Ana Sofía M. Uzsoy

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Education

Harvard University
Cambridge, MA, USA

PhD, Astronomy
September 2022 - present

- Advisor: Doug Finkbeiner

University of Cambridge
Cambridge, UK

M.Phil, Machine Learning and Machine Intelligence
September 2021 - August 2022

- Advisor: Kaisey Mandel
- Thesis: *Scalable Bayesian Inference for Probabilistic Spectrotemporal Models of Type Ia Supernovae*

North Carolina State University
Raleigh, NC, USA

B.S. Physics (honors), B.S. Computer Science (honors)
August 2017 - May 2021

- *Summa cum laude*, Dean's List (All Semesters)
- Minors: Mathematics, Oboe Performance

Work Experience

Google
Santa Barbara, CA, USA (remote)

Software Engineering Intern
June 2021 – August 2021

- Worked on Quantum AI team.
- Used Python to improve quantum computing simulators in Cirq by modeling noise from quantum hardware.
- Created design documents and documentation for Cirq website.

Google
Mountain View, CA, USA (remote)

Software Engineering Intern
May 2020 – July 2020

- Worked on TensorFlow and Kaggle teams.
- Created natural language processing (NLP) machine learning code examples using TensorFlow 2 for Kaggle in Python and R.
- Led launch of new NLP-focused Kaggle competition.

NASA Langley Research Center
Hampton, VA, USA

Intern
June 2019 – August 2019

- Worked on SAGE III ISS (Stratospheric Aerosol & Gas Experiment III on the International Space Station) team.
- Identified cloud interference in spectroscopic atmospheric measurements using machine learning in Python (sklearn and PyTorch).
- Shadowed NASA employees in mission operations and software engineering.

Achievements

2021 **National Science Foundation Graduate Research Fellowship**, awarded to outstanding graduate students in STEM disciplines at US institutions

2021 **Churchill Scholarship**, national scholarship providing funding for American students to complete an MPhil at the University of Cambridge

2021 **Rodney I. McCormick Award**, awarded by NCSU Physics Department to a senior for outstanding undergraduate research

2020 **First place poster prize**, McCormick Symposium, the NCSU Physics Department Annual Undergraduate Research Symposium

2020 **NCSU Computer Science Department Faculty Senior Scholar**, awarded to a rising senior based on academic excellence, intellectual breadth, and depth of character

2019 **Barry M. Goldwater Scholarship**, a national scholarship awarded to promising undergraduates who plan to pursue a research career in engineering, mathematics, or the natural sciences

2017 **Park Scholarship**, a full-ride merit scholarship to NCSU awarded on the basis of outstanding accomplishments and potential in scholarship, leadership, character, and service

2017 **Finalist**, Intel International Science & Engineering Fair

Skills

Programming	Python, Julia, C, C++, Java, R, MATLAB, LaTeX, HTML/CSS, Assembly
Technology	Git/Github, UNIX, Bash, FIJI/ImageJ, LabView
Miscellaneous	Spanish (native speaker), Soldering, Circuit wiring, Bacterial culture

Publications

Saydjari, A. K., **Uzsoy**, **A. S. M.**, Zucker, C., Peek, J. E. G., & Finkbeiner, D. P. (2023). Measuring the 8621 A diffuse interstellar band in Gaia DR3 RVS spectra: Obtaining a clean catalog by marginalizing over stellar types. *The Astrophysical Journal*, *954*(2), 141.

Uzsoy, **A. S. M.**, Zareiesfandabadi, P., Jennings, J., Kemper, A. F., & Elting, M. W. (2021). Automated tracking of S. pombe spindle elongation dynamics. *Journal of Microscopy*, *284*(1), 83–94.

Uzsoy, **A. S. M.**, Rogers, L. A., & Price, E. M. (2021). Radius and mass distribution of ultra-short-period planets. *The Astrophysical Journal*, *919*(1), 26.

Presentations

Poster Presentations

Uzsoy, A.S., Price, M. and Rogers, L. The radius and mass distribution of ultra-short period planets. Poster presented at: National Conference for Undergraduate Research; 2020 March 26-28; Bozeman, MT†.

Uzsoy, A.S., Price, M. and Rogers, L. The radius and mass distribution of ultra-short period planets. Poster presented at: 235th American Astronomical Society Meeting; 2020 January 4-8; Honolulu, HI.

Uzsoy, A.S., Kemper, A.F., and Elting, M. Automated tracking of S. pombe spindle elongation dynamics. Poster presented at: 2019 American Society for Cell Biology Meeting; 2019 December 7-11; Washington, DC

Uzsoy, A.S., Kemper, A.F., and Elting M. Automated tracking of S. pombe spindle elongation dynamics. Poster presented at: Triangle Cytoskeleton Meeting; 2019 September 30; Saxapahaw, NC

Uzsoy, A.S. Machine Learning for Aerosol/Cloud Determination. Poster presented at: NASA Langley NIFS Intern Poster Session; 2019 August 1; Hampton, VA

Uzsoy, A.S., Zareisfandabadi, P., and Elting, M. Investigation of S. pombe mitotic spindle mechanics with molecular perturbation and computational techniques. Poster presented at: NCSU Spring Undergraduate Research Symposium; 2019 April 24; Raleigh, NC

Uzsoy, A.S., Zareisfandabadi, P., and Elting, M.Investigation of S. pombe mitotic spindle mechanics with molecular perturbation and computational techniques. Poster presented at: NCSU Physics Department McCormick Symposium; 2019 April 22; Raleigh, NC

Zareisfandabadi, P.*, Uzsoy, A.S.*, and Elting, M. (*contributed equally) Probing mitotic spindle mechanics in S. pombe via perturbation of microtubule crosslinkers and targeted laser ablation. Poster presented at: Triangle Cytoskeleton Meeting; 2018 September 24; Saxapahaw, NC

† planned, but canceled due to COVID-19.

Oral Presentations

Uzsoy, A.S., Rogers, L., Price, M., Zareiesfandabadi, P., Jennings, J., Kemper, A.F. and Elting, M. Hidden Worlds, Large and Small. Virtual oral presentation presented at: NCSU Physics Department McCormick Symposium; 2021 May 5, Raleigh, NC.

Uzsoy, A.S., Zareiesfandabadi, P., Jennings, J., Kemper, A.F. and Elting, M. Automated tracking of S.pombe spindle elongation dynamics. Virtual oral presentation presented at: NCSU Physics Department McCormick Symposium; 2020 May 6, Raleigh, NC.

Uzsoy, A.S. and Rogers, L. The radius and mass distribution of ultra-short period planets. Oral presentation presented at: University of Chicago STEM Research Symposium; 2018 August 1; Chicago, IL.

Uzsoy, A.S. and Rogers, L. The radius and mass distribution of ultra-short period planets. Oral presentation presented at: Leadership Alliance National Symposium; 2018 July 27-29; Hartford, CT.