

Undergraduate Colloquium in Mathematics
Thursday, February 2nd 2PM-3PM
STV 325

Quantum Mechanical Scattering
using Path Integrals

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The Path Integral technique is an alternative formulation of quantum mechanics that is completely equivalent to the more traditional Schrödinger equation approach. Developed by Feynman in the 1940's, following inspiration from Dirac, the path integral approach has been widely used in high energy physics, quantum field theory, and statistical mechanics. However, only in limited cases has the path integral approach been applied to quantum mechanical scattering. An overview of various quantum mechanical scattering methods will be given, along with a discussion of the theoretical and computational development of the path integral method for use in the study of atomic collisions.

