

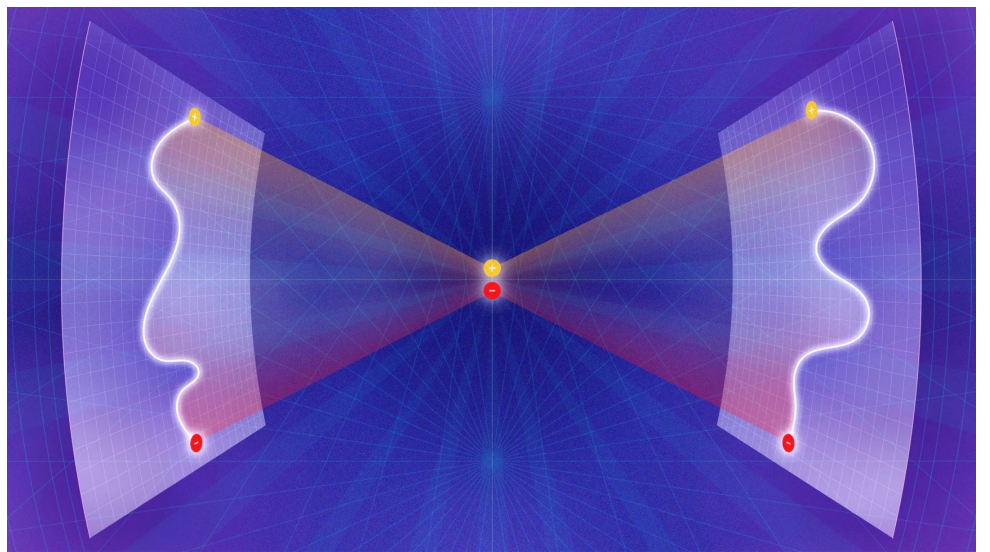
COLLOQUIUM SERIES

Calculating the impossible: using symmetries and the lattice to understand quantum field theory



Maria Neuzil

University of Minnesota



Quantum field theory is a powerful mathematical framework to understand the microscopic world around us. But in practice, it often produces immensely complicated equations that are impossible to solve. How, then, can physicists make sense of these equations? I will discuss two powerful strategies --- symmetries and lattice field theory -- and how they work together to help us make sense of the quantum world.

Maria Neuzil is a graduate student at the University of Minnesota studying many aspects of quantum field theory, from lattice models to modern ideas about symmetry to the old problem of quark confinement. She particularly likes solving puzzles that require lots of spatial visualization. Outside of physics, she loves playing bluegrass and old time music all around the Twin Cities.

Wednesday, October 8

3:00 PM | RNS 210