

NONLINEAR QUANTUM DYNAMICS

22 October 2024

The time evolution of dynamical systems offers many surprises, in particular when many-body or effective nonlinearities via feedback or close to mean-field approximations are involved. Our interdisciplinary workshop presents various facets of control and dynamics relevant for state-of-the-art quantum technologies as well as basic science covering topics from atom-optics, open quantum systems, quantum engineering and cosmology.

Aula Maxwell, Department SMFI, plesso Fisica, Università di Parma

Program

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| 13:45 | Welcome address |
| 14:00-14:40 | Luca Salasnich, Padua University:
<i>Bose-Einstein condensates in curved geometries</i> |
| 14:45-15:25 | Ennio Arimondo, Pisa University:
<i>Floquet engineering of an ultracold rubidium atom qubit</i> |
| 15:30-16:10 | Andreas Buchleitner, Freiburg University:
<i>The distinctive feature of many-body quantum chaos</i> |
| 16:10-16:30 | Open Discussion |
| 16:30-17:45 | Department Seminar by Luca Amendola, Heidelberg University: <i>Cosmological geometry and gravity with non-linear large scale structure</i> , presentation by M. Pietroni |
| 18:00-18:40 | Francesco Petiziol, TU Berlin: <i>Floquet Engineering of anyons</i> |
| 20:00 | Social dinner |

Organisation: Sandro Wimberger



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