

# **Technical Meeting on the Benefits and Challenges of Fast Reactors of the SMR Type**

## **Report of Contributions**

Contribution ID: 1

Type: **not specified**

## **ID-6: Large Eddy Simulation of Thermal Striping in the Upper Internal Structure of the Prototype Gen-IV Sodium-cooled Fast Reactor**

*Tuesday, 24 September 2019 10:50 (30 minutes)*

**Presenter:** Mr KIM, Dehee (KAERI)

**Session Classification:** Session I

**Track Classification:** Session I: Sodium Cooled Fast SMR

Contribution ID: 2

Type: **not specified**

## **ID-10: SMR CADOR : an inherently safe small SFR as a response to the dilemma 'safety vs cost'**

*Tuesday, 24 September 2019 11:40 (30 minutes)*

**Presenter:** GAUTHÉ, Paul (CEA)

**Session Classification:** Session I

Contribution ID: 3

Type: **not specified**

## **ID-23: Feasibility study of small sodium cooled fast reactors**

*Tuesday, 24 September 2019 12:10 (30 minutes)*

**Presenter:** HAYAFUNE, HIROKI (Japan Atomic Energy Agency)

**Session Classification:** Session I

Contribution ID: 4

Type: **not specified**

## **ID-27: A preliminary study of autonomous and ultra-long life hybrid micro-modular reactor cooled by sodium heat pipes**

*Tuesday, 24 September 2019 14:00 (30 minutes)*

**Presenter:** Mr SEOUNG DONG, Jang (KAIST)

**Session Classification:** Session I

Contribution ID: 5

Type: **not specified**

## **ID-1: Thermal Hydraulic Safety Analyses in Support of SEALER**

*Tuesday, 24 September 2019 14:50 (30 minutes)*

**Presenters:** ROELOFS, Ferry (NRG); Mr ZWIJSEN, Kevin (NRG)

**Session Classification:** Session II

Contribution ID: 6

Type: **not specified**

## **ID-2: LFR-SMR: affordable solutions for all needs**

*Tuesday, 24 September 2019 15:20 (30 minutes)*

**Presenter:** CINOTTI, Luciano (Hydromine Nuclear Energy S.à r.l.)

**Session Classification:** Session II

Contribution ID: 7

Type: **not specified**

## **Supplementary presentation of H2020 proposal on BONSAI-SMR: Baseline for Nuclear Safety Assessment of Innovative SMR**

*Wednesday, 25 September 2019 16:50 (15 minutes)*

**Presenter:** GAUTHÉ, Paul (CEA)



Contribution ID: 8

Type: **not specified**

## **ID-4: Inherent Self-Protection, Passive Safety and Competitiveness of Small Power Modular Fast Reactor SVBR-100**

*Wednesday, 25 September 2019 09:30 (30 minutes)*

**Presenter:** Mr TOSHINSKII, Georgii (IPPE & AKME-Engineering)

**Session Classification:** Session II

Contribution ID: 9

Type: **not specified**

## **ID-7: CLFR-300, an Innovative Lead-cooled Fast Reactor Based on Natural-driven Safety Technologies**

*Wednesday, 25 September 2019 10:00 (30 minutes)*

**Presenter:** CHEN, Zhao (China Nuclear Power Technology Research Institute Co.)

**Session Classification:** Session II

Contribution ID: 10

Type: **not specified**

## **ID-24: Lead Fast Reactor technology: a promising option for SMR application**

*Wednesday, 25 September 2019 11:50 (30 minutes)*

**Presenter:** GRASSO, Giacomo (Italian National Agency for New Technology, Energy and Sustainable Economic Development (ENEA))

