

ISTVAN KADAR

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Positions

Hermann Weyl Instructor at ETH Zürich

Sept. 2025– present

- Group leader: Mikaela Iacobelli

Postdoc at Princeton Gravity initiative

Sept. 2024– Sept 2025

- Supervisor: Mihalis Dafermos

Education

PhD in Mathematics, University of Cambridge

Oct. 2020– July 2024

- Advisor: Claude Warnick

MMath, University of Cambridge

Oct 2016 – June 2020

- 1st class in year 1-3. Honours in final year.
- Sir Peter and Lady Gershon Prize for best Mathematics result in college.
- Anthony and Christina Kelly Prize in Materials Science and Metallurgy for the best exam in college.

Research interest

Partial Differential Equations, Nonlinear Waves equations, General Relativity

Publications

- *Scattering, Polyhomogeneity and Asymptotics for Quasilinear Wave Equations From Past to Future Null Infinity* with Leonhard Kehrberger. Preprint. 2025, arXiv:2501.09814
- *Construction of multi-soliton solutions for the energy critical wave equation in dimension 3.* Preprint. 2024, arXiv:2409.05267
- *A scattering theory construction of dynamical solitons in 3d .* Preprint. 2024, arXiv:2403.13891
- *Small data nonlinear wave equation numerology: The role of asymptotics.* Preprint. 2023, arXiv:2302.07312
- *On global behaviour of classical effective field theories.* Preprint. 2022, arXiv:2208.09194

Invited talks

Hyperbolic and Dispersive Equations on Curved Geometries, Simons Center	Apr 2025
Analysis seminar, Georgia Institute of Technology	Mar 2025
Analysis seminar, University of Massachusetts Amherst	Feb 2025
Analysis seminar, Yale University	Feb 2025
Analysis seminar, Rutgers University	Jan 2025
Analysis seminar, Berkeley	Nov 2024
Analysis seminar, Stanford	Nov 2024
Analysis seminar, California Institute of Technology	Nov 2024
Analysis seminar, Vanderbilt University	Oct 2024
Princeton Gravity Initiative	Sep 2024
Analysis seminar, Columbia University	Sep 2024
Analysis seminar, Princeton University	Sep 2024
Gravitational physics and its mathematical analysis, Les Diablerets	Jun 2024
Nonlinear Waves and Relativity, Vienna	Jun 2024

13th Oxbridge PDE, Oxford	Mar 2024
Analysis seminar, CY Cergy Paris Université	Dec 2023
General Relativity and PDE seminar, Leipzig	Nov 2023
General Relativity seminar, Munster	Nov 2023
General Relativity seminar, Cambridge	Nov 2023
Cretan waves conference, University of Crete	Sep, 2023
Online GR and Hyperbolic PDE seminar	Sep, 2023
Singularities and Curvature in General Relativity, Nijmegen	June 2023
Junior Analysis Seminar, Imperial College, London	June 2023
Wave by the Thames, Kings College London	June 2023
Pre analysis seminar talk, ETH, Zurich	May 2023
Cambridge–Princeton seminar	May 2023
Interdisciplinary junior scientist workshop: Mathematical General Relativity, Wildberg	March 2023
DPMMS PDE seminar, Cambridge	Feb 2023

Research visits

ETH Zurich, invited by Peter Hintz	May 2023
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Teaching

Part III Analysis of Partial Differential Equations	Michaelmas 2022
Part III General Relativity	Michaelmas 2021-2023
Part 1a Vector Calculus	Lent 2021
Part Ib Electromagnetism	Lent 2021
Part II Principles of Quantum Mechanics	Michaelmas 2020-2021