

# The Antenna

NEWSLETTER FROM A.N.T. INTERNATIONAL No.62 2025

## Education is key to keep nuclear power safe and profitable.

The Mission of A.N.T. International is to transfer the unique expertise of The Network that developed the current nuclear industry to the new generation of engineers. Our business idea is to interpret world-wide R&D results and nuclear plant experience on fuel, structural materials and water chemistry for you as a customer, so that our customers can make informed decisions for the improved reliability, safety and economics of your operations.

A.N.T. International business idea is accomplished by several Tools such as Annual Seminars, publications of Reports and Handbooks, A.N.T. International Wikipedia (AWIKI), Online Education and Consulting Services. Please visit our website to get more information about these Tools at <https://antinternational.com/>

This Newsletter provides information about the yearly successful Annual Seminar that started 30 years ago.

# A.N.T. INTERNATIONAL SEMINARS



A.N.T. International is most grateful to Iberdrola in Spain, that kindly hosted the nuclear fuel (ZIRAT) and coolant chemistry/structural material degradation (LCC) Seminars. We also want to thank all the 90+ customer participants from 28 different organisations and 12 countries for coming to the seminars.

The Seminars are valuable for all engineers with different backgrounds from engineers with little experience to experts in their fields.

Our Seminars in Spain were very well appreciated by our customers. The overall opinion on the different Seminars was 4.5 ranked on a scale from 1 (bad) to 5 (excellent).



Group photo of some of the ZIRAT and LCC participants. Ms. Mikaela Rudling, President of A.N.T. International, is in the front row, 4th from the left.

# LCC20 PRESENTATION AGENDA

## Tuesday May 6

### INTRODUCTION

#### FUEL RELIABILITY ASSESSMENT - LCC20 REPORT

- Fuel Reliability Assessment in BWRs, PWRs and VVERs, [Peter Rudling](#)

#### INVITED PRESENTATIONS

- Fontevraud X conference highlights, [François Cattant](#)

## Wednesday May 7

#### ZN CHEMISTRY - LCC20 REPORT

- Zn Chemistry in BWRs, PWRs and VVERs, [Juan de Dios Sánchez](#)

#### RAW WATER SYSTEMS – LCC19 REPORT

- PWRs operation and maintenance - Raw water systems, [François Cattant](#)

## Thursday May 8

### INVITED PRESENTATIONS

- Environmentally assisted cracking of carbon steels and low-alloy steels in high-temperature water, [Armin Roth](#)
- Outlines of water chemistry for Czech VVER, [Jiří Rapouch](#)
- Fuel Failure Experience of Cofrentes, [Juan de Dios Sánchez](#)

Please click on the links to get more information about the Presenters

# LCC20 FEEDBACK

*"It was my first LCC seminar. Very well-organized meeting with professional speakers and interesting program."*

**TATU KUMPULAINEN**

*Chemistry Team leader*

TVO

*"The LCC Seminar was very comprehensive. It was great to have many speakers to keep attention."*

**JELTE DE WIT**

*Chemical technologist*

EPZ

*"Very positive feedback from me. Very experienced speakers, the speakers did not just read the slides but could present the subject naturally. "*

