



University of Crete  
Department of Physics

## Physics Colloquium

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Thursday, 8 February 2024 | 17:00 – 18:00, Seminar Room, 3rd floor

### Dynamics of confining spin chains

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#### ABSTRACT

*Spin chains in their ferromagnetic regime manifest confinement when switching on a magnetic field coupled to the order parameter, leading to interesting non-equilibrium behaviour, suppressing equilibration and transport in such systems. Under certain conditions, the system finds itself in a false vacuum, which is expected to decay via bubble nucleation, similar to first-order phase transitions in quantum field theory. I discuss the exotic phenomena in such circumstances, both in translation-invariant and inhomogeneous situations. Besides their relevance for condensed matter physics, these systems also advance our understanding of core phenomena in high-energy physics.*