



4th Workshop
**Energy for
Sustainable
Science**
at Research Infrastructures

PROGRAMME

IV. CERN/ERF/ESS Workshop on Energy for Sustainable Science at Research Infrastructures

Organized by CERN/ERF/ESS in cooperation with ARIES – hosted by ELI-NP

Dates:

Thu/Fri – 23/24 November 2017

Location:

ELI-NP, Magurele, Romania

Website: <http://www.eli-np.ro/4ess/>

Format of the workshop:

- Two-day workshop with plenary and parallel sessions
- Plenary Talks are (25+5)', Parallel Talks are (20+5)'

THURSDAY, 23 NOVEMBER 2017

08:30 **Registration**

09:00 **Welcome Session**

- Welcome by Host – Acad. Victor Nicolae Zamfir, Director-General National Institute for Physics and Nuclear Engineering “Horia Hulubei”, IFIN-HH
- Overview ELI-NP – Acad. Victor Nicolae Zamfir
- Introduction, Goals and Summary of the last workshops – Frank Lehner, DESY

09:45 **Plenary I: Political Landscape (2 Key Notes)**

Chair: Victor Zamfir, ELI-NP

- Ciprian Preda, Secretary of State at the Ministry of Research and Innovation, Romanian Government
- Jean-David Malo, DG Research & Innovation

10:30 **Coffee Break**

11:00 **Plenary II: (3 Talks)**

Chair: Frédérick Bordry, CERN

- ESS Status and plans – John Womersley, DG ESS
- Energy Efficiency of Accelerators in the European Programs Eucard2 and ARIES – Mike Seidel, PSI
- CERN energy recovery analysis and selected projects – Serge Claudet, CERN

12:30 Lunch

14:00 Plenary III: (4 Talks) – International Laboratories

Chair: Carlo Rizzuto, ELI-AISBL

- High Q s.c. Cavities for CW LINACS – Vyacheslav Yakovlev, FNAL
- Energy Issues at RIs – a Chinese perspective – Yongbin Leng, SINAP
- ESRF and ESRF phase II – Harald Reichert, ESRF
- Energy Management at KEK - Takayuki Saeki, KEK

16:00 Coffee Break

16:30 Parallel Sessions: Two Parallel Sessions w/ 6 talks each

Parallel Session Ia: Energy Management at Laboratories

Chair: Ornella de Giacomo

- CERN electricity consumption forecast and validation – Bruno Mouche, CERN
- Energy Management at DESY/XFEL – Jens-Peter Jensen, DESY
- Energy Efficiency and Recovery at Large Scale Cryogenic Plants: A Survey – John G. Weisend, ESS
- Introduction of economy cycles in the CERN SPS accelerator to reduce the energy consumption – Quentin King, CERN
- Campus Development guided by KIT Masterplan – Rupert Lohr, KIT
- Distributed Control System application to tertiary infrastructures energy management and optimization – Christophe Martel, CERN

Parallel Session Ib: Energy Efficiency

Chair: Mike Seidel, PSI

- Generalisation of energy storage in power converters to save energy, to reduce electrical and cooling infrastructure – Thomas Höhn, CERN
- Use of Energy Storage to take advantage from low energy prices, Hans-Jörg Eckoldt, DESY
- Tunable permanent accelerator magnets – Ben Shepherd, STFC Daresbury
- Development of efficient klystrons – Claude Marchand, CEA
- Measured performance of Multi Beam IOTs and klystrons – Morten Jensen, ESS
- ForHLR II – energy – and resource efficient computing at KIT – Rudolf Lohner, KIT

19:30 Transfer to Restaurant

20:00 Dinner

FRIDAY, 24 NOVEMBER 2017

- 08:30** **Plenary IV: Advanced Energy Technologies**
Chair: Roland Garoby, ESS
- ALFRED Demonstrator towards an Improved Sustainability of Nuclear Energy – Ilie Turcu & Marin Constantin
 - Long term plans for MYRRHA in view of a future ADS facility – Hamid Aït Abderrahim, *SCK-CEN, Belgium*
 - Research and Prospect for Sustainable Nuclear Energy Utilization in Japan – Kazufumi Tsujimoto
- 10:00** **Coffee Break**
- 10:30** **Plenary Session IV: Energy Management and Efficiency**
Chair: Frank Lehner, DESY
- Energy efficiency of particle accelerators and colliders – Philippe Lebrun, CERN
 - Computing – Volker Lindenstruth, U Frankfurt
 - RE100 – Alberto Carrillo Pineda
 - SESAME – Yasser Khalil, SESAME
- 12:30** **Final Plenary**
Chair: Frédérick Bordry, CERN
- Reports from Parallel Sessions
 - Closing Talk – Carlo Rizzuto, ELI-AISBL
- 13:15** **Working Lunch**
- afterwards** **Tour of ELI-NP Facilities**