Edward M. Berman (he/him)

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EDUCATION

Northeastern University

Boston, MA

Bachelor of Science Mathematics; Bachelor of Science Applied Physics

09/21 - 06/25

Publications

ASTRONOMY

- Edward Berman, et al.: "Efficient PSF Modeling with ShOpt.jl: A PSF Benchmarking Study with JWST NIRCam Imaging" Submitted to the Astronomical Journal. https://arxiv.org/abs/2401.11625
- Edward Berman, Jacqueline McCleary.: "ShOpt.jl: A Julia Package for Empirical Point Spread Function Characterization of JWST NIRCam Data" Conditionally accepted to The Journal of Open Source Software (JOSS), will be published upon the acceptance of the AAS companion paper. https://arxiv.org/abs/2310.00071

ΑI

• Noah Shinn, Federico Cassano, Edward Berman, Ashwin Gopinath, Karthik Narasimhan, Shunyu Yao.: "Reflexion: Language Agents with Verbal Reinforcement Learning" — https://arxiv.org/abs/2303.11366

Google Scholar: [Link]

Orcid: https://orcid.org/0000-0002-8494-3123

SOFTWARE, DATA SETS, AND BENCHMARKS

• ShOpt.jl: [Code]

• COSMOS-Web PSF Diagnostics: [Code]

• Can it edit?: [Benchmark]

EMPLOYMENT

• McCleary's Group, Northeastern University Researcher Advised: Prof. Jacqueline McCleary	Boston, MA 01/23 - Present
• Northeastern Mathematics Department Course Assistant: MATH 4571 (Advanced Linear Algebra)	Boston, MA 01/24 - 05/24
• McCleary's Group, Northeastern University Astrophysics Research Co-op	Boston, MA 07/23 - 12/23
• Northeastern Summer Math Research Program (NSMRP) REU Mentor: Alon Duvall	Boston, MA 05/23 - 07/23
• Northeastern Mathematics Department Course Assistant: MATH 2331 (Linear Algebra)	Boston, MA 08/22 - 12/22
• Air Force Research Laboratory Information Directorate Contract Mentor: Dr. Qing Wu	Rome, NY 06/22 - 08/22
• Griffiss Institute VICEROY Intern	Rome, NY 06/22 - 08/22

International Collaborations & Affiliations

Member M	COSMOS-Web: The JWST Cosmic Origins Survey Lensing, Imaging, and Simulations Working Groups	PID: 1727 01/23 - Present
PEAK Summit Award (\$3,000) Northeastern Undergraduate Research and Fellowships Physics Research Co-op Fellowship (50% cost share up to \$6,500) Northeastern Physics Department PEAK Ascent Award (\$1,050) Northeastern Undergraduate Research and Fellowships Research and Training Grant (\$4,500 REU Stipend) National Science Foundation and Northeastern University Dean's Scholarship (\$12,000 Annual) Northeastern University Symposium Travel Grant (Reserved for top 5 interns) Griffiss Institute PEAK: Project-based Exploration And Know CONFERENCES AND INVITED TALKS (NOT INCLUDING REGULAR TELECOMS) Columbia University — Invited Talk Fifficient PSF Modeling and PSF Benchmarking COSMOS 2023 Empirical Characterization of the NIRCam Point Spread Function Joint with Jacqueline McCleary Brown University — SUMS Parameter Estimation of the PSF VICEROY Symposium — Invited Talk VICEROY Research Talk Northeastern University — RISE Expo Shear Optimization with ShOpt SERVICE AND EXTRA CURRICULARS How to Read a Research Paper Introductory Workshop Lead Organizer March 23rd, 2 March 23rd		inks: [GitHub] [Website] 09/23 - Present
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General DLO Representative 00/25 - Pres	• COS Student Leadership Council General SLC Representative	Boston, MA 06/23 - Present

Coursework

- PhD Level: Riemannian Optimization, Optimization and Complexity
- Masters Level: General Relativity and Cosmology
- Advanced Undergraduate: Advanced Group Theory, Advanced Probability and Statistics, Advanced Linear Algebra