

APPOINTMENTS

Assistant Professor, School of Earth and Space Exploration (SESE), Arizona State University	Jan. 2021 – Present
<ul style="list-style-type: none"> • Research focus: astronomy education (at the undergraduate level) 	
Education Postdoctoral Fellow, The Zooniverse, Adler Planetarium	June 2019 – Jan. 2021
<ul style="list-style-type: none"> • Project Title: Engaging Non-Majors in Real Research Through Citizen Science • Advisor: Dr. Laura Trouille 	
Visiting Scholar, Northwestern University, Center for Interdisciplinary Exploration and Research in Astrophysics	June 2019 – Jan. 2021

EDUCATION

The University of Arizona, Tucson, AZ	2019
Ph.D. in Planetary Sciences	
<ul style="list-style-type: none"> • Dissertation Title: Part I: How Did We Get Here? College Students Preinstructional Ideas on the Topic of Planet Formation, and the Development of the Planet Formation Concept Inventory; Part II: Evidence for Magnetically Driven Protoplanetary Disk Winds • Advisor: Dr. Chris Impey 	
The University of Arizona, Tucson, AZ	2018
Certificate in College Teaching	
The University of Arizona, Tucson, AZ	2016
M.S. in Planetary Sciences	
<ul style="list-style-type: none"> • Project Title: Understanding Protoplanetary Disk Winds and Planet Interactions via Low Velocity Forbidden Line Emission • Advisor: Dr. Ilaria Pascucci 	
The University of Chicago, Chicago, IL	2013
B.S. in Geophysical Sciences, College Honors	
<ul style="list-style-type: none"> • Thesis Title: Dust Accretion onto Planetesimals in the Solar Nebula • Advisor: Dr. Fred Ciesla 	

GRANTS, FELLOWSHIPS, & AWARDS

Since beginning my career at Arizona State University, I have been involved in 2 successful grants, with 1 as PI. I have also brought over funding to ASU from a previous grant I was part of as a Postdoctoral Fellow. The grants on which **I am PI total \$299,840**. I am currently Co-I on two grants, totaling \$176,325. Between these 3 grant efforts, **I have brought ASU a total of \$476,165**.

Major Grants (3): Total: \$476,165**Bringing Authentic Research to the Remote Classroom: The First Fully Online Course-based Undergraduate Research Experience (CURE) for Astronomy Majors**, awarded July 2021

- Funding Agency: National Science Foundation, Improving Undergraduate STEM Education (IUSE)
- Total Amount: \$299,840
- PI: Molly Simon

NASA SMD Exploration Connection, Infiniscope, awarded Jan. 2021

- Funding Agency: NASA Science Activation Program
- Total Amount: \$10,780,742 (Simon: \$26,325)
- PI: Ariel Anbar, Co-I: Molly Simon

Engaging Non-Majors in Authentic Research through Citizen Science, awarded September 2018

- Funding Agency: National Science Foundation, Improving Undergraduate STEM Education (IUSE)
- Total Amount: \$599,385 (Simon: \$150,000)
- PI: Laura Trouille, Co-PI: Molly Simon

Graduate Fellowships (1): Total: \$96,038**University of Arizona/NASA Space Grant Graduate Research Fellowship**, awarded 2017 – 2019

- Total Amount: \$96,038 (2 years of graduate funding, \$48,019/year for 2 years)

Awards (3): Total: \$3,500

University of Arizona, Lunar and Planetary Laboratory Cavanagh Travel Grant, awarded 2017

- Total Amount: \$1,500

University of Arizona College of Science: Galileo Circle Scholarship, awarded 2017

- Total Amount: \$1,000

Lunar and Planetary Laboratory Graduate Teaching Excellence Award, awarded 2013

- Total Amount: \$1,000

PUBLICATIONS

I have **6 refereed publications** with 2 in preparation, including **4 as first author**, and 1 in preparation with a student mentee as first author. A * indicates a student/postdoc I have mentored.

