

Conference Programme

1st International Conference on LWR Fuel Performance, Modelling and Experimental Support

14–19 September 2025, Sol Nessebar Resort, Nessebar, Bulgaria

Day 1: Sunday, 14 September 2025

- 10:00 – 17:00 Registration
- 19:00 – 20:00 Welcome drink
- 20:00 – 21:30 Dinner - Italian Restaurant

Day 2: Monday, 15 September 2025

9:30–10:00 Coffee Break

10:00–11:00 CONFERENCE OPENING SESSION

- *Ms. N. Kiselova - Chairperson of the National Assembly of the Republic of Bulgaria*
- *Mr. Lionel Gaiffe (Framatome) – Senior Executive Vice President*
- *Ms. Kristina Ryttersson (Westinghouse) - Senior Director EMEA Fuel Engineering at Westinghouse Electric Company*
- *Dr. Emilia Georgieva (Studsvik Scandpower GmbH)*

11:00–12:30 Session 1: Plenary Session

Chairpersons: Krasimir Kamenov, Dimitar Tonev

11:00–11:30 Dimitar Tonev

SCIENCE AND THE NUCLEAR INDUSTRY IN BULGARIA

Institute for Nuclear Research and Nuclear Energy, Bulgarian Academy of Sciences, Sofia, Bulgaria

11:30–12:00 Gwen Bolsée

IMPROVING NUCLEAR ECONOMICS: TOWARDS LEU+ AND HIGH BURNUP FUEL FOR LIGHT WATER REACTOR APPLICATIONS

Framatome SAS, Lyon, France

12:00–12:30 Krasimir Kamenov

EXPERIENCE OF RWFA FUEL IMPLEMENTATION AT KOZLODUY NPP UNIT 5

Kozloduy Nuclear Power Plant, Bulgaria

12:35–12:45 Conference Photo

12:45–14:00 Lunch Break

14:00–15:40 Session 2: Fuel performance and operational experience

Chairpersons: Krasimir Kamenov, Gwen Bolsee

14:00–14:25 Nicolas Lamorte

FRAMATOME UNIQUE OPERATING EXPERIENCE ON 14FT PRODUCTS
Framatome SAS, Lyon, France

14:25–14:50 Johann Plancher

FUEL CYCLE OPTIMIZATION WITH FRAMATOME FARGO SOFTWARE
Framatome SAS, Lyon, France

14:50–15:15 Luis Gonzalez

VVER WATER CHEMISTRY COMPATIBILITY WITH WESTINGHOUSE FUEL
Westinghouse Electric Sweden, Västerås, Sweden

15:15–15:40 Michal Kuna

WESTINGHOUSE LTA INSPECTION AT TEMELÍN NPP
Westinghouse Electric Czech Republic s.r.o., Praha, Czech Republic

15:40–16:00 Coffee Break

16:00–18:05 Session 2: Fuel performance and operational experience (Cont.)

Chairpersons: Akif Abdullayev, Henri Rapeli

16:00–16:25 Johann Plancher

FRAMATOME SOLUTIONS TO FLEXIBLE OPERATION
Framatome SAS, Lyon, France

16:25–16:50 Johann Plancher

EVOLUTION OF FRAMATOME CORE SIMULATORS
Framatome SAS, Lyon, France

16:50–17:15 Pavlo Biziuk

MODELLING OF POWER DISTRIBUTION CONTROL PROCESSES IN THE
CORES OF VVER-1000 REACTORS USING ANC-H REACTOR CORE SIMU-
LATOR PROGRAM (ARCS)
JSC NNEGC Energoatom, Kyiv, Ukraine

17:15–17:40 Henri Rapeli

LICENSING OF A NEW FUEL DESIGN AT LOVIISA NPP
Fortum Power and Heat Ltd, Fortum, Espoo, Finland

17:40–18:05 Antonios Mylonakis

THE POLCA8H NODAL CODE FOR VVER-1000
Westinghouse Electric Sweden, Västerås, Sweden

Day 3: Tuesday, 16 September 2025

08:30–10:10 Session 3: Improvement of fuel design and operation

Chairpersons: Didier Bardel, Nicolas Vioujard

08:30–08:55 Didier Bardel

ADDITIVE MANUFACTURING OF FUEL COMPONENTS: FROM IMPLEMENTATION OF NON-CRITICAL 316L COMPONENTS TO HEAVILY LOADED APPLICATIONS WITH ALLOY 718,
Framatome SAS, Lyon, France

08:55–09:20 Gwen Bolsée

FRAMATOME FUEL PORTFOLIO FOR LIGHT WATER BASED SMRs
Framatome SAS, Lyon, France

09:20–09:45 Romain Borrossi

PERFORMANCE OF M5_{FRAMATOME} CLADDING DURING LOSS-OF-COOLANT ACCIDENT
Framatome SAS, Lyon, France

09:45–10:10 Romain Borrossi

PERFORMANCE OF M5_{FRAMATOME} FUEL ROD DURING REACTIVITY INITIATED ACCIDENT INFORMED BY ADVANCED MODELING
Framatome SAS, Lyon, France

10:10–10:30 Coffee Break

10:30–12:35 Session 3: Improvement of fuel design and operation (Cont.)

