

## From nuclear forces to structure and astrophysics

*Monday, 18 May 2015 09:15 (35 minutes)*

In this talk I will introduce the big picture of modern low-energy nuclear theory. Specifically, I will first go over the efforts toward connecting nucleon-nucleon and three-nucleon interactions with the fundamental theory of Quantum Chromodynamics, in the context of what is known as chiral Effective Field Theory (EFT). I will then discuss first-principles studies of the many-nucleon problem that use chiral EFT to assess some of the systematic uncertainties involved in theoretical predictions. This overview will include both finite nuclei and infinite matter, that is, systems that are of both terrestrial and astrophysical relevance.

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