jinzhao Zhang*
 - Progress in Structural Behaviours of Fuel Assemblies in Light Water Cooled Reactors – A Review of the Latest IAEA Technical Meeting Outcomes.

LCC20 Seminar Lecturers

The presentations at the LCC20 Seminar will be given by:
Mr. Francois Cattant, Dr. Mattias Olsson, Jiří Rapouch,
Mr. Peter Rudling, Mr. Juan de Dios Sánchez

ZIRAT29 Seminar Lecturers

The presentations of the ZIRAT29 Seminars will be given by:
Mr. Peter Rudling, Mr. David Schrire, Dr. Martin Steinbrück, Dr. Nicolas Waeckel,
Dr. Jinzhao Zhang, Dr. Martin Ševeček, Martine Yrieix at Blat,
Mr Sten Lundberg, Mr. Marek Stepniewski

Seminar Location and hotels in Alcobendas/San Sebastián de los Reyes, Spain

Iberdrola meeting venue

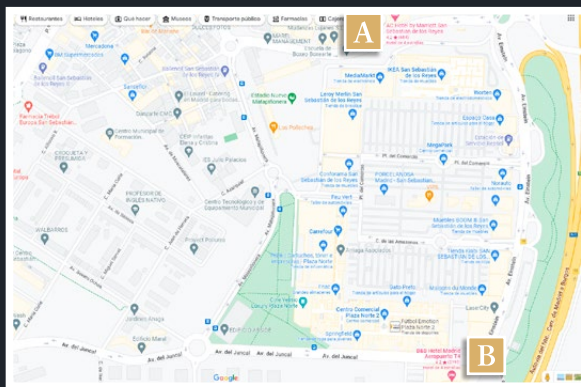
The seminar location will be the same as for the 2024 ZIRAT28 and LCC19 Seminars

- 1 San Agustín de Guadalix – Seminar location
- 2 Alcobendas and San Sebastián de los Reyes – Recommended hotel area

Hotels:

In terms of proximity below are the two closest hotels (see map).

- A [B&B Hotel Madrid Aeropuerto T4](#)
- B [AC Hotel San Sebastian de los Reyes](#)



Transportation:

Regarding accommodation, each participant is responsible for booking his/her own room.

From the airport: There is a subway station at Adolfo Suárez Madrid-Barajas airport, to get to Madrid downtown. Then you could go to Plaza de Castilla to get the bus (lines 191 and 193). Taxi is available and recommended, just 15-30 minutes, depending on the traffic. If you choose to get to the Campus by rental car there will be free parking available for all participants.

From Alcobendas and San Sebastián de los Reyes: Iberdrola will kindly arrange Iberdrola busses from Alcobendas to the seminar location and back.

Seminar Registration

In addition to hotel/room reservation, you must also register for the ZIRAT29, and/or LCC20.

Please fill out the online registration by clicking here »



If you need assistance, please contact us via e-mail: seminar@antinternational.com



We cordially invite you to attend our seminars.
Mikaela Rudling and Peter Rudling



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