

Ph.D. Course in Materials Science and Nanotechnology

University of Milano-Bicocca, Department of Materials Science, via Cozzi 55, 20125 Milano

January 30, 2019 – 2.00 p.m.

Seminar room - Department of Materials Science U5

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Spinor and nonlinear effects in Exciton-polariton lattices

Exciton-polaritons are hybrid states of light and matter existing in semiconductor heterostructures. They have been typically studied in planar microcavities containing quantum wells, exhibiting spin-sensitive phenomena such as the optical spin Hall effect and nonlinear effects such as solitons and bistability. More recently, there has been a growing interest in studying exciton-polaritons in patterned lattices, where the interplay of spin-orbit interaction with magnetic field was shown to give rise to topological physics. Furthermore, as we will show, the spin sensitivity of nonlinear interactions allows exciton-polaritons in lattices to demonstrate complex phenomena, such as that of cellular automata."

PhD students and all interested in the seminar are kindly invited to participate.

The PhD Coordinator
Prof. Marco Bernasconi