

PSI Condensed Matter Colloquium

Friday, June 22, 2018, 11:15 h,
WHGA/001 (Auditorium)

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Exploring nanoscale magnetism with a single spin microscope

Diamond has emerged as a unique material for a variety of applications, both because it is very robust and because it has defects with interesting properties. One of these defects, the nitrogen-vacancy center (NV center), has a single spin associated with it that shows quantum behavior up to room temperature. Our group is harnessing the properties of single NV centers for high resolution magnetic sensing applications.

In this talk, I will give an introduction into the basics of diamond-based quantum sensors and present an outlook of some key applications pursued in our laboratory, including the imaging of current distributions and magnetism in two-dimensional materials with sub-50-nm resolution.

