Spin Mechanics 4



Contribution ID: 96

Type: Invited Talk

Quantum-limited and backaction evading measurements in optomechanics

Thursday 23 February 2017 08:00 (1h 6m)

In this tutorial-style talk, I'll give an introduction to various aspects of how quantum mechanics constrains measurements in optomechanics. Among the topics I'll cover include the formal definition of the quantum limit on continuous position measurement, techniques for beating the "standard" quantum limit, and back-action evading measurement strategies. Time permitting, I will end by discussing our recent work on two-mode backaction evading measurements and connections to autonomous feedback protocols (i.e. "reservoir engineering") for stabilizing entangled mechanical (or magnonic) states.

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