BI-CO MATHEMATICS COLLOQUIUM

Dr. Joseph Nakao

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"Balancing Efficiency, Physics, and Robustness: What Goes into Designing a *Good* Algorithm?"

Monday, February 5, 2024
Talk at 4:15 – Park 245
Tea at 4:00 – Park 361, Math Lounge

Abstract:
Many physical systems can be described by partial differential equations (PDEs). Yet, analytic solutions are oftentimes unavailable, and lab experiments have financial and time restrictions. This motivates the need for numerical solutions. When numerically solving PDEs, we must consider the storage requirements, computational complexity, physical structures, and much more. In this talk, I will overview the ingredients we consider when constructing an algorithm to numerically solve PDEs, followed by my current research endeavors.

BRYN MAWR COLLEGE