SCIENTIFIC PROGRAMME

ICACS-31 & SHIM-13 2026 Conference Programme

27 September-2 October 2026 | Bluesun Hotel Elaphusa, Bol, Island of Brač, Croatia

Sunday, 27 September 2026

16:00-18:00	**Registration**
18:00-18:15	**Opening ceremony**
18:15-19:00	**Christina Trautmann	Lindhard Lecture** GSI Helmholtz Centre for Heavy Ion Research, Germany *Experimental and simulation challenges in swift heavy ion track formation.*
19:00-20:30	**Welcome reception at Bluesun Hotel Elaphusa**

Monday, 28 September 2026

08:00-09:00	**Registration**
SESSION 1	
09:00-09:30	**Mamour Sall** | **Invited talk** Center for Research on Ions, Materials and Photonics, Caen, France *Inducing Uniaxial Magnetic Anisotropy in $La_{0.7}Sr_{0.3}MnO_3$ by Means of Surface Nanostructuration with Low and High Energy Ion Irradiation*
09:30-09:50	**Mandla Msimanga** | **Contributed talk** Mulungushi University, Zambia and Tshwane University of Technology, South Africa *Defect-Engineered Charge Transport in ITO/PANI-Graphene/Al Schottky Diodes via Swift Heavy Ion Irradiation*
09:50-10:10	**Milko Jakšić** | **Contributed talk** Ruđer Bošković Institute, Croatia *IBIC characterisation of the charge transport using heavy ions*
10:10-10:30	**Ricardo Papaleo** | **Contributed talk** Pontifical Catholic University of Rio Grande do Sul, Brazil *Thickness dependence of bond-breaking cross sections in PMMA thin films: new insights from in situ spectroscopic investigations with 9 MeV/u C ions*
10:30-11:00	**Coffee break**
SESSION 2	
11:00-11:30	**Cíntia Aparecida Pires da Costa** | **Invited talk** Physics Department - University of Trento, Italy and Aix-Marseille University, France *O_2 plasma-induced modifications in the surface of space-technology polymers*
11:30-11:50	**Hermann Rothard** | **Contributed talk** CNRS CIMAP, France *Swift Ion irradiation of ices containing organic molecules at GANIL*
11:50-12:10	**Michael Dürr** | **Contributed talk** Justus Liebig University Giessen, Germany *Highly site-selective fragmentation of peptides induced by swift heavy ion impact*
12:10-12:30	**Lars Breuer** | **Contributed talk** University of Duisburg-Essen, Germany *Velocity-resolved SNMS as a probe of electronically driven sputtering under swift-heavy-ion irradiation*
12:30-12:38	**Sponsor presentation (SCAN)**
12:40-14:00	**Lunch break**

Monday, 28 September 2026 (continued)

SESSION 3

14:00-14:30 **Anna Niggas | Invited talk**
TU Wien, Austria
Identifying electronic doorway states in secondary electron emission

14:30-14:50 **Chad Sosolik | Contributed talk**
Clemson University, USA
X-ray emissions from slow multiply-charged ions on Si and Nb targets

14:50-15:10 **Eliezer Kolodney | Contributed talk**
Technion - Israel Institute of Technology, Israel
Recent progress in studying the velocity correlated cluster emission (VCCE) effect in surface impact of keV C_{60}^- ions

15:10-15:30 **Richard Wilhelm | Contributed talk**
TU Wien, Austria
Chirality switching in 1T-TaS_2 with Slow Highly Charged Ions

15:30-16:00 **Coffee break**

SESSION 4

16:00-16:30 **Toma Susi | Invited talk**
University of Vienna, Austria
Atom and ion irradiation of graphene: disentangling inelastic from elastic scattering and the role of phonons

16:30-16:50 **Milena Majkić | Contributed talk**
University of Pristina - Kosovska Mitrovica, Serbia
Two-velocity regimes in nanostructure formation on metal surfaces induced by slow highly charged ions

16:50-17:10 **Sabrina Gouasmia Boussahoul | Contributed talk**
Ruđer Bošković Institute, Croatia
Modeling of Sputtering from Solid Surfaces Under Argon Cluster and Ion Bombardments: Comparison with Experimental and Simulated Data.

