

WORKSHOP PROGRAMME

Monday 09.04.2018

9:30 – 10:30 *Registration at the Conference Desk*

10:30 – 11:00 Welcome address Emanuele Vardaci

Session 1: Super-Heavy Elements Fission Decay (Chair: S. Hofmann)

11:00 – 11:50 Yuri Oganessian *Fission of heaviest nuclei*

11:50 – 12:40 Nicolae Carjan *Predictions of Fission Fragment Mass Distributions
for Super-Heavy Elements*

12:40 – 14:30 LUNCH

Session 2: Super-Heavy Decay (Chair: D. Poenaru)

14:30 – 15:20 Peter Möller *Super-Heavy Nuclei: production and decay properties*

15:20 – 16:10 Fritz P. Heßberger *Spontaneous Fission Properties of Super-Heavy Nuclei*

16:10 – 16:30 COFFEE BREAK

16:30 – 17:20 Roderick Clark *Alpha Decay and Fission of High-K Isomers*

Tuesday 10.04.2018

Session 3: New Facilities 1 (Chair: K. Rykaczewski)

09:30 – 10:20 **Sergey Dmitriev** ***SHE-FACTORY: A New Facility for Super-Heavy Element Research***

10:20 – 11:10 **Mikhail Itkis** ***Impact of quasifission on SHE production***

11:10 – 11:30 **COFFEE BREAK**

Session 4: Multi-nucleon Transfer (Chair: G. Ter Akopian)

11:30 – 12:20 **Alexander Karpov** ***Production of neutron-rich heavy and super-heavy nuclei in multinucleon transfer reactions***

12:20 – 13:10 **Guillaume Scamps** ***Dynamical effects of superfluidity on multi-nucleon transfer, fusion and fission***

13:10 – 14:30 **LUNCH**

Session 5: Reaction Mechanisms (Chair: E. Vardaci)

14:30 – 15:20 **Iulia Itkis** ***Symmetric, asymmetric and super-asymmetric modes in fission and quasifission of heavy and super-heavy nuclei***

15:20 – 16:10 **Dario Vretenar** ***Microscopic studies of fission dynamics based on energy density functionals***

16:10 – 16:30 **COFFEE BREAK**

16:30 – 17:20 **Piotr Magierski** ***Time-dependent Density Functional Theory for nuclear reactions – advantages and disadvantages***

Wednesday 11.04.2018

Session 6: New Facilities 2 (Chair: M. Itkis)

09:30 – 10:20 Michael Block

Super-heavy Element Research at GSI

10:20 – 11:10 Sigurd Hofmann

Fission Barriers of Super-Heavy Nuclei and Search for Element 120

11:10 – 11:30 COFFEE BREAK

Session 7: New Facility 3 (Chair: S. Dmitriev)

11:30 – 12:20 Gianfranco Prete

The SPES project at the INFN- Laboratori Nazionali di Legnaro

12:20 – 13:10 Giacomo de Angelis

Exotic nuclei and the SPES radioactive ion beam facility

13:10 – 14:30 LUNCH

Session 8: Use of RIBs (Chair: M. Block)

14:30 – 15:20 Krzysztof Rykaczewski

Contributions to the science program at the SHE Factory and SPES

15:20 – 16:10 Gurchen Ter-Akopian

Radioactive ion beams for the fission study of the heaviest neutron-rich nuclei

16:10 – 16:30 COFFEE BREAK

16:30 – 17:20 Greg Chubarian

Secondary heavy ion beams as a tool for investigation of fusion mechanism

20:00 Social Dinner

Thursday 12.04.2018

Session 9: More on Spontaneous Fission 1 (Chair: N. Carjan)

09:30 – 10:20 Dorin Poenaru *Theory of spontaneous fission of super heavy nuclei and its competitor decay modes*

10:20 – 11:10 Christopher Zachary *Spontaneous Fission of SHE: A New Source of Insights into the Structure of Neutron-Rich Nuclei*

11:10 – 11:30 COFFEE BREAK

Session 10: More on Spontaneous Fission 2 (Chair: P. Möller)

11:30 – 12:20 Michal Kowal *Fission hindrance of heaviest high-K isomers*

12:20 – 13:10 Janusz Skalski *From instantons to spontaneous fission rates*

13:10 – 14:30 LUNCH

Session 11: More on Spontaneous Fission 3 (Chair: A. Karpov)

14:30 – 15:20 Wojciech Brodziński *An instanton-motivated approach to the spontaneous fission of odd nuclei*

15:20 – 16:10 Ion Silisteanu *Half-lives of nuclei around the super-heavy nucleus $^{304}120$*

16:10 – 16:30 COFFEE BREAK

16:30 – 17:20 David Regnier *Probing the evolution of the fission modes with a microscopic approach*

Friday 13.04.2018

Session 12: Cluster Radioactivity (Chair: D. Poenaru)

09:30 – 10:20 **Michal Warda** *Correspondence between cluster radioactivity of and asymmetric fission of super-heavy nuclei*

10:20 – 11:10 **Zachary Matheson** *Cluster emission in ^{294}Og*

11:10 – 11:30 COFFEE BREAK

11:30 – 12:30 Concluding Remarks

12:30 LUNCH