

Institute Lecture



Prof. William Detmold

Massachusetts Institute of Technology

The secret life of quarks



@ 6.15pm | Thursday, January 9, 2020

Venue: L 17 (LHC)

About the Talk

This talk will focus on the femtoscale universe inside protons and atomic nuclei and discuss the quarks and gluons that define this realm. After introducing the physical principles that govern these systems and highlighting new developments in the calculation of their properties, the talk will focus on the consequences of this substructure for understanding everyday matter and searching for new physical principles beyond the current paradigm.

About the Speaker

Professor William Detmold obtained his PhD from the University of Adelaide, Australia. He joined the MIT physics faculty in 2012, moving from the College of William & Mary where he was an Assistant Professor.

Prof. Detmold's research interests are in strong interaction dynamics in theoretical particle and nuclear physics. Detmold uses analytic methods and supercomputers to solve the complex equations of quantum chromodynamics (QCD) that describe the strong interaction and seeks to understand the emergence of hadrons and nuclei from the underlying Standard Model of particle physics. He aims to determine the properties and interactions of these systems from first principles to confront experiment and to make predictions for regimes such as in the interior of neutron stars where experiments are not possible.

All are invited to attend

Dean of Research and Development