

Stanford



Oliver Lindblad Petersen

Postdoctoral Research Fellow, Mathematics

Bio

BIO

I am a Postdoc in mathematics, working with Andras Vasy.

PROFESSIONAL EDUCATION

- Doctor of Philosophy, University of Potsdam (2018)
- Master of Science, Royal Institute of Technology (2014)
- Bachelor of Science, Royal Institute of Technology (2014)

STANFORD ADVISORS

- Andras Vasy, Postdoctoral Faculty Sponsor

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

My research is in Geometric Analysis, with emphasis on the following two topics:

1. Wave equations near horizons in general relativity. This amounts to a study of singular and degenerate hyperbolic PDEs on Lorentzian spacetimes. There are natural geometric applications related to the strong cosmic censorship in cosmology and the black hole uniqueness conjecture.
2. Ricci flow on non-compact manifolds. Together with Klaus Kröncke in Hamburg, we work on stability questions for Ricci flow on manifolds with a prescribed asymptotic structure at infinity. This requires a good understanding of parabolic equations on non-compact manifolds.

Preprints and publications:

<https://arxiv.org/search/?searchtype=author&query=Petersen%2C+O+L>