

Stanford



Warren Li

Postdoctoral Scholar, Mathematics

Bio

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Hello! I am a Stanford Science Fellow working in the Mathematics department. I am interested in the theory of nonlinear wave equations of mathematical physics, including the Einstein equations of General Relativity, the equations of gas mechanics, and related models. In particular, my research concerns a detailed understanding of "singularity formation" for such models, where energy is concentrated and interacts in such a way that the models, in some sense, break down. My focus is on understanding exactly how such a breakdown occurs and the physical implications.

STANFORD ADVISORS

- Jonathan Luk, Postdoctoral Faculty Sponsor

Teaching

COURSES

2025-26

- Partial Differential Equations: MATH 256A (Win)

Publications

PUBLICATIONS

- **Kasner Bounces and Fluctuating Collapse Inside Hairy Black Holes with Charged Matter** *ANNALS OF PDE*
Li, W., van de Moortel, M.
2025; 11 (1)
- **Kasner-Like Description of Spacelike Singularities in Spherically Symmetric Spacetimes with Scalar Matter** *ANNALS OF PDE*
Li, W.
2025; 11 (1)