



Hadrons and Nuclear Physics meet ultracold atoms: a French Japanese workshop

IHP (29/01/2018 - 02/02/2018)



Monday 29/01/2018

09h30-09h45 Welcome

Chairman: Jean-Marc Richard

09h45-10h15 *Scattering in Euclidean space: from Bethe-Salpeter equation to LQCD* –
Jaume Carbonnel (IPN Orsay)

10h15-10h45 *Exotic hadrons from lattice QCD* – Yoichi Ikeda (RCNP Osaka Univ.)

10h45-11h15 *Effective theory for the infrared regime of QCD* – Matthieu Tissier (LPTMC)

11h15-11h45 Coffee Break

Chairman: Bira van Kolck

11h45-12h15 *Artificial gauge fields for neutral atoms* – Fabrice Gerbier (LKB)

12h15-12h45 *Efimov physics of hadrons* – Tetsuo Hyodo (YITP Kyoto Univ.)

12h45-14h00 Cocktail at the Cafeteria of IHP

14h00-18h00 Discussions (room 201)

Tuesday 30/01/2018

Chairman: Jaume Carbonnel

09h45-10h15 *Hadronic molecules with a short-range force by a quark model* –
Yasuhiro Yamaguchi (RIKEN)

10h15-10h45 *Structure of hadron resonances with nearby zero of amplitude* –
Yuki Kamiya (YITP Kyoto Univ.)

10h45-11h15 *Tetraquarks* – Jean-Marc Richard (IPN Lyon)

11h15-11h45 Coffee Break

Chairman: Pascal Naidon

11h45-12h15 *Few-body problems via Faddeev-Yakubovsky equations formalism* –
Rimantas Lazauskas (IPHC Strasbourg)

12h15-12h45 *Five-body calculation of heavy pentaquark system* – Emiko Hiyama (RIKEN)

12h45-14h30 Lunch

Chairman: Rimantas Lazauskas

14h30-15h00 *Probing neutron-neutron correlations in ^{11}Li via the quasi-free (p,pn) reaction* –
Yuki Kubota (RIKEN)

15h00-15h30 *Very neutron-rich Carbon and Nitrogen isotopes at and beyond stability* –
Nigel Orr (LPC Caen)

15h30-18h00 Discussions (room 314)

Wednesday 31/01/2018

Chairman: Emiko Hiyama

09h45-10h15 ***Dineutron cluster states in neutron drip line nuclei*** –

Takashi Nakamura (Tokyo Inst. of Tech.)

10h15-10h45 ***Pairing in dilute neutron matter*** – Michael Urban (IPN Orsay)

10h45-11h15 ***New variational method using antisymmetrized molecular dynamics for nuclear many-body systems*** – Takayuki Myo (Osaka Institute of Tech.)

11h15-11h45 Coffee Break

Chairman: Dima Petrov

11h45-12h15 ***Bosons and Nucleons at Unitarity: From few to many*** –

Bira van Kolck (IPN Orsay)

12h15-12h45 ***Summation of diagrammatic series with zero convergence radius for strongly correlated fermions*** – Félix Werner (LKB)

12h45-14h00 Lunch

Social program

Remark: for the visit of the Sorbonne and for the cocktail, it is necessary to bring a passport or an identity card.

Visit of the mineral collection of Sorbonne University

14h15- Meeting point at the fountain
near the Jussieu metro station

14h30-15h30 Visit of the collection



Visit of the historical part of the Sorbonne

15h45- Meeting point in front of the « 47 rue des écoles »

16h00-18h00 Visit of the Sorbonne



Conference Cocktail

20h00- Cocktail at the 24th floor of the Zamansky Tower
(Campus Jussieu)



Thursday 1/02/2018

Chairman: Xavier Leyronas

09h45-10h15 ***One, two, three, many, few-body losses in many-body ensembles*** –

Frédéric Chevy (LKB)

10h15-10h45 ***Confinement induced trimer in a quasi-1D atomic waveguide*** –

Ludovic Pricoupenko (LPTMC)

10h45-11h15 ***Impurities in a BEC: from the Yukawa to the Efimov attraction*** –

Pascal Naidon (RIKEN)

11h15-11h45 Coffee Break

Chairman: Yvan Castin

11h45-12h15 ***Zoo of quantum halos*** - Yusuke Nishida (Tokyo Inst. of Tech.)

12h15-12h45 ***Mesoscopic few-body problem with short-range interactions*** –

Dima Petrov (LPTMS)

12h45-14h30 Lunch

14h30-18h00 Discussions (room 314)

Friday 2/02/2018

Chairman: Félix Werner

09h45-10h15 ***Dimer-dimer zero crossing in a one-dimensional mixture*** –

Alexandre Pricoupenko (LPTMS)

10h15-10h45 ***Momentum Distribution of a Dilute Unitary Bose Gas with Three-Body Losses*** –

Xavier Leyronas (LPS Paris)

10h45-11h15 超流動フェルミガス中のフォノン減衰

Amortissement des phonons dans les gaz de fermions superfluides –

Yvan Castin (LKB)

11h15-11h45 Coffee Break

Chairman: Nicolas Dupuis

11h45-12h15 ***Recent algorithmic developments in diagrammatic Monte Carlo*** –

Kris van Houcke (LPS Paris)

12h15-12h45 ***From One-Dimensional Charge Conserving Topological Superconductors to the Gapless Haldane Phase*** – Patrick Azaria (LPTMC)

12h45-14h30 Lunch

Chairman: Yusuke Nishida

14h30-15h00 ***Higgs amplitude mode in the vicinity of a quantum critical point*** –

Nicolas Dupuis (LPTMC)

15h00-15h30 ***Dirac cones for cold atoms in an optical lattice*** – Jean-Noël Fuchs (LPTMC)

15h30-18h00 Discussions (room 314)

