

Towards Quantum Computing with Spins on Surfaces



Prof. Andreas Heinrich
Center for Quantum
Nanoscience, Seoul

or on zoom :
<https://epfl.zoom.us/j/64905394203>

Tuesday
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16:15
Room CE1 2

In this talk we will focus on quantum-coherent experiments with a Scanning Tunneling Microscope (STM). In order to study qubits with STM, we recently learned how to combine STM with electron spin resonance. Spin resonance gives us the means to quantum-coherently control an individual atomic or molecular spin on a surface. Using short pulses of microwave radiation further enables us to perform qubit rotations and learn about the quantum coherence times of our spins. Finally, we will demonstrate multi-qubit operations with spins on surfaces and discuss their performance measures. Future directions for improvements will wrap up the talk.

Host: Prof. Harald Brune