Mathematical and Numerical Aspects of Quantum Dynamics
June 19–21, 2018
Center for Scientific Computation And Mathematical Modeling
University of Maryland

Organizers
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Confirmed Participants
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Scientific Background
Understanding and numerically simulating quantum dynamics remains one of the great outstanding scientific challenges. This workshop aims to gather a group of mathematicians, physicists, and chemists to exchange ideas and foster collaborations on various topics related to quantum dynamics. Potential topics include adiabatic theory, topological insulators, semiclassical analysis. Numerical methods to be discussed include surface hopping, path-integral, quantum Monte Carlo, and tensor network methods.

Goals
Bringing together chemists and physicists with focus on topics in chemical and quantum dynamics with potential intercation for applied math, in particular, issues that can benefits from further impact using kinetic theories. The goal is to have a forward-looking workshop that establishes long term interactions between communities.