1. **Simon, M.N.**, Prather, E.E, Rosenthal, I.*, Trouille, L., Cassidy, M., & Hammerman, J., 2021. A Model for Improving Students' Data Literacy and Self-Efficacy in the General Education Online STEM Classroom, *in preparation*.
2. Rosenthal, I.*, **Simon, M.N.**, Trouille, L., Cavanaugh, K., & Byrnes, J.E.K., 2021. Kelp from Space: A Citizen Science Powered Classroom Experience, *in preparation*.
3. Eisner, N.L., Barragan, O., Lintott, C., Aigrain, S... **Simon, M.N.** et al., 2021. Planet Hunters TESS II: findings from the first two years of TESS, Monthly Notices of the Royal Astronomical Society, 501:4, 4669-4690, doi: <https://doi.org/10.1093/mnras/staa3739>
4. **Simon, M.N.**, Prather, E.E, Buxner, S.R., Impey, C.D., 2019. The Development and Validation of the Planet Formation Concept Inventory, International Journal of Science Education, 41:17, 2448-2464, doi: 10.1080/09500693.2019.1685140
5. **Simon, M.N.**, Buxner, S.R., & Impey, C.D., 2018. A Survey and Analysis of College Students' Understanding of Planet Formation Before Instruction, Astrobiology, 18,12, 1594-1610, doi: <http://doi.org/10.1089/ast.2017.1815>
6. **Simon, M.N.**, Pascucci, I., Edwards, S., et al. 2016. Tracing Slow Winds from T Tauri Stars via Low Velocity Forbidden Line Emission, ApJ, 831, 169. doi: 10.3847/0004-637X/831/2/169
7. Pascucci, I., Edwards, S., Heyer, M., Rigliaco, E., Hillenbrand, L., Gorti, U., Hollenbach, D., & **Simon, M.N.** 2015. Narrow Na and K absorption lines toward T Tauri stars: Tracing the atomic envelope of molecular clouds. The Astrophysical Journal. 2015; 814(1).
8. **Simon, M.N.**, Carter, L.M., Campbell, B.A., Phillips, R.J., & Mattei, S. 2014. Studies of Lava Flows in the Tharsis Region of Mars using SHARAD, JGR: Planets, 119, 11, 2291-2299. doi: 10.1002/2014JE004666

INVITED TALKS & SEMINARS

*Indicates workshop/seminar lead

1. Department of Physics, Universitat Duisburg-Essen, Essen, Germany. Dec. 2021
2. Department of Education, Universitat Duisburg-Essen, Essen, Germany. Dec. 2021
3. West Valley Astronomy Club, Surprise, AZ. Sept. 2021
4. East Valley Astronomy Club, Phoenix, AZ. June 2021
5. Skype-A-Scientist. Mar. 2021
6. NSF Astronomy and Astrophysics Postdoctoral Fellowships Symposium, Education Keynote. Feb. 2021
7. American Association of Physics Teachers Meeting*. Jan. 2021
8. School of Earth and Space Exploration Colloquium, Arizona State University, Aug. 2020
9. American Astronomical Society, 235th Meeting, Honolulu, HI*. Jan. 2020
10. American Association of Physics Teachers Meeting, Orlando, FL*. Jan. 2020
11. Bernard Zell Anshe Emet Day School, Chicago, IL. Jan. 2020
12. Sun City – Oro Valley Astronomy Club, Oro Valley, AZ. May 2017

FIRST-AUTHORED CONFERENCE ABSTRACTS

*indicates oral presentation/conference talk, ^indicates poster presentation

- **American Astronomical Society Meeting, #237, 2021, Using Citizen Science in the Online Astronomy Classroom: A New Model for improving Learners' Data Literacy and Self Efficacy*
- **Astronomical Society of the Pacific, ASP2020: A Virtual Meeting, 2020, A New Model for Citizen Science in the Online Classroom*
- **American Astronomical Society Meeting, #235, 2020, The Development and Validation of the Planet Formation Concept Inventory*
- **American Astronomical Society Meeting, #235, 2020, Best Practices in Astronomy Education: Engaging Non-Majors in Real Research Through Citizen Science*
- **American Astronomical Society Meeting, #231, 2018, The Development of the Planet Formation Concept Inventory: A Preliminary Analysis of Version I*
- **Astrobiology Science Conference (AbSciCon), 2018, A Survey and Analysis of College Students' Preinstructional Understanding of Planet Formation*
- **International Astronomical Union International Symposium on Education in Astronomy and Astrobiology (ISE2A), 2018, An Analysis of College Students' Understanding of Planet Formation Before Instruction*
- **American Astronomical Society Meeting, #229, 2017, A Preliminary Analysis of College Students' Preinstructional Ideas About Planet Formation*
- **American Astronomical Society Meeting, #229, 2017, Evidence for Magnetically Driven Protoplanetary Disk Winds*
- **American Astronomical Society Meeting, #228, 2016, Developing New Pedagogy to Teach Planet Formation to Undergraduate Non-Science Majors*
- **American Astronomical Society Meeting, #228, 2016, Tracing Slow Winds from T Tauri Stars via Low Velocity Forbidden Line Emission*
- ^*Gordon Research Conference: Origins of the Solar Systems, 2015, The Role of Winds in Clearing Protoplanetary Disks*
- ^*Star and Planet Formation in the Southwest, 2015, Measuring the Relative Contributions of Viscous Accretion and Photoevaporation to the Dispersal of Protoplanetary Disks*
- ^*Exoplanets, Biosignatures, & Instruments Meeting, 2014, Measuring the Relative Contributions of Viscous Accretion and Photoevaporation to the Dispersal of Protoplanetary Disks*
- ^*Lunar and Planetary Science Conference, #44, 2013, Dust Accretion onto Planetesimals in the Solar Nebula*
- ^*American Astronomical Society – Division for Planetary Sciences Meeting, #44, 2012, Studies of Lava Flows in Mars' Tharsis Region Using SHARAD Radar*
- ^*Lunar and Planetary Science Conference, #43, 2012, Studies of Lava Flows in Mars' Tharsis Region Using SHARAD Radar*

