

# ECT\*

EUROPEAN CENTRE  
FOR THEORETICAL STUDIES  
IN NUCLEAR PHYSICS AND RELATED AREAS

FONDAZIONE BRUNO KESSLER

## ECT\* Doctoral Training Programme 2020

Trento, July 6 – 31

### High-Energy and Nuclear Physics within Quantum Technologies

#### Programme coordinators

**PILAR HERNANDEZ** (*Universidad de Valencia, Spain*) | **SIMONE MONTANGERO** (*Università di Padova, Italy*)  
**YASSER OMAR** (*Universidade de Lisboa, Portugal*) | **ENRIQUE RICO** (*University of the Basque Country, Spain*)

#### Student Coordinators and Advisors

**ENRIQUE RICO** (*University of the Basque Country, Spain*) | **DIONYSIOS TRIANTAFYLLOPOULOS** (*ECT\*, Italy*)  
**HENDRIK VAN HEES** (*University of Frankfurt, Germany*)

#### Lecturers and Topics

- **CHRISTOF GATTRINGER** (*University of Graz, Austria*) Lattice QCD methods
- **PHILIPP HAUKE** (*Università di Trento, Italy*) Open Quantum systems and Optical Lattices
  - **STEFAN SCHAEFER** (*NIC, DESY, Germany*) Challenges in Lattice QCD
  - **RAINER BLATT** (*University of Innsbruck, Austria*) Experimental tools in ion traps
  - **ZOHREH DAVOUDI** (*University of Maryland, USA*) Nuclear physics and effective theories
  - **MARI CARMEN BAÑULS** (*Max-Planck-Institute of Quantum Optics, Germany*) Tensor network methods: from quantum information to solving lattice gauge theories
    - **DAVID KAPLAN** (*University of Washington, USA*) Chiral theories
- **FRED JENDRZEJEWSKI** (*University of Heidelberg, Germany*) Experimental tools in cold gases and optical lattices

#### Applications

Applications for the ECT\* Doctoral Training Programme should be made electronically through the ECT\* web page. It should include: a curriculum vitae, a 1-page description of academic and scientific achievements, a short letter expressing the applicants' personal motivation for participating in the programme.

In addition, a reference letter from the candidate's supervisor should be sent to:  
Professor Jochen Wambach - Director of ECT\* – Strada delle Tabarelle, 286 - 38123 Villazzano (TN) Italy  
(email to Barbara Gazzoli [gazzoli@ectstar.eu](mailto:gazzoli@ectstar.eu))

**Deadline for applications: April 20, 2020**

For further details see [www.ectstar.eu](http://www.ectstar.eu)