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(I) Quantum Magnetometry with the Diamond NV-Centre

Tuesday 8 June 2021 15:00 (20 minutes)

The diamond Nitrogen-Vacancy centre (NV-centre) is a defect which occurs in natural diamonds, and can also be introduced artificially. Due to screening effects, the NV-centre defect exhibits remarkably long spin coherence times. This means the diamond NV centre can be used for precision magnetometry, using Optically Detected Magnetic Resonance (ODMR) of the Zeeman splitting. This talk will review the history and basic physics of the diamond NV-centre, and describe work toward a new compact diamond NV-centre magnetometer, with potential applications in geophysical sensing.

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