

ICAP 2012

The 23rd International Conference on Atomic Physics

23–27 July 2012
Palaiseau – France

Book of Abstracts



Foreword

The 23rd International Conference on Atomic Physics takes place in Ecole Polytechnique, a high level graduate school close to Paris.

Following the tradition of ICAP, the conference presents an outstanding programme of invited speakers covering the most recent subjects in the field of atomic physics, such as:

- Ultracold gases and Bose Einstein condensates,
- Ultracold Fermi gases,
- Fundamental atomic tests and measurements,
- Precision measurements, atomic clocks and interferometers,
- Quantum information and simulations with atoms and ions,
- Quantum optics and cavity QED with atoms,
- Atoms and molecules in optical lattices,
- From two-body to many-body systems,
- Ultrafast phenomena and free electron lasers,
- Beyond atomic physics (biophysics, optomechanics...).

The program includes 31 invited talks and 13 ‘hot topic’ talks.

This book of abstracts gathers the contributions of these talks and of all posters, organized in three sessions.

The proceedings of the conference will be published online in open access by the “European Physical Journal Web of Conferences”, <http://www.epj-conferences.org/>

On behalf of the committees, we would like to welcome you in Palaiseau, and to wish you an exciting conference.

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Conference opening

Monday 23 July, 9.30am-11.15am

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Anderson localization of ultra-cold atoms (p. 33)

Alain Aspect (30 min)

Phase slips and weak links: superfluidity in rotating “circuits” of ultra-cold atoms (p. 34)

Gretchen Campbell (30 min)

Monday 23 July, 2.45pm-4.30pm

Ultracold Fermi gases

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Deborah Jin (45 min)

Strongly interacting Fermi gases: thermodynamics and topological phases (p. 35)

Martin Zwierlein (30 min)

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Christophe Salomon (30 min)

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Paolo De Natale (30 min)

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John Doyle

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Gerhard Rempe (30 min)

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Jelena Vuckovic (30 min)

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Ping Koy Lam

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Juliette Simonet

A superradiant laser with <1 intracavity photon (p. 44)

James Thompson

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Benjamin Lev

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Francesca Ferlaino

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Beyond atomic physics

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Philipp Treutlein

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Luis Orozco