### ICACS

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## SHIM

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28<sup>TH</sup> INTERNATIONAL CONFERENCE ON ATOMIC COLLISIONS IN SOLIDS

> CAEN 2018 ICACS SHIM

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10<sup>™</sup> INTERNATIONAL SYMPOSIUM ON SWIFT HEAVY IONS IN MATTER

#### www.shim-icacs2018.org







# THE FOLLOWING TOPICS WILL BE ADDRESSED:

**ICACS** deals with physical and chemical phenomena induced by the interaction beams with condensed matter (surface, bulk of solids and liquids). Projectiles include singly and charged ions, atoms and clusters, photons, electrons, positrons, antiprotons, etc.

It started in 1965 in Aarhus (Denmark). The most recent meetings have been held in Lanzhou (China, 2014), Debrecen (Hungary, 2014), Kyoto (Japan, 2012), Krakow (Poland, 2010) and Phalaborwa (South Africa, 2008).

The objectives of ICACS-28 are to assess the state of the art in the current understanding of a variety of basic phenomena.

**SHIM** 2018 will be the 10<sup>th</sup> International Symposium in a series started in Caen (France) in 1989. The most recent meetings have been held in Darmstadt (Germany, 2015), Kyoto (Japan, 2012) and Lyon (France, 2008) and brought together scientists performing research with high-energy heavy ions in various fields, including radiation effects in solids, atomic physics, plasma physics, radiation biology and medicine, and nanotechnology.

SHIM focuses on basic as well as applied research, including both theoretical and experimental aspects.

In 2012, ICACS and SHIM took place in Kyoto with an overlap of 2 days and joint social events. In 2018, ICACS and SHIM will be organized together in Caen (France), starting with the traditional ICACS tutorials on Sunday. The conference program will comprise invited lectures as well as oral and poster presentations. There will be no parallel sessions. Proceedings are planned as special issue of Nuclear Instruments and Methods B.

#### CONFERENCE CHAIRS

Brigitte Ban d'Etat // CIMAP, Caen Isabelle Monnet // CIMAP, Caen Hermann Rothard // CIMAP, Caen Ian Vickridge // INSP, Paris

#### ICACS

- charge-exchange processes;
- collective as well as single-particle excitation and ionization;
- energy loss, scattering and channeling of primary and secondary particles;
- electron, atom, ion and photon emission processes;
- slow highly-charged-ion interactions at surfaces;
- radiation damage and materials modification, including nuclear-energy materials;
- high-energy-density physics with intense ion beams and in relation to plasma physics;
- collision induced physical, chemical and biological reactions.

#### SHIM

- Interactions of Swift Heavy Ions with Gases, Liquids, Solids, and Plasmas
- Material Modifications
- Chemical and Biological Radiation Effects
- Applications:
- structuring of materials;
- ion-track based nanostructures;
- heavy-ion micro- and nanotechnology;
- effects of swift heavy ions on electronic devices;
- geological, astrophysical and other applications based on high-energy accelerators.



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