

Jakob Robnik

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EDUCATION

- **University of California, Berkeley, USA** Aug 2021–Jun 2026 (expected)
Ph.D. Physics Thesis advisor: Uroš Seljak
- **Eidgenössische Technische Hochschule, Zürich, Switzerland** Sep 2019–Mar 2021
M.Sc., Physics Thesis advisor: Robert Brandenberger
- **University of Ljubljana, Slovenia** Oct 2016–Aug 2019
B.Sc., Physics Thesis advisor: Miha Ravnik

FELLOWSHIPS, GRANTS AND FUNDING

- **Heising-Simons Foundation Fellowship** 2022–2026
Developing probabilistic Kepler exoplanet catalog
- **Grant by the U.S. Department of Energy** 2023–2026
Enable research for Data-intensive Machine Learning and Analysis
- **Ad futura Fellowship** 2019–2021
Tuition and living expenses for talented Slovene students abroad
- **ASEF Fellowship** 2018
Research with Prof. Uroš Seljak, UC Berkeley
- **Zois Fellowship** 2012–2019
Living expenses for talented students

HONORS AND AWARDS

- **Honorable Mention**, Gravity Research Foundation Essay 2021
- **Graduation with Distinction**, ETH Zürich (High GPA) 2021
- **Dean's Prize**, University of Ljubljana, Faculty of Mathematics and Physics 2017, 2018 and 2019
- **Bronze medals at International Olympiads**
Astronomy and Astrophysics (IOAA), India 2016
Physics (IPhO), Switzerland 2016
- **Absolute winner at Slovene national competitions**
Physics 2016
Astronomy 2015 and 2016

PUBLICATIONS

A list of publications will be provided separately.

INVITED SEMINARS

- **Flatiron Institute's Center for Computational Mathematics, New York** 2025
"Gradient-based MCMC in high dimensions"
- **FORTH Institute of Astrophysics, Heraklion** 2025
"Periodicity significance testing: null signal templates"
- **LMU Department of Statistics, München** 2024
"Scalable Bayesian neural networks in Blackjax: Microcanonical Langevin Monte Carlo"
- **Astrophysics Working Group, NANOGrav** 2024
"Reassessment of PTF's SMBH binary candidates with null-signal templates"
- **Deep Skies Lab, Chicago** 2022
"Towards field-level inference: Microcanonical Langevin Monte Carlo"
- **Center for Integrative Planetary Sciences, Berkeley** 2022
"Probabilistic exoplanet search"
- **Faculty of Computer and Information science, Ljubljana** 2022
"Microcanonical Hamiltonian Monte Carlo"

CONTRIBUTED TALKS

- **"Bayesian Deep Learning for Cosmology and Time Domain Astrophysics", Paris** 2025
"What does it take to scale MCMC to high dimensions?"
- **"The Formation and Early Evolution of Supermassive Black Holes", Baltimore** 2024
"Periodicity significance testing with null-signal templates: reassessment of PTF's SMBHB candidates"
- **"From Perturbation Theory to AI", Split** 2024
"Sampling with Blackjax: Microcanonical Langevin Monte Carlo"
- **"Advances in Approximate Bayesian inference", Vienna** 2024
"Fluctuation without dissipation: Microcanonical Langevin Monte Carlo"
- **"Cosmology", Vipolže** 2022
"Statistical significance testing with partial prior information"
- **"Statistical Challenges in Modern Astronomy VII", Penn State University** 2021
"Probabilistic exoplanet search with Fourier methods"

ACADEMIC SERVICE

- **Research mentor**
 - Emma Yu, Physics Innovators Initiative (undergraduate student) 2025
 - Levi Galvan, MPS Scholars Research Fund (undergraduate student) 2024
 - Zihao Wu, (undergraduate student) 2023–2024
 - Rohith Karur, (graduate student) 2023–2024
- **Conference organizer**
 - "From Perturbation Theory to AI", Split, Croatia* 2024
 - "Cosmology", Vipolže, Slovenia* 2022
- **Reviewer**
 - NeurIPS Conference on Neural Information Processing Systems 2025
 - European Physical Journal C 2023
- **Exam designer** 2017–2025
 - National high school physics competitions, Slovenia
- **Tutor for undergraduate physics students** 2016–2021
 - ETH Zürich & University of Ljubljana