17:10-17:30 **Alexander Redl | Contributed talk**
TU Wien, Austria
Picosecond Ion Pulses from Laser-Stimulated Desorption at Tungsten Nanotips for Time-Resolved Ion-Solid Interaction Studies

Tuesday, 29 September 2026

SESSION 5

09:00-09:30 **Hongwei Cheng | Invited talk**
Institute of Modern Physics and School of Nuclear Science and Technology, University of Chinese Academy of Sciences, China
Reactivate the rule of "smaller and stronger": breaking the small size limit of mechanical metamaterials by swift heavy ions

09:30-09:50 **Xiang Lian | Contributed talk**
Australian National University, Australia
Osmotic Energy Conversion using Ion Track Etched Conical Nanopores in SiO_2

09:50-10:10 **Mohan Li | Contributed talk**
GSI Helmholtz Centre for Heavy Ion Research, Germany
Electrodeposition-Based Fabrication of Hierarchical Nanoporous Au Nanowire Networks with Tunable Electrochemical Functionality

10:10-10:30 **Shankar Dutt | Contributed talk**
Australian National University, Australia
Ion Track-Etched Silicon Dioxide Nanopores: A Swift Heavy Ion Route to Single-Molecule Biosensing

10:30-11:00 **Coffee break**

SESSION 6

11:00-11:30 **Alexander Azarov | Invited talk**
University of Oslo, Norway
Irradiation-induced phase transformations in Ga_2O_3 polymorphs

11:30-11:50 **Azat Abdullaev | Contributed talk**
Nazarbayev University and National Laboratory Astana, Kazakhstan
Polymorphism-Driven Thermal Conductivity Degradation in Swift Heavy Ion Irradiated β-Ga_2O_3

11:50-12:10 **Flyura Djurabekova | Contributed talk**
University of Helsinki, Finland
Amorphization versus defective spinel phase evolution in gallium oxide subjected to different ion beam irradiation conditions

12:10-12:22 **Sponsor presentation (ITR-LAB)**

12:25-14:00 **Lunch break**

Tuesday, 29 September 2026 (continued)

SESSION 7

14:00-14:30 **Amirthapandian Sankarakumar | Invited talk**
Indira Gandhi Centre for Atomic Research (IGCAR), India
In-situ investigation of ion beam induced dissolution, displacement and deformation of particles using i4-FESEM facility

14:30-14:50 **Friedrich Aumayr | Contributed talk**
TU Wien, Austria
How boronization alters tungsten erosion: Insights from ion-beam studies of W-B mixed layers

14:50-15:10 **Andreja Gajović | Contributed talk**
Ruđer Bošković Institute, Croatia
Study of the WTaVCr high entropy alloy for fusion application by irradiation with Cu and He ions in DiFU

15:10-15:30 **Jean-Marc Layet | Contributed talk**
Aix-Marseille University, CNRS, France
Production of negative ions at surfaces exposed to a low-pressure deuterium plasma: comparison between boron- and phosphorus-doped diamond, graphite and gadolinium

15:30-17:30 **Poster session and coffee break**

17:30-19:30 **ISC meeting**

Wednesday, 30 September 2026

08:30-15:00	**Boat Excursion with lunch**
SESSION 8	
15:30-16:00	**Nikita Medvedev** | **Invited talk** Institute of Physics, Czech Academy of Sciences, Czechia *Heating mechanisms in SHI tracks: nonthermal effects*
16:00-16:20	**Alexei Zverev** | **Contributed talk** University of Helsinki, Finland *First-Principles Modeling of Swift Heavy Ion Track Formation*
16:20-16:40	**Raquel Giulian** | **Contributed talk** Federal University of Rio Grande do Sul, Brazil *Simulation of InSb Nanofoams Induced by Ion Irradiation using the Cellular Potts Model*
16:40-17:00	**Ruslan Rymzhanov** | **Contributed talk** Joint Institute for Nuclear Research, Russia and Institute of Nuclear Physics, Kazakhstan *Non-radial Recovery Kinetics in Swift Heavy Ion Tracks in Monoclinic Zirconia*
17:00-19:00	**Poster session and coffee break**

Thursday, 1 October 2026

SESSION 9

09:00-09:30 **Ina Schubert | Invited talk**
GSI Helmholtz Centre for Heavy Ion Research, Germany
Size-dependent swift heavy ion irradiation effects in nanostructures

09:30-09:50 **Jacques O'Connell | Contributed talk**
CHRTEM, Nelson Mandela University, South Africa
Combined S/TEM-MD study on the nanostructure of ion tracks in $MgAl_2O_4$ spinel

09:50-10:10 **Hiro Amekura | Contributed talk**
National Institute for Material Science (NIMS), Japan
Fluence dependent ion-track formation and transition to self-organized nanodots in Si under 9 MeV C_{60} ion irradiation