**Session Classification:** Session II

Contribution ID: 11

Type: **not specified**

## **ID-15: Conceptual Design of China Lead-based Mini-Reactor CLEAR-M10d**

*Wednesday, 25 September 2019 11:20 (30 minutes)*

**Presenter:** LIU, Chao (Institute of Nuclear Energy Safety and Technology)

**Session Classification:** Session II

Contribution ID: 12

Type: **not specified**

## **ID-30: SEALER-UK: a 55 MWe lead-cooled reactor for commercial power production**

*Wednesday, 25 September 2019 12:20 (30 minutes)*

**Presenter:** WALLENIOUS, Janne (LeadCold)

**Session Classification:** Session II

Contribution ID: 13

Type: **not specified**

## **Supplementary presentation on Underground Nuclear Power Plants**

*Wednesday, 25 September 2019 14:00 (30 minutes)*

**Presenter:** DE BRUYN, Didier (Belgian Nuclear Research Centre (SCK•CEN))

**Session Classification:** Session II

Contribution ID: 14

Type: **not specified**

## **ID-8: INNOVATIVE MODELLING APPROACHES FOR MOLTEN SALT SMALL MODULAR REACTORS**

*Wednesday, 25 September 2019 14:30 (30 minutes)*

**Presenters:** Mr CERVI, Eric (Politecnico di Milano); Mr RICOTTI, Marco (Politecnico di Milano)

**Session Classification:** Session III

Contribution ID: 15

Type: **not specified**

## **ID-22: A CHARACTERIZATION OF THE FINANCIAL RISK PROFILE OF FAST SMRS**

*Wednesday, 25 September 2019 15:00 (30 minutes)*

**Presenter:** Ms BOARIN, Sara (Politecnico di Milano)

**Session Classification:** Session IV



Contribution ID: 16

Type: **not specified**

## **ID-16: EVALUATION OF POTENTIAL SAFETY AND ECONOMIC BENEFITS AND CHALLENGES OF MODULAR SODIUM-COOLED FAST REACTORS**

*Thursday, 26 September 2019 09:30 (30 minutes)*

**Presenters:** ASHURKO, Iurii (IPPE); Mr TOSHINSKII, Georgii (IPPE & AKME-Engineering)

**Session Classification:** Session IV

Contribution ID: 17

Type: **not specified**

## **ID-3: Experience in physics design and safety analysis of small and medium sized FBRs**

*Thursday, 26 September 2019 10:00 (30 minutes)*

**Presenter:** Mr SALIM, Riyas Abdul (IGCAR)

**Session Classification:** Session V

Contribution ID: 18

Type: **not specified**

## **ID-25: Numerical assessment of sodium fire incident**

*Thursday, 26 September 2019 10:30 (30 minutes)*

**Presenter:** TAKATA, Takashi (Japan Atomic Energy Agency)

**Session Classification:** Session V

Contribution ID: 19

Type: **not specified**

## **ID-26: ALFRED PROTECTED LOSS OF FLOW ACCIDENT EXPERIMENT IN CIRCE FACILITY**

*Thursday, 26 September 2019 11:20 (30 minutes)*

**Presenter:** Mr GIANNETTI, Fabio (La Sapienza)

**Session Classification:** Session V

Contribution ID: 20

Type: **not specified**

## **ID-28: A Passive Safety Device for SFRs with Positive Coolant Temperature Coefficient**

*Thursday, 26 September 2019 11:50 (30 minutes)*

**Presenter:** Mr KIM, Yoonghee (KAIST)

**Session Classification:** Session V

Contribution ID: 21

Type: **not specified**

## **ID-5: MYRRHA Technology and Research Facilities in support of Heavy Liquid Metal SMR Fast Reactors**

*Thursday, 26 September 2019 13:30 (30 minutes)*

**Presenter:** FERNANDEZ, Rafael (Belgian Nuclear Research Centre (SCK.CEN))

**Session Classification:** Session VI

Contribution ID: 22

Type: **not specified**

## **ID-18: Introduction of the U.S. DOE Versatile Test Reactor Project**

*Thursday, 26 September 2019 14:00 (30 minutes)*

**Presenter:** HEIDET, Florent (Argonne National Laboratory)

**Session Classification:** Session VI

Contribution ID: 23

Type: **not specified**

## **ID-21: Estimation of minimal critical size of bare iso-breeding core for 8 selected fast reactors in Th-U and U-Pu fuel cycles**

*Thursday, 26 September 2019 14:30 (30 minutes)*

**Presenter:** KREPEL, Jiri (Paul Scherrer Institut)

**Session Classification:** Session VI



Contribution ID: 24

Type: **not specified**

## **ID-9: A MULTIPHYSICS APPROACH TO LFR ANALYSIS**

*Thursday, 26 September 2019 15:20 (30 minutes)*

**Presenter:** Mr MARCO, Sumini (University of Bologna)

**Session Classification:** Session VI

Contribution ID: 25

Type: **not specified**

## Opening by IAEA

*Tuesday, 24 September 2019 10:00 (10 minutes)*

**Presenters:** KRIVENTSEV, Vladimir (IAEA); MONTI, Stefano (IAEA)

**Session Classification:** Opening Session

Contribution ID: 26

Type: **not specified**

## Welcome Remarks by POLIMI

*Tuesday, 24 September 2019 10:10 (5 minutes)*

**Presenter:** Mr RICOTTI, Marco (Politecnico di Milano)

**Session Classification:** Opening Session

Contribution ID: 27

Type: **not specified**

## **Self-Introduction of Participants**

*Tuesday, 24 September 2019 10:15 (5 minutes)*

**Session Classification:** Opening Session

Contribution ID: 28

Type: **not specified**

## **Nomination of the Chairperson**

*Tuesday, 24 September 2019 10:20 (5 minutes)*

**Session Classification:** Opening Session

Contribution ID: 29

Type: **not specified**

## Discussion and Approval of the Agenda

*Tuesday, 24 September 2019 10:25 (5 minutes)*

**Presenter:** AGOSTINI, Pietro (ENEA)

**Session Classification:** Opening Session

Contribution ID: 30

Type: **not specified**

## Meeting Objectives & IAEA Activities on Fast Reactors

*Tuesday, 24 September 2019 10:30 (20 minutes)*

**Presenter:** KRIVENTSEV, Vladimir (IAEA)

**Session Classification:** Opening Session