A High-Order Low-Order Algorithm with Exponentially-Convergent Monte Carlo for Thermal Radiative Transfer

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TEXAS A&M ENGINEERING

Outline

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Overview

- We are interested in modeling thermal radiation transport in the high-energy density physics regime
  - Temperatures on order of 10^6 K or more
  - Significant energy and momentum may be exchanged with material

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- Radiative transfer simulations important in modeling:
  - Material under extreme conditions
  - Inertial confinement fusion
  - Supernovae and other astrophysical phenomena.