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# WG3: Low-energy gravitational effects in quantum systems

*Monday 7 July 2025 16:00 (50 minutes)*

This talk introduces the research foundations of WG3, which focuses on the theoretical development of gravitational interactions in quantum systems within the low-energy regime. We explore foundational questions about the nature of gravity and the role of observers, with an emphasis on identifying experimentally testable phenomena. Topics include quantum clocks, quantum reference frames, gravitationally induced decoherence models, theoretical frameworks and new protocols for tabletop experiments probing quantum aspects of gravity. These investigations are closely connected with the experimental developments in WG4, and the concepts and theoretical frameworks explored in WG1 and WG5, with many further synergies yet to be uncovered.

## Working Group

WG3 - Low-energy gravitational effects in quantum systems

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**Session Classification:** Working Group Introductions 2