



MAX-PLANCK-GESELLSCHAFT

Critical Stability of Quantum Few-Body Systems

Max Planck Institute for the Physics of Complex Systems

International School & Workshop 9 - 20 October 2017

Workshop week: 16 - 20 October

The lectures in the school will introduce basic few-body techniques understandable for mature master students. It will serve as an introduction to the following workshop. The interdisciplinary workshop will focus on the properties of weakly bound few-body quantum states at the edge of stability, and aim at exchanging information between different subfields where the same concepts and techniques are used.



Alabaster sculpture by Nicholas Durnan, exhibited at the Bridges Math and Art conference, 2011

Topics during school

- Few-body techniques using coordinate space for bound and continuum states
- Few-body techniques using momentum space for bound and continuum states
- Universality in few-body systems
- One- and two-dimensional systems

Topics during workshop

- Universality or Efimov physics
- Finite-range corrections to Efimov physics
- From few to many degrees of freedom
- One- and two-dimensional systems
- Dimensional crossover
- Multicomponent systems
- Dynamic evolution
- Reactions with weakly bound systems
- Mathematical problems

Lecturers during school

Garrido Bellido, Eduardo (ES)
Gattobigio, Mario (FR)
Valiente, Manuel (GB)
Yamashita, Marcelo (BR)

Invited speakers

Barnea, Nir (IL)
Blume, Doerte (US)
Busch, Thomas (JP)
Chin, Cheng (US)
Crespo, Raquel (PT)
Cui, Xiaoling (CN)
Deltuva, Arnoldas (LT)
D'Incao, Jose (US)
Dörner, Reinhard (DE)
Foerster, Angela (BR)
González Lezana, Tomás (ES)
Gridnev, Dmitri (DE)
Hammer, Hans-Werner (DE)
Harshman, Nathan L. (US)
Higa, Renato (BR)
Hiyama, Emiko (JP)
Kokkelmans, Servaas (NL)
Kolganova, Elena (RU)
Landua, Rolf (CH)
Lazauskas, Rimantas (FR)
Naidon, Pascal (JP)
Nishida, Yusuke (JP)
Okopińska, Anna (PL)
Petrov, Dmitri (FR)

Segovia, Jorge (DE)
Shimoura, Susumu (JP)
Stipanovic, Petar (HR)
Tan, Shina (US)
Tumino, Aurora (IT)
Valcarce Mejía, Alfredo (ES)
van Kolck, Bira (US/FR)
Viviani, Michelle (IT)
Volosniev, Artem (DE)
Yu, Zhenhua (CN)

Scientific coordinators

Tobias Frederico
São José dos Campos, BR
Aksel Stenholm Jensen
Aarhus, DK
Alejandro Kievsky
Pisa, IT
Jean-Marc Richard
Lyon, FR

Organisation

Maria de Haas
MPIPKS Dresden

Applications received before 11 June 2017 are considered preferentially.

Applications are welcome and should be made by using the application form on the event's web page. The number of attendees is limited. The registration fee for the international seminar and workshop is 120 Euro and should be paid by all participants. Costs for accommodation and meals will be covered by the Max Planck Institute. Limited funding is available to partially cover travel expenses.

For further information please contact:

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