ANA SOFIA M. UZSOY

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EDUCATION

North Carolina State University, Raleigh, NC *August 2017 - May 2021 (anticipated)*
B.S. Computer Science, B.S. Physics Cumulative GPA: 4.0/4.0
Minors: Oboe Performance, Mathematics

EXPERIENCE

Intern, NASA Langley Research Center, Hampton, VA *June 2019 - August 2019*

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

Undergraduate Researcher, University of Chicago, Chicago, IL *June 2018 - present*

Use Python to analyze data from *Kepler* and *Gaia* missions to calculate radius and mass distribution for ultra-short period exoplanets. First-author paper in preparation.

Undergraduate Researcher, NC State University, Raleigh, NC *August 2017 - present*

Conduct experiments and develop computational tools to investigate the mechanics of the microtubular structure of *S. pombe* (fission yeast). Use Python, Java and FIJI to develop an ImageJ plugin to automatically measure mitotic spindle length in dividing cells. First-author paper in preparation.

SKILLS

Programming Languages	Python, Java, C, C++, HTML/CSS, JavaScript, Assembly, MATLAB
Software & Tools	LaTeX, GitHub, Bash, JUnit, Maven, LabView, SolidWorks, FIJI
Other Skills	Spanish (native speaker), soldering, circuit wiring, bacterial culture

HONORS AND AWARDS

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

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 (2019)

Freshman Physics Outstanding Academic Achievement Award (2018)

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

Finalist, Intel International Science & Engineering Fair (2017)

2nd Place, Beijing Youth Science Creation Competition (2017)

EXTRA-CURRICULARS

Principal Oboe, NC State Wind Ensemble

NC State College of Sciences Student Ambassador- we represent the College at recruitment events, etc.

NC State Women in Computer Science Club member

NC State Woodwind Quintet- we perform on and off campus, and have opened for the NC Symphony

Service Raleigh Web Committee- we maintain the website for Service Raleigh, an annual day of service event. As a senior member, I review others members' code in addition to writing my own.

Competitive bowling- I have participated in weekly team bowling leagues for close to a year

PRESENTATIONS

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

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

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

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

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

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

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

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

Uzsoy AS 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 AS 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.

Uzsoy AS. Drastic conditions call for drastic measures: the viability of terrestrial extremophiles in simulated Martian UV radiation. Poster session presented at: Intel International Science & Engineering Fair; 2017 May 14-19; Los Angeles, CA

Uzsoy AS. Drastic conditions call for drastic measures: the viability of terrestrial extremophiles in simulated Martian UV radiation. Oral presentation presented at: North Carolina School of Science and Mathematics Research Symposium; 2017 April 26; Durham, NC

Uzsoy AS. Drastic conditions call for drastic measures: the viability of terrestrial extremophiles in simulated Martian UV radiation. Poster session presented at: 37th Beijing Youth Science Creation Competition; 2017 March 23-26; Beijing, China

† planned, but canceled due to COVID-19.

PUBLICATIONS (IN PREPARATION)

Uzsoy AS, Price, M and Rogers L. (2020). The radius and mass distribution of ultra-short period planets. (in prep)

Uzsoy AS, Jennings, J, Kemper, A and Elting M. (2020). Automated tracking of S. pombe spindle elongation dynamics. (in prep)