

## **Programme 4th Franco-Japanese workshop on Few-Body: from Atoms to Quarks**



Morning session: 10h30 – 13h00 with break between talks

Lunch: 13h00 – 14h00 (Friday 13h30-14h30)

Afternoon session: 14h00 -15h30/16h00 (Wednesday afternoon free, no session scheduled)

### **Monday** (Chair: Hiyama Emiko)

- Introduction and practical information
- Alireza Dehghani “*Ab initio study of antiproton-nucleus systems at low energies*”
- Pierre-Yves Duerinck “*The excited state of the  $\alpha$ -particle: a benchmark study*”

#### *Lunch*

- Yamanaka Nodoka “*Resolutions of the strong CP problem and the U(1) problem*”

*DRINKS RECEPTION* (16h00 -18h00)

### **Tuesday** (Chair: Ludovic Pricoupenko)

- Endo Shimpei “*Efimov states in highly excited nuclear halos*”
- Oi Kazuki “*Universality of Efimov states in highly mass-imbalanced cold-atom mixtures with van der Waals and dipole interactions*”

#### *Lunch*

- Lucas Happ “*Stabilization of three-body resonances to bound states in a continuum*”
- Chloë Hebborn “*Recent developments in reaction theory relevant for nuclear structure studies*”

**Wednesday** (Chair: Jaume Carbonell)

- Didier Beaumel “Clustering, resonances in  $^{10}\text{He}$  and the 6-neutron system”
- Uesaka Tomohiro TBA (TOGAXSI/clustering themed)

Lunch

FREE AFTERNOON

**Thursday** (Chair: Pascal Naidon)

- Nicolas Michel “Structure and reaction observables of drip-line nuclei with the Gamow Shell Model”
- Rimantas Lazauskas “Description of the He isotopes”

Lunch

- Hiyama Emiko “Structure of the heavy boron isotopes and related topics”
- Emeline Oliveira “Determination of the  $^{17}\text{B-n}$  scattering length” (short talk)

**Friday** (Chair: Jean-Marc Richard)

- Pascal Naidon “Closed-channel parameters of Feshbach resonances”
- Ludovic Pricoupenko “Universality in few-body resonances”
- Feng Wu “Bosonic three and four-body systems expanded around the unitarity limit” (short talk)

Lunch (~13h30-14h30)

END OF WORKSHOP

## Participant List

| First Name  | Last Name | Affiliation                                   |
|-------------|-----------|---|
| Lynda       | Achouri   | LPC-Caen                                      |
| Audrey      | Anne      | LPC-Caen                                      |
| Didier      | BEAUMEL   | IJCLab, Orsay                                 |
| Tobias      | Beck      | LPC-Caen                                      |
| Jaume       | Carbonell | Université Paris Saclay/CNRS/IJCLab           |
| Alan Cruz   | Dassie    | GANIL   |
| Alireza     | Dehghani  | Université Paris-Saclay, CNRS/IN2P3, IJCLab   |
| Franck      | Delaunay  | LPC-Caen                                      |
| Pierre-Yves | Duerinck  | ULB - IPHC                                    |
| Shimpei     | Endo      | Univ. Electro-Communications                  |
| Freddy      | Flavigny  | LPC-Caen                                      |
| Julien      | Gibelin   | LPC CAEN/Université de Caen                   |
| Lucas       | Happ      | Few-body Systems in Physics Laboratory, RIKEN |
| Chloe       | Hebborn   | IJCLab  |
| EMIKO       | HIYAMA    | Tohoku Univ./RIKEN                            |
| RIMANTAS    | LAZAUSKAS | IPHC, Strasbourg                              |
| Miguel      | Marques   | LPC-Caen                                      |
| Adrien      | Matta     | LPC Caen, CNRS-IN2P3                          |

| <b>First Name</b> | <b>Last Name</b> | <b>Affiliation</b>          |
|-------------------|------------------|-----------------------------|
| Nicolas           | Michel           | Institute of Modern Physics |
| Pascal            | Naidon           | RIKEN                       |
| Kazuki            | Oi               | Tohoku University           |
| Emeline           | OLIVEIRA         | LPC Caen                    |
| Nigel             | Orr              | LPC-Caen                    |
| Ludovic           | Pricoupenko      | LPTMC - Sorbonne Université |
| Jean-Marc         | Richard          | IP2I Université Lyon 1      |
| Tomohiro          | Uesaka           | RIKEN Nishina Center        |
| Feng              | Wu               | IJCLab                      |
| Nodoka            | Yamanaka         | RIKEN Nishina Center        |