**RICHARD POWELL**

*Chemistry Engineer*

EDF Energy UK

*"Great opportunity to network with expertise in my field of work."*

**ABIGAIL SAVAGE**

*Nuclear Technical Engineer*

Amentum

*"Presenters were excellent + very high level of knowledge in their field"*

**HARRY FOX**

*Chemistry Engineer*

EDF Energy UK

*"All speakers are distinguished experts. All presentations were excellent."*

**IVAN PIDCHENKO**

*Project Manager*

Studsvik Nuclear

*"Overall, very useful conference!"*

**LEVENTE JECZKÓ**

*Inspector*

Hungarian Atomic Energy Authority

*"Great seminar, very useful for my work."*

**DEJAN KRALJ**

*Lead Engineer of Analytical Chemistry and Radiochemistry*

NEK Krsko

# ZIRAT29 PRESENTATION AGENDA

## Tuesday May 6

### INTRODUCTION

#### LOSS OF COOLANT ACCIDENT (LOCA)- ZIRAT29 REPORT

- Reactor Safety, Phenomena during LOCA, LOCA in PWRs/BWRs/Spent Fuel Pools, LOCA testing methodologies, [Nicolas Waeckel](#)
- LOCA in VVERs and Small Modular reactors (SMRs), [Martin Ševeček](#)
- LOCA safety acceptance criteria and background, [Nicolas Waeckel](#)
- Computer codes and methods for PWR and BWR LOCA analysis, [Marek Stepniewski](#)
- LOCA Accident Tolerant Fuel: 1)LOCA acceptance criteria for ATF, 2)Cr-coated Zr alloys, FeCrAl Alloys, SiCf-SiC ceramic composites, [Martin Steinbrück](#)
- LOCA Remaining Gaps and Concluding Remarks, [Nicolas Waeckel](#)

## Wednesday May 7

### INVITED PRESENTATIONS

- PWR Zirconium alloys – In pile corrosion and hydrogen pick-Up : Effects on materials behaviours, [Martine Yrieix at Blat](#)
- Post-CHF time at temperature (t@T) phenomena of importance for fuel behaviour, [David Schrire](#)
- GEN IV reactors – Cladding and structural materials challenges: an overview, [Martine Yrieix at Blat](#)
- Progress in Structural Behaviours of Fuel Assemblies in Light Water Cooled Reactors – Outcomes of the IAEA Technical Meeting in 2022, [Jinzhaio Zhang](#)

## Thursday May 8

### INVITED PRESENTATIONS

- Cycle Planning and nuclear operation of LWRs, [Sten Lundberg](#)

#### INTERIM DRY STORAGE - THERMAL CREEP- ZIRAT29 REPORT

- Thermal Creep, [Peter Rudling](#)

# ZIRAT29 FEEDBACK

*“The proposed topics are well-structured and aligned with the current trends in nuclear technology. The overall organization of the event is excellent.”*

**MAURICIO EXEQUIEL CAZADO**  
Research Scientist  
Karlsruhe Institute of Technology (KIT)

*“Very well organized. The opportunity to meet people of the nuclear industry is very valuable.”*

**CONRADO RÖSSGER**  
Research Associate/Engineer  
Karlsruhe Institute of Technology (KIT)

*“In general, very good level with a few introduction slides (for less experienced participants), but not too basic. Overall excellent talks!”*

**PIA TEJLAND**  
Senior project manager  
Studsvik Nuclear

*“Thank you for a nicely organized and very informative seminar. I would definitely recommend it further! Huge variety of knowledge and experience!”*

**NATALIA DANIELS**  
Project engineer, Senior Expert  
WTI

*“Overall, I found the seminar very valuable. The topics discussed were closely related with my current work, and the quality of the lecturers generally very high. The venue was also very good.”*

**CARLOS AGUADO**  
Researcher  
CIEMAT

*“Very good organization.  
Keep on!”*

**JAVIER FERNÁNDEZ**  
Head HLW Eng. Dpt.  
ENRESA

*“It’s always a pleasure to attend  
ZIRAT seminars.”*

**LAURA ENCINAS**  
Nuclear fuel technician  
Iberdrola



Coffee break and Networking at the ZIRAT29 and LCC20 Seminars. Ms. Mikaela Rudling, President of A.N.T. International is to the far right in the photo.



A.N.T. International Expert Juan de Dios Sánchez, covered "Zn Chemistry in BWRs, PWRs and VVERs".



A.N.T. International Expert François Cattant presentation: "Fontevraud X conference highlights".



Armin Roth, invited speaker presentation: "Environmentally assisted cracking of carbon steels and low-alloy steels in high-temperature water".



Jiří Rapouch, invited speaker presentation: "Outlines of water chemistry for Czech VVER at our annual Water Chemistry and Structural Material Degradation"



A.N.T. INTERNATIONAL®

## CONTACT

For more information and/or an offer, welcome  
to contact us at [sales@antinternational.com](mailto:sales@antinternational.com)

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information [www.antinternational.com](http://www.antinternational.com)