Chairpersons: Didier Bardel, Nicolas Vioujard

10:30–10:55 Romain Borrossi

FRAMATOME'S FUEL ROD AND FUEL ASSEMBLY STRUCTURAL MATERIALS FOR PWR AND VVER REACTORS
Framatome SAS, Lyon, France

10:55–11:20 Dounia Lhachemi

DEVELOPMENT OF EUROPEAN VVER-1000 FUEL ASSEMBLY BY FRAMATOME: PROJECT OBJECTIVES AND OVERVIEW OF THE DEVELOPMENT APPROACH
Framatome SAS, Lyon, France

11:20–11:45 Guy Gentet

DEVELOPMENT OF EUROPEAN VVER-440 FUEL ASSEMBLY BY FRAMATOME
Framatome SAS, Lyon, France

11:45–12:10 Guy Gentet

FRAMATOME SOLUTIONS TO SUPPORT UTILITIES FOR LONG TERM OPERATION
Framatome SAS, Lyon, France

12:10–12:35 Guy Gentet

FUEL RELIABILITY IMPROVEMENTS
Framatome SAS, Lyon, France

12:35–14:00 Lunch Break

14:00–15:40 Session 3: Improvement of fuel design and operation (Cont.)

Chairpersons: Jan Höglund, Dounia Lhachemi

14:00–14:25 Karl Buchanan

PROTECT CR: THE LEADING E-ATF SOLUTION BY FRAMATOME
Framatome SAS, Lyon, France

14:25–14:50 Nicolas Vioujard

DEVELOPMENT OF INNOVATIVE MATERIAL FOR LWR FUEL
Framatome SAS, Lyon, France

14:50–15:15 Elmar W. Schweitzer

IRRADIATION FEEDBACK OF FRAMATOME'S PROTECT-CR CLADDING
TO A BURNUP OF > 70 MWD/KGU
Framatome GmbH, Erlangen, Germany

15:15–15:40 Jan Höglund

MITIGATION OF LOCAL POWER PEAKING BY INTRODUCING HF SPACER
PINS IN THE VVER-440 FOLLOWER FUEL ASSEMBLY
Westinghouse Electric Sweden, Västerås, Sweden

15:40–16:05 Coffee Break

16:05–17:45 Session 3: Improvement of fuel design and operation (Cont.)

Chairpersons: Jan Höglund, Dounia Lhachemi

16:05–16:30 Alex Riznychenko

NEXT GENERATION VVER-1000 FUEL DEVELOPMENT
Westinghouse Electric Sweden, Västerås, Sweden

16:30–16:55 Gwen Bolsée

FRAMATOME FUEL RESEARCH CENTERS & LABS
Framatome SAS, Lyon, France

16:55–17:20 Oleksandr Mazurok

APPROACHES TO SUPPLY UKRAINIAN NPPS WITH CORE COMPONENTS
ES Group LLC, Kyiv, Ukraine

17:20–17:45 Angel Demerdjiev

RADIATION SHIELDING ASSESSMENT OF THE CYCLOTRON CENTRE AT
INRNE-BAS
INRNE-BAS, Sofia, Bulgaria

Day 4: Wednesday, 17 September 2025

08:30–10:10 **Session 4: Fuel modelling and experimental support**

Chairpersons: Arndt Schubert, Stanislav Linhart

- 8:30–8:55** **Arndt Schubert**
TOWARDS MODELLING OF ADVANCED-TECHNOLOGY FUEL RODS WITH THE TRANSURANUS CODE
European Commission – Joint Research Centre, Karlsruhe, Germany
- 8:55–9:20** **Johann Plancher**
GALILEE, FRAMATOME FUEL ROD PERFORMANCE CODE FOR LWR
Framatome SAS, Lyon, France
- 9:20–9:45** **Veit Marx**
FRAMATOME ADVANCED SOLUTIONS AGAINST GRID-TO-ROD FRET-
TING WEAR RISK
Framatome GmbH, Erlangen, Germany
- 9:45–10:10** **Veit Marx**
FRAMATOME'S ADVANCED CORE DISTORTION SIMULATION CAPABILI-
TIES
Framatome GmbH, Erlangen, Germany

10:10–10:30 Coffee Break

10:30–12:35 **Session 4: Fuel modelling and experimental support (Cont.)**

Chairpersons: Arndt Schubert, Stanislav Linhart

- 10:30–10:55** **Tommaso Carnicella**
FUEL ASSEMBLY BOW DNBR PENALTY FOR VVER-1000 REACTORS
Westinghouse Electric Sweden, Västerås, Sweden
- 10:55–11:20** **Stanislav Linhart**
IRRADIATION-INDUCED GROWTH OF ADVANCED ZIRCONIUM ALLOYS
ALVEL, a.s., Brno, Czech Republic
- 11:20–11:45** **Michael Brunmayr**
FRAMATOME – IMPROVEMENT OF FUEL PRODUCT TH PERFORMANCE
Framatome GmbH, Erlangen, Germany
- 11:45–12:10** **Michael Brunmayr**
VALIDATION OF FRAMATOME SUBCHANNEL CODE COBRA-FLX FOR
VVER FUEL
Framatome GmbH, Erlangen, Germany
- 12:10–12:35** **Marcin Kopeć**
DIGITAL IMAGE PROCESSING FROM NUCLEAR FUEL INSPECTIONS IN
CVR
Centrum výzkumu Řež s.r.o., Husinec, Czech Republic

12:35–14:00 Lunch Break

14:00–16:05 Session 4: Fuel modelling and experimental support (Cont.)

