

INTERNATIONAL SCHOOL AND WORKSHOP ON ELECTRONIC CRYSTALS ECRYS-2017

<http://lptms.u-psud.fr/ecrys2017/>

August 21- September 2, 2017

Institut d'Etudes Scientifiques de
Cargèse, Corse, France.



Organizers:

Serguei Brazovskii	Orsay	France
Natasha Kirova	Orsay	France
Sylvain Ravy	Orsay	France

ECRYS-2017 continues the series of tri-annual conferences ECRYS on Electronic Crystals, which have been organized since 1993 in France. The event will be held by the Institut d'Etudes Scientifiques de Cargèse, Corse, France (<http://www.iesc.univ-corse.fr>). The international meeting will host about 100 scientists and PhD students. Each day, the program will integrate the advanced research school and the leading edge scientific conference.

The ECRYS goal is to bring together scientists who are involved in related problems but are divided in several loosely-interacting communities oriented towards more focused schools and conferences. The axes of the ECRYS integrate various areas in science of electronic aggregation in solids.

Materials: synthetic low-dimensional systems build from transition metals, oxides, chalcogenides etc; organic conductors; artificial atomic structures, charged patterns in soft and bio-matters, cold trapped ions; electronic ferroelectrics.

Effects: Cooperative electronic states like density waves, charge order and ferroelectricity, Peierls, Mott and excitonic, insulators; formations of patterns, stripes, solitons and their lattices; resulting collective nonlinear and non-stationary effects; states switching and dynamical phase transitions; weak crystallization.

Methods: nano-scale studies and manipulations by STM, STS and AFM; MBE- and FIB- fabricated nanostructures; high magnetic and electric fields; femto-second optical quenches and high tera-Hertz pulses; time-sliced ARPES, X-ray and electron diffraction.

Theory: mathematics of nonlinear and non-stationary processes; analytical and numerical techniques for many-body static and dynamical states.

Main axes of the Program:

- Charge and spin density waves
- Solitons and stripes
- Charge ordering and neutral-ionic transitions
- Electronic ferroelectricity
- Mott, Peierls, and excitonic insulators, Wigner crystals
- Superconductivity versus density waves
- Chirality from CDWs to superconductors
- Magnetic field, spins, skyrmions, FFLO
- Ions: from cold traps to colloids
- Electronic solids at nano-scales, on surfaces and in mono-layers
- Dynamics of electronic solids, hidden states, switching
- Weak crystallization

To appreciate the character of our meetings, please visit the website of the previous event <https://lptms.u-psud.fr/ecrys/>

Abstract Submission:

Deadline for the abstract submission is

April 15, 2017.

Some sources of financial support may be available. Fees waiving or reduction are previewed for PhD and master students and for some speakers.

Contact

brazov@lptms.u-psud.fr
kirova@lps.u-psud.fr
sylvain.ravy@u-psud.fr

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