

# Nuclear physics and related areas @Trento

Feb. 17-18, 2020  
ECT\* meeting room

## Program

### Monday Feb. 17

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|---------------|--------------------------------------------------------------------------------------------------------------------------------------|
| 11:30 - 12:00 | <i>Quantum simulation for lattice gauge theories</i><br>Philipp Hauke (Unitn)                                                        |
| 12:00 - 12:30 | <i>A nuclear reactor on a quantum chip: dream or reality?</i><br>Francesco Pederiva (Unitn)                                          |
| 12:30 - 13:00 | <i>Quantum computing and nuclear physics</i><br>Martin Savage (INT and University of Washington)                                     |
| 13:00 - 14:30 | lunch                                                                                                                                |
| 14:30 - 15:00 | <i>Beyond general relativity: prospects and challenges</i><br>Massimiliano Rinaldi (Unitn)                                           |
| 15:00 - 15:30 | <i>The strong interaction under extreme conditions</i><br>Gert Aarts (Swansea University)                                            |
| 15:30 - 16:00 | <i>Gluon saturation in collider physics</i><br>Dionysios Triantafyllopoulos (ECT*)                                                   |
| 16:00 - 16:30 | Coffee break                                                                                                                         |
| 16:30 - 17:00 | <i>Ab initio approaches to nuclear dynamics: from sum rules to integral transforms</i><br>Giuseppina Orlandini (Unitn)               |
| 17:00 - 17:30 | <i>Ab initio computation of ground states and optical potentials</i><br>Carlo Barbieri (University of Surrey)                        |
| 17:30 - 18:00 | <i>Machine learning and the nuclear many-body problem</i><br>Morton Hjorth-Jensen (Michigan State University and University of Oslo) |

## **Tuesday Feb. 18**

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|---------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| 11.00 - 13.00 | <i>Remembering Renzo Leonardi</i>                                                                                                              |
| 13.00 - 15.00 | Buffet                                                                                                                                         |
| 15.00 - 15.30 | <i>Discovering drugs using nuclear theory</i><br>Pietro Faccioli (Unitn)                                                                       |
| 15.30 - 16.00 | <i>Definite uncertainty: accurate thermophysical properties from ab initio calculations</i><br>Giovanni Garberoglio (ECT*/LISC)                |
| 16.00 - 16.30 | <i>Supersolidity: new challenge from ultracold atom physics</i><br>Sandro Stringari (Unitn)                                                    |
| 16.30 - 17.00 | Coffee break                                                                                                                                   |
| 17.00 - 17.30 | <i>The future of hadron spectroscopy</i><br>Alessandro Pilloni (ECT*)                                                                          |
| 17.30 - 18.00 | <i>Compact binary mergers: new opportunities for nuclear and fundamental physics</i><br>Albino Perego (Unitn)                                  |
| 18.00 - 18.30 | <i>From vortices in superfluids to rotating (analog) black holes and back:<br/>a cross-fertilization tale</i><br>Jacopo Carusotto (CNR-Trento) |