Chairpersons: Emiliya Georgieva, Katalin Kulacsy

14:00–14:25 Jürgen Michna

INSPECTIONS AND MEASUREMENTS ON FUEL ASSEMBLIES
Framatome GmbH, Erlangen, Germany

14:25–14:50 Emiliya L. Georgieva

CMS5 BENCHMARKING AGAINST A VVER-1000 PLANT DATA
Studsvik Scandpower GmbH, Norderstedt, Germany

14:50–15:15 Fredrik Waldemarsson

WESTINGHOUSE FUEL THERMAL-HYDRAULIC TESTING CAPABILITIES
Westinghouse Electric Sweden, Västerås, Sweden

15:15–15:40 Coffee Break

15:40–16:05 Nadejda Rijova

ANALYSIS OF MAIN STEAM LINE BREAK AT HOT ZERO POWER USING
ATHLET, COCOSYS AND DYN3D
Enpro Consult, Sofia, Bulgaria

16:05–16:55 Session 5: Fuel safety and QA

Chairpersons: Emiliya Georgieva, Katalin Kulacsy

16:05–16:30 Katalin Kulacsy

FUEL PERFORMANCE ANALYSIS CAPABILITY DEVELOPMENT IN SURO
National Radiation Protection Institute (SÚRO), Praha, Czech Republic

16:30–16:55 Maximilian Stark

DEVELOPMENT OF VVER-1000 FUEL ASSEMBLY SHIPPING SOLUTION BY
FRAMATOME: PROJECT OBJECTIVES AND STATUS
Framatome GmbH, Erlangen, Germany

19:00–23:00 SOCIAL DINNER

Day 5: Thursday, 18 September 2025

9:00–10:15 Session 6: Spent fuel performance and management

Chairpersons: Roman Glushenkov, Radan Sedláček

- 9:00–9:25** **Radan Sedláček**
FRAMATOME'S PERFORMANCE IN SPIZWURZ CREEP BENCHMARK
Framatome GmbH, Erlangen, Germany
- 9:25–9:50** **Roman Glushenkov**
SPENT NUCLEAR FUEL MANAGEMENT OF UKRAINIAN NUCLEAR OPERATOR
JSC "NNEGC "Energoatom", Kyiv, Ukraine
- 9:50–10:15** **Mykhaylo Tretyakov**
STUDYING THE INTEGRITY OF SNF ROD CLADDING AT VARIOUS STAGES OF DRY STORAGE TECHNOLOGY IMPLEMENTATION
Kharkiv Institute of Physics and Technology, Kharkiv, Ukraine
- 10:15–10:40** **Valeriy Zuyok**
DEVELOPMENT OF NEUTRON-ABSORBING MATERIALS AND RCCA WITH INCREASED PERFORMANCE FOR VVER-1000 REACTOR
Technical Establishment "Nuclear Fuel Cycle" of National Science Center Kharkov Institute of Physics and Technology, Kharkiv, Ukraine, Kharkiv, Ukraine
- 10:40–11:00** **Conference overall discussion and conclusions**
- 12:00–13:30** **Lunch Break**
- 14:00–18:00** **Excursion**

Day 6: Friday, 19 September 2025

9:00–10:30 Poster Session

- 1. Vítězslav Matocha**
EXTENDED VALIDATION OF TRANSURANUS CODE FOR THE PWR CLADDING
TYPES CONDUCTED AT UJV REZ
ÚJV Řež, a. s., Husinec, Czech Republic
- 2. Ondrej Pašta**
ADVANCED DIGITAL IMAGE PROCESSING FOR MATERIAL EVALUATION IN
NUCLEAR APPLICATIONS
Centrum výzkumu Řež s.r.o., Husinec, Czech Republic
- 3. Mladen Mitev**
FROM OPEN TO CLOSED FUEL CYCLE – ADVANTAGES AND DRAWBACKS OF
THE PROCESS
Technical University, Sofia, Bulgaria
- 4. Petya Vryashkova**
STUDY OF FUEL BEHAVIOUR DURING LBLOCA WITH PARTIAL DAMAGING OF
REACTOR CORE
INRNE-BAS, Sofia, Bulgaria
- 5. Galina Dimitrova**
MONTE CARLO-BASED STUDIES FOR RADIATION SAFETY IN THE DESIGN OF
BGNCC
INRNE-BAS, Sofia, Bulgaria
- 6. Elena Geleva**
Post-Fukushima Stress Tests at Kozloduy NPP: Assessing Resilience to Extreme Climatic
Events
INRNE-BAS, Sofia, Bulgaria

10:30–11:00 Closing Ceremony