

*Department of Mathematics,
University of California San Diego*

Department Colloquium

David Maxwell

University of Alaska

Non-vacuum initial data sets in general relativity

Abstract:

We describe a principled approach for constructing non-vacuum initial data sets for the Cauchy problem in general relativity. The core idea has an interesting history of having been known in the '70s, forgotten by the mathematical relativity community for decades, and now independently rediscovered and rigorously demonstrated. We show how it explains why certain techniques for generating initial data worked well in the past, but also how it leads to new equations with appealing physical properties when generating initial data containing fluids. The talk will be targeted at a broad audience.

Mike Holst

April 5, 2023

4:00 PM

APM 6402
