Seminar/Talk

Quantum Sensing and Quantum Error Correction applied to rare stochastic signals

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Host: Julian Léonard and Maximilian Prüfer

Abstract :In this talk, I discuss the role of quantum error correction in enhancing quantum sensors. I will begin by reviewing established results on how and when quantum error correction protocols can be used to protect sensors in noisy environments. Then, I will present our recent work, where we developed a protocol to detect rare stochastic signals in a noisy environment using quantum error correction. Specifically, I will show how we achieve an improved sensitivity of our approach over more conventional sensing strategies.[This talk is based on arXiv:2601.04313.]

Thursday, April 30, 2026 10:00am - 11:00am
Office Bldg West / Ground floor / Heinzel Seminar Room (I21.EG.101)

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