Bryce Wedig

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GitHub: github.com/bryce-wedig

Research Interests

Strong gravitational lensing, dark matter substructure in galaxies, optical/near-IR space telescope image simulation

Education

Washington University in St. Louis — St. Louis, MO, USA
Ph.D. in Physics — 2022–Present
- Advisor: Dr. Tansu Daylan
- A.M. in Physics (en route) achieved May 2024

Trinity College, University of Cambridge — Cambridge, UK
M.Phil. in History and Philosophy of Science and Medicine, *First Class Honours* — 2018–2019
- Dissertation: "Wavefunction ontology and Koopman-von Neumann theory"
- Supervisor: Dr. Jeremy Butterfield

Kenyon College — Gambier, OH, USA
B.A. in Physics, Philosophy, *magna cum laude* — 2014–2018

Lady Margaret Hall, University of Oxford — Oxford, UK
Visiting Student Programme, Physics and Philosophy — 2016–2017

Professional Experience

- **Technical Consultant**, R&D Technical Services, Veeva Systems — Oct 2021–Jun 2022
  Developed and implemented custom software integrations with Veeva Vault and extended system functionality utilizing Vault Java SDK and REST API, Amazon Web Services. Managed integration and development projects.
- **Associate Consultant**, R&D Services, Veeva Systems — Oct 2019–Oct 2021
  Implemented Veeva's Vault cloud software applications at global life sciences companies. Led candidate case study interviews and mentored new hires' mock projects.

Honors and Awards

- **1st Place (Graduate Division)**, Washington University Physics Research Symposium — 2024
- **Future Investigators in NASA Earth and Space Science and Technology (FINESST)** — 2024
  $150,000 award for *Maximizing JWST and Roman Dark Matter Science with Strong Gravitational Lensing*
- **First Class (Distinction)**, M.Phil. Dissertation, University of Cambridge — 2019
- **Member**, Phi Beta Kappa, Beta of Ohio, Kenyon College — 2018
- **Distinction**, Senior Exercise in Physics, Department of Physics, Kenyon College — 2018
- **Distinction**, Senior Exercise in Philosophy, Department of Philosophy, Kenyon College — 2018
- **Member**, Sigma Pi Sigma, the Physics Honor Society (American Institute of Physics) — 2017
- **Merit List Scholar**, Kenyon College — 2014–2018
- **Trustee Opportunity Scholarship**, Kenyon College — 2014–2018

Publications

[1] **B. Wedig**, T. Daylan, S. Birrer, F.-Y. Cyr-Racine, C. Dvorkin, D. P. Finkbeiner, A. Huang, X. Huang, R. Karthik, N. Khadka, P. Natarajan, A. M. Nierenberg, A. H. G. Peter, J. D. R. Pierel, X. T. Tang, and R. H. Wechsler, "The Roman View of Strong Gravitational Lenses", *submitted to ApJ and ApJS*,

Presentations

Contributed Conference Talks

- "The Roman View of Strong Gravitational Lenses" January 2025
  245th Meeting of the American Astronomical Society, National Harbor, MD, USA
- "The Roman View of Strong Gravitational Lenses" December 2024
  Mid-American Regional Astrophysics Conference, Lawrence, KS, USA
- "The Roman View of Strong Gravitational Lenses" July 2024
  "Challenging Theory with Roman: From Planet Formation to Cosmology," Pasadena, CA, USA
- "Image Simulation of Strong Gravitational Lenses Detectable by the Roman Space Telescope" January 2024
  243rd Meeting of the American Astronomical Society, New Orleans, LA, USA

Poster Presentations

- "The Roman View of Strong Gravitational Lenses" November 2024
  Washington University Physics Research Symposium, Department of Physics, Washington University in St. Louis
- "Image Simulation of Strong Gravitational Lenses Detectable by the Roman Space Telescope" November 2023
  Washington University Physics Research Symposium, Department of Physics, Washington University in St. Louis

Service and Public Engagement

- **Judge**, Chambliss Astronomy Achievement Student Awards 2025
  245th Meeting of the American Astronomical Society
- **Speaker**, Astronomy on Tap STL October 2024
- **Co-organizer**, Washington University Cosmology and Astrophysics Seminar 2024–Present
- **Graduate Student Mentor**, Department of Physics, Washington University in St. Louis 2023–Present

Teaching

- **Assistant in Instruction**, Department of Physics, Washington University in St. Louis 2023
  Physics II Laboratory (PHYS 192L), Physics I Laboratory (PHYS 191L)
- **Apprentice Teacher**, Department of Modern Languages and Literatures, Kenyon College 2014–2017
  Intensive Introductory Japanese (JAPN 111-112Y), Intermediate Japanese (JAPN 213-214Y)
- **Teaching Assistant**, Johns Hopkins Center for Talented Youth Summer 2017
  Advanced Topics in Physics: Special Relativity (SREL)
- **Tutor**, Department of Physics, Kenyon College Spring 2016
  Oscillations and Waves (PHYS 245)

Memberships

- **LSST Dark Energy Science Collaboration (DESC)** 2024-Present
- **American Astronomical Society** 2023-Present