

Quantum Simulation

Tuesday 2 September 2025 15:30 (1h 15m)

I will talk about the first experimental signatures of two-dimensional many-body false vacuum decay in a quantum material emerging from microscopic interactions. We used a programmable noisy superconducting quantum simulator with 2008 qubits in order to perform simulations corresponding to our specific experiment on quantum domain reconfiguration in a topological electronic crystal. We carefully chose a simulator with the same measured noise spectrum to ensure the fidelity of the model correspondence between the two systems, thereby presenting a realization of simulating real-world open quantum systems according to the original vision of Feynman.

Presenter: Dr VODEB, Jaka