CONFERENCE ABSTRACTS BY STUDENTS/POSTDOCS MENTORED

*SESE graduate student or postdoc

Rosenthal, I. *American Geophysical Union Meeting, 2020, Kelp from Space: A Citizen Science Powered Classroom Experience*

TEACHING

I have taught **three difference courses** while at ASU. In my first semester, I taught a graduate level seminar, and in my second semester I am teaching the introductory course all SESE majors are required to take, and the corresponding laboratory course. According to my course evaluations, **86.4% of students rated the overall effectiveness of the instructor as Very Good** (highest rating), while the other 13.6% rated overall effectiveness as Good. 95.2% of students answered that they would take another class from me in the future.

Fall 2021	SES 121: Earth, Solar System, & Universe (3 credits, Undergraduate Majors)
Fall 2021	SES 123: Earth, Solar System, & Universe Lab (1 credit, Undergraduate Majors)
Spring 2021	SES 502: Exploring SESE Research (1 credit, Graduate Seminar)

Prior to ASU, I served as a teaching assistant (TA) for 4 semesters. In my first semester as a TA, I received the **Graduate Teaching Excellent Award**. I gave a variety of guest lectures throughout my graduate career, and received an addition 3-course **Certificate in College Teaching in 2018** from the University of Arizona's Office of Instruction and Assessment.

Spring 2016	ASTR 202: Life in the Universe (3 credits, Undergraduate Non-Majors)
Fall 2015	PTYS/ASTR 170B2: The Universe and Humanity: Origin and Destiny (3 credits, Undergraduate Non-Majors)
Fall 2014	PTYS/ASTR 214: Astrobiology: A Planetary Perspective (3 credits, Undergraduate Non-Majors)
Fall 2013	PTYS/ASTR 2016: Our Golden Age of Planetary Exploration (3 credits, Undergraduate Non-Majors)

MENTORSHIP

Postdoctoral Researchers

Dr. Christine O'Donnell, SESE Postdoctoral Researcher	Jan. 2021 – Present
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SESE Graduate Students

Heather Hewitt, SESE Graduate Student (Primary Advisor/Committee Chair)	Aug. 2021 – Present
Jonathon Hill, SESE Graduate Student (Committee Member)	May 2021 – Present

Physical Sciences Center – F wing, 550 E. Tyler Mall, Tempe, AZ 85281 | 480-965-9292 | molly.n.simon@asu.edu

Peter Smith, SESE Graduate Student (Secondary Project Advisor)
Haylee Archer, SESE Graduate Student (Secondary Project Advisor)

April 2021 – Present
April 2021 – Present

Graduate Students at Other Institutions

Isaac Rosenthal, UMass-Boston Graduate Student (Secondary Project Advisor, External Committee Member)

Aug. 2019 – Present

SERVICE

Department	SESE Virtual Classroom Working Group (2021 – Present)
Department	Online Degree Committee (2021 – Present)
ASU-wide	Undergraduate Research Experience Task Force (2021 – Present)
Professional	Reviewer for <i>Physical Review – Physics Education Research</i>
Professional	American Astronomical Society, Chambliss Award Judge (2017)

PROFESSIONAL SOCIETY MEMBERSHIPS

American Astronomical Society
National Association for Research in Science Teaching
Astronomical Society of the Pacific
Citizen Science Association