

PRISMA+ Colloquium

Dec. 7, 2022 at 1 p.m.
Lorentz-Raum, 05-127, Staudingerweg 7

Prof. Dr. Tim Cohen
CERN, Switzerland

Three Effective Field Theory Vignettes

The referent will describe some recent work on applying Effective Field Theory (EFT) methodology to three different physically interesting systems. First he will explain the philosophy and general methodology of EFT. He will then present three short vignettes. The first has to do with techniques for systematically computing the EFT parameters from a given more fundamental description. The second will show how EFT can be used to understand the behavior of quantum fields in an inflationary background, with applications to light scalar fields and the inflaton itself. And in the third, the referent will show how EFT ideas can be applied to systematically improve a numerical technique for quantum field theory known as Hamiltonian truncation.