

Global Symposium on Lead and Lead Alloy Cooled Nuclear Energy Science and Technology 2024 (GLANST 2024)

30 September - 2 October 2024

ENEA Brasimone Research Centre (Villa Ruggeri)
Località Brasimone, 40032 Camugnano (Bologna), Italy

Jointly organized by GIF LFR pSSC and ENEA, Supported by OECD/NEA

Agenda

| <i>Day One</i> | | Monday, 30 September 2024 |
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| 13:00 | <i>Registration</i> | |
| Opening Remarks and Introductory Lectures | | Chairperson: M. Tarantino (ENEA, Italy) |
| 13:30 | Welcome Message and Presentation of ENEA Activities | A. Dodaro <i>(ENEA, Italy)</i> |
| 13:55 | "GIF contribution to LFR development: the role of LFR pSSC" | A. Alemberti <i>(Chair of GLANST Scientific Committee)</i> |
| 14:20 | Invited Talk on Other Applications of Lead Technologies: "Development of Liquid Pb Technologies for Beam Intercepting Devices at CERN: A Case Study for Muon Collider Target and FCCee Beamstrahlung Absorber" | M. Calviani and S. Candido <i>(CERN)</i> |
| 14.45 | Q&A – Discussion | |
| 15:00 -18:00 | Visit to the Brasimone Facilities | M. Tarantino <i>(ENEA, Italy)</i> |

| <i>Day Two</i> | | Tuesday, 1 October 2024 | |
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| 08:30 | <i>Registration</i> | | |
| 09:00 | Opening Remarks | M. Tarantino (ENEA, Italy) | |
| SESSION 1: Modelling and Simulation | | Chairperson: A. Moisseytsev (ANL, USA) | |
| 09:15 | Invited Talk: "Status and Prospective of <i>newcleo</i> project" | L. Cinotti (<i>newcleo</i>) | |
| 09:45 | "Validation of a CFD-STH coupled tool against experiment on TALL3D" | P. Cioli Puviani (Polito /ENEA, Italy) | |
| 10:05 | "Thermodynamic Properties of Pure Lead in the SIMMER-III Code: A Comparative Review and New Evaluation Proposal" | A. Bellomo (University of Pisa, Italy) | |
| 10:25 | "Numerical investigation on influencing mechanism of thermal stratification in hot pool of a lead-based SMR" | L. Wenbo (Chinese Academy of Sciences, China) Speaker: M. Jin (International Academy of Neutron Sciences) | |
| 10:45 | Q&A – Discussion | | |
| 11:10 | <i>Coffee Break and Group Photograph</i> | | |
| 11:30 | Invited Talk: "Roadmap to a commercial LFR: the ALFRED demonstrator" | M. Frignani (Ansaldo, Italy) | |
| 12:00 | "Flow blockage analysis for START transmutation reactor core" | G. Morresi (Transmutex SA) | |
| 12:20 | "Designing the LLWAA-LFR code to assess the radiological inventory of non-fuel waste from LFR reactors" | F. De Dortan (TRACTEBEL, Belgium) | |
| 12:40 | Q&A – Discussion | | |
| 13:00 | <i>Buffet Lunch</i> | | |
| SESSION 2: Coolant, Materials and Fuel | | Chairperson: M. Tarantino (ENEA, Italy) | |
| 13:45 | Invited Talk: "R&D roadmap to LFR demonstrator: the experimental infrastructure, support for ALFRED" | C. Ducu (RATEN ICN, Romania) | |
| 14:15 | "Development of Test Facility to Study Erosion and Corrosion of Materials" | J.K. Lee (University of Pittsburgh, USA) | |
| 14:35 | "Lead Coolant Chemistry Program Development at <i>newcleo</i> : Roadmap, Achievements and Perspectives" | G. Gregori (<i>newcleo</i>) | |
| 14:55 | Q&A – Discussion | | |
| 15:15 | <i>Coffee Break</i> | | |
| 15:35 | Invited Talk: "Ductile amorphous oxide coatings as antipermeation and anticorrosion environmental barriers for LFR and ADS claddings and components" | F. Di Fonzo (X-nano s.r.l., Italy) | |
| 16:05 | "LEad fast reactor Safety design and Tools – the LESTO project" | S. Gianfelici (ENEA, Italy) | |
| 16:25 | "Concept of Innovative Lead-Bismuth-cooled Fast Reactor Core Design Using Metallic Fuel" | X. Zhao (Tokyo Institute of Technology, Japan) | |
| 16:45 | "LMTH24: A Python package for the implementation of Liquid Metal Thermal-Hydraulics correlations" | G. Ottino (<i>newcleo</i>) | |
| 17:05 | Q&A – Discussion | | |
| 17:25 | Day Two Wrap-up | A. Alemberti (Chair of GLANST Scientific Committee) | |

