

# SERBAN EUGEN CICORTAS

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## EDUCATION

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| <b>Princeton University</b><br><i>PhD in Mathematics</i><br>Advisor: Igor Rodnianski.  | <b>September 2021 - Present</b>   |
| <b>University of Cambridge, Trinity College</b><br><i>Master of Advanced Study in Pure Mathematics, Distinction</i><br>Part III Essay: The Existence of Naked Singularities and Their Instability.<br>Advisor: Mihalis Dafermos. | <b>October 2020 - July 2021</b>   |
| <b>Princeton University</b><br><i>Bachelor of Arts in Mathematics, Highest Honors</i><br>Senior Thesis: Global Stability for Weak Null Wave Equations with Multi-localized Initial Data.<br>Advisor: Sergiu Klainerman.          | <b>September 2016 - June 2020</b> |

## RESEARCH INTERESTS

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Partial Differential Equations, General Relativity, Nonlinear Wave Equations

## PUBLICATIONS

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| <b>5. Discretely self-similar exterior-naked singularities for the Einstein-scalar field system</b><br>with Christoph Kehle<br>arXiv:2412.09540. Submitted.                             | 2024 |
| <b>4. Systems of wave equations on asymptotically de Sitter vacuum spacetimes in all even spatial dimensions</b><br>arXiv:2411.16655. Submitted.  | 2024 |
| <b>3. Nonlinear scattering theory for asymptotically de Sitter vacuum solutions in all even spatial dimensions</b><br>arXiv:2410.01558. Submitted.                                      | 2024 |
| <b>2. Scattering for the wave equation on de Sitter space in all even spatial dimensions</b><br>arXiv:2309.07342. Submitted.  | 2023 |
| <b>1. Extensions of Lorentzian Hawking–Page solutions with null singularities, spacelike singularities, and Cauchy horizons of Taub–NUT type</b><br>Ann. Henri Poincaré (online first). | 2024 |

## INVITED TALKS

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"Singularities and Cosmic Censorship, from vacuum to matter" Workshop, Fields Institute, Upcoming talk	May 2026
PDE/Analysis Seminar, MIT, Upcoming talk	September 2025
Hyperbolic and Dispersive Equations on Curved Geometries Workshop, Simons Center	April 2025
Elaine Hubbard PDE Seminar, Georgia Institute of Technology	November 2024
Analysis Seminar, University of Toronto	November 2024
Princeton Gravity Initiative Workshop, Flash talk	March 2024
Princeton Graduate Student Seminar	February 2024
Mathematical GR and Hyperbolic PDE Seminar, Online talk	March 2023
Princeton Graduate Student Seminar	February 2023

## TEACHING EXPERIENCE

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Teaching Assistant for Integration Theory, Complex Analysis	Fall 2024 - Present
Instructor for SLMath Summer School "Mathematics of General Relativity and Fluids"	Summer 2024
Preceptor for MAT 201 - Multivariable Calculus	Summer 2024
Preceptor for MAT 175 - Mathematics for Economics/Life Sciences	Fall 2023 - Spring 2024
Teaching Assistant for Integration Theory, Complex Analysis	Fall 2022 - Spring 2023

## AWARDS

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Centennial Fellowship	2021 - 2025
Trinity Studentship in Mathematics	2020 - 2021
George B. Covington Prize in Mathematics	2020
Elected to Membership in the Society of Sigma Xi	2020
Elected to Membership in the Phi Beta Kappa Society	2019
Peter A. Greenberg '77 Prize	2019
Princeton University German Department Book Prize	2017, 2018, 2019

## OTHER

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Princeton-Cambridge Joint General Relativity Seminar Organizer	2022-2025
Princeton Graduate Student Seminar Co-Organizer	2022-2023