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## **Microscopic simulations with modern nuclear forces**

*Monday, 16 June 2014 15:45 (30 minutes)*

I will first go over the status of modern nuclear theory, especially in connection with first-principles studies of strongly interacting nucleons. After some general points on the underlying theory of Quantum Chromodynamics (QCD), I will go over the efforts toward connecting QCD with many-nucleon studies (via chiral Effective Field Theory [EFT]). I will then introduce a recent local reformulation of chiral EFT, which makes it possible to use such modern potentials within the framework of Quantum Monte Carlo (an essentially exact type of microscopic simulation method).

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