| <i>Day Three</i> | | Wednesday, 2 October 2024 |
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| 08:30 | <i>Registration</i> | |
| 08:45 | Opening Remarks | M. Tarantino (ENEA, Italy) |
| SESSION 3: Experiments and Code Validation | | Chairperson: I.S. Hwang (Seoul National University, Korea) |
| 09:00 | Invited Talk: "MYRRHA contribution to LFR Development" | P. Schuurmans (SCK-CEN) |
| 09:30 | "Loss Of Heat Sink RELAP5 Simulation in the ATHENA Facility" | T. Del Moro (Sapienza University of Rome, Italy) |
| 09:50 | "Thermal-hydraulic modelling of a bayonet tube heat exchanger using AC2 ATHLET system code" | D. Caterino (Polito, Italy) |
| 10:10 | "Numerical study of the influence of contact treatment method on flow of pin-wire components based on NACIE-UP" | S. Ouyang (University of Science and Technology of China, China) Speaker: M. Jin (International Academy of Neutron Sciences, China) |
| 10:30 | Q&A – Discussion | |
| 10:55 | <i>Coffee Break</i> | |
| 11:15 | "Numerical Analyses in support of the CIRCE-THETIS experimental campaign" | P. Stefanini (University of Pisa, Italy) |
| 11:35 | Invited Talk: "An analytical approach to station blackout management in LFRs" | J. Wallenius (Blykalla) |
| 12:05 | "newcleo LFR R&D programme: key test facilities" | N. Garelli (newcleo) |
| 12:25 | Q&A – Discussion | |
| 12:45 | <i>Buffet Lunch</i> | |
| SESSION 4: Design of Systems & Components | | Chairperson: T. Obara (Tokyo Tech, Japan) |
| 13:30 | Invited Talk: "LFR Core design and impact on primary system layout" | G. Grasso (ENEA, Italy) |
| 14:00 | "Calculation of the kinetic parameters for LFR with OpenMC" | D.A. Olivares (newcleo), Speaker: M. Falabino (newcleo) |
| 14:20 | "MicroURANUS Leveraged on Inert Coolant for Maritime Safety" | I.S. Hwang (Seoul National University, Korea) |
| 14:40 | Q&A – Discussion | |
| 15:00 | <i>Coffee Break</i> | |
| 15:20 | "CFD Modeling Approaches and Uncertainty Quantification in LBE Wire-Wrapped Bundles" | O. Halim (University of Pisa, Italy) |
| 15:40 | "Advances in Control Rods homogenization by the Reactivity Equivalence Method" | M. Falabino (newcleo) |
| 16:00 | "Numerical investigation of ALFRED under seismic scenario" | G. Khalil Youssef (Sapienza University of Rome, Italy) |
| 16:20 | Q&A – Discussion | |
| 16:40 | Day Three Wrap-up and Closing Remarks | A. Alemberti (Chair of GLANST Scientific Committee) |
| 19:00 | <i>Dinner offered by newcleo</i> | |