10:10-10:40 **Coffee break**

SESSION 10

10:40-11:10 **John Hirtz | Invited talk**
University of Tennessee, USA
Advances in Neutron Scattering Characterization of Swift Heavy Ion Irradiated Nuclear Ceramics

11:10-11:30 **Ayman El-Said | Contributed talk**
King Fahd University of Petroleum and Minerals (KFUPM), Saudi Arabia
Tailoring Optical Properties of GaP Single Crystals by Irradiation with Energetic Heavy Ions

11:30-11:50 **Christopher Schröck | Contributed talk**
GSI Helmholtz Centre for Heavy Ion Research, Germany
Investigating Nanomaterials Under High-Pressure and Swift Heavy Ion Irradiation

11:50-12:10 **Norito Ishikawa | Contributed talk**
Japan Atomic Energy Agency, Japan
Track morphology in quartz irradiated with swift heavy ions: Thickness and edge effects

12:10-14:00 **Lunch break**

Thursday, 1 October 2026 (continued)

SESSION 11

14:00-14:30 **Kevin Vomschee | Invited talk**
Uppsala University, Sweden
Atomic collisions in solids - what can we learn from exit charge states, photon emission and their correlation?

14:30-14:50 **Hidetsugu Tsuchida | Contributed talk**
Kyoto University, Japan
Stopping power measurement of liquid water for heavy ions

14:50-15:10 **Karoly Tokesi | Contributed talk**
HUN-REN Institute for Nuclear Research, Hungary
Correlated Electron Dynamics in Ne^{10+} and He Collisions

15:10-15:30 **Carolin Frank | Contributed talk**
Uppsala University, Sweden and University of Duisburg-Essen, Germany
Rainbow Scattering from Graphene

15:30-16:00 **Coffee break**

SESSION 12

16:00-16:30 **Pedro Luis Grande | Invited talk**
Universidade Federal do Rio Grande do Sul, Brazil
Quantum Trajectories of Energy Loss: Ion Stopping from Bohmian Mechanics to Biological Media

16:30-16:50 **Claudia Montanari | Contributed talk**
CONICET and National University of Salta, Argentina
Antiproton and proton electronic stopping power in transition metals: a non-perturbative model

16:50-17:10 **Remigio Cabrera-Trujillo | Contributed talk**
Institute of Physical Sciences ICF, Mexico and University of Gothenburg, Sweden
Electronic Stopping in Atomic Systems: Effects of Trajectory, Energy Regimes, and Confinement

17:10-17:30 **Nikola Starčević | Contributed talk**
Vinča Institute of Nuclear Sciences, Serbia
Evolution of Crystal and Atomic Rainbows in 2 MeV Proton Scattering Through Ultrathin (001) Si Crystals

18:30-20:30 **Conference dinner at Bluesun Hotel Elaphusa**

20:30-01:00 **Entertainment: Thursday night fever at Bluesun Hotel Elaphusa Disco**

Friday, 2 October 2026

SESSION 13

09:00-09:30 **Arun Persaud | Invited talk**
Lawrence Berkeley National Laboratory, USA
Harnessing High-Energy Heavy Ion Irradiation for Engineering Color Center Qubits in Semiconductors

09:30-09:50 **Satoru Yoshioka | Contributed talk**
Osaka Metropolitan University, Japan
XAS investigation of Swift Heavy Ion-Induced Phase Transformations in ZrO_2: From Monoclinic to Orthorhombic and Tetragonal Phases

09:50-10:10 **Vladimir Skuratov | Contributed talk**
Joint Institute for Nuclear Research, Russia
Single ion induced luminescence kinetic in Al_2O_3 in nanosecond range

10:10-10:40 **Coffee break**

SESSION 14

10:40-11:10 **Shin-ichiro Sato | Invited talk**
National Institutes for Quantum Science and Technology, Japan
Rare-Earth Ion Implantation into Nanostructures: Towards Applications in Quantum Light Sources

11:10-11:30 **Tomás Fernández Bouvier | Contributed talk**
University of Helsinki, Finland
Molecular Dynamics insights on single ion implantation for quantum computer manufacturing

11:30-11:50 **Somar Dibeh | Contributed talk**
University of Vienna, Austria
Platinum single atoms and clusters embedded in mono- and few-layer graphene

11:50-12:10 **Rajdeep Kaur | Contributed talk**
Uppsala University, Sweden
Ion-induced tuning of resistive switching properties in amorphous TiO_2 memristors

12:10-12:30 **Closing ceremony**

The programme is subject to change.