Dany Waller

Curriculum Vitae

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danywaller.github.io

EDUCATION

+ 05/2022 (in progress) – M.S. Applied Physics, Johns Hopkins University
+ 05/2019 – B.S. Mathematics (Honors), University of Kentucky
+ 05/2019 – B.A. Physics, University of Kentucky

EMPLOYMENT

+ 09/2021 - Present – Scientific Software and Visualization Developer, Johns Hopkins University Applied Physics Laboratory Space Exploration Sector
+ 09/2020 - 09/2021 – Graduate Student Research Assistant, Adecco/Johns Hopkins University Applied Physics Laboratory Space Exploration Sector
+ 08/2020 - 09/2021 – Scientific Analyst II, Science Systems & Applications, Inc./NASA Goddard Space Flight Center Geodesy and Geophysics Laboratory (61A)
+ 05/2019 - 08/2020 – Farish Planetarium Director and Earth & Space Science Program Coordinator, Living Arts & Science Center
+ 06/2018 - 05/2019 – Junior Software Engineer, University of Kentucky Center for Muscle Biology
+ 02/2017 - 05/2019 – Undergraduate Research Assistant, University of Kentucky Department of Geology and Department of Physics & Astronomy

RESEARCH PROJECTS

+ 09/2020 - Present – *Modeling magnetic anomalies and mapping related photometric features on the Moon.* PI: Dr. Joshua Cahill, Johns Hopkins University Applied Physics Laboratory.
+ 08/2020 - 09/2021 – *Optimizing LIDAR simulations and algorithmic hazard detection for precision lunar landing.* PI: Bryan Blair, NASA Goddard Space Flight Center.
+ 08/2017 - 05/2019 – *Modeling magnetic anomalies associated with lunar swirls*. PI: Dr. Dhananjay Ravat, University of Kentucky.
+ 02/2017 - 08/2017 – *Processing and mapping MAVEN magnetometer data.* PI: Dr. Dhananjay Ravat, University of Kentucky.

PUBLICATIONS

+ **Waller, D.,** Strauss, B.E. (2023, In Review). Magnetometry. In B.M. Cudnik (Ed.), *Encyclopedia of Lunar Science* (1st ed.). Springer. doi:10.1007/978-3-319-05546-6

+ **Waller, D.,** Cahill, J.T., Wirth-Singh, A.A. (In Prep). Investigation of Magnetic Fields Associated With Plausible Lunar Swirls Observed In The Far-Ultraviolet. *Geophysical Research Letters.*
+ Blewett, D.T., Halekas, J., **Waller, D.,** Cahill, J.T., Deutsch, A., Glotch, T.D., Regoli, L., Tikoo, S., Vines, S., Wang, X. (2021). Science Case for a Lander or Rover Mission to a Lunar Magnetic Anomaly and Swirl. *Bulletin of the AAS, 53*(4). doi:10.3847/25c2cfeb.9295af86
+ Strauss, B.E., Borges, S.R., Faridani, T., Grier, J.A., Kiihne, A., Maier, E.R., Olsen, C., O'Neill, T., Rivera-Valentín, E.G., Sneed, E.L., **Waller, D.**, Zamloot, V. (2020). Nonbinary Systems: Looking Towards the Future of Gender Equity in Planetary Science. *Planetary Science and Astrobiology Decadal Survey 2023-2032*. arXiv:2009.08247 [link]

CONFERENCES

Presentations

+ **Waller, D.**, Cahill, J.T.S., & Wirth-Singh, A. (2021, July 20-23). *Investigation of Magnetic Fields Associated with Various Lunar Swirls Observed in The Far-Ultraviolet*. Joint NASA Exploration Science Forum & European Lunar Symposium, held virtually due to COVID-19. [abstract]
+Wirth-Singh, A.A., Cahill, J.T., **Waller, D.** (2021, June 28-July 2). *Fourier Transform De-Striping of LRO LAMP Data Products*. 5th Planetary Data Workshop and Planetary Science Informatics and Data Analytics (PSIDA) Meeting, held virtually due to COVID-19. [abstract]
+ **Waller, D.** (2020, April 24-May 1). *Towards Modeling Magnetic Anomalies of Lunar Swirls*. LPSC Early Career Event, held virtually due to COVID-19. [abstract], [session recording]
+ **Waller, D.** & Ravat, D. (2019, April 24). *The Undeniable Attraction of Lunar Swirls*. University of Kentucky Undergraduate Research Showcase, Lexington, KY, United States. [abstract]
+ **Waller, D.** & Ravat, D. (2019, February 21). *The Undeniable Attraction of Lunar Swirls*. 18th annual Kentucky Posters at The Capitol, Frankfort, KY, United States. [abstract]
+ **Waller, D.** & Ravat, D. (2018, November 8-10). *The Undeniable Attraction of Lunar Swirls*. 85th annual SESAPS meeting, University of Tennessee, Knoxville, TN, United States. [abstract]

GRANTS AND FELLOWSHIPS

2020 – If/Then Grant, ASTC ($500)
2020 – NASA Universe of Learning Grant, ASTC ($2500)
2019 – Sigma Pi Sigma Chapter Research Award, AIP ($1200)
2018 – Sigma Pi Sigma Chapter Reporter Award, AIP ($200)
2014 – Annual Provost Scholarship, University of Kentucky ($5000)

INVITED TALKS

+ “The Moon and Mars” (2019). Noyce Scholars Program, Morehead State University.
+ “The Moon and Mars” (2019). SpaceTrek, Morehead State University.

+ “The Moon and Mars” (2019). Rogers Scholars Program, Asbury University.
+ “Towards Deciphering the Science and Mysteries of Lunar Swirls” (2017). Astronomy department seminar, University of Kentucky. [abstract]

AWARDS AND HONORS

2021 – 2nd place in NESF/ELS 2021 Student Poster Competition, NASA SSERVI
2020 – 5 Sigma Physicist, American Physical Society
2019 – Physics Advocacy Award, University of Kentucky Dept. of Physics & Astronomy
2019 – Student Impact Award, Omicron Delta Kappa Nu Circle
2019 – Outstanding Senior on *UK at the Half,* University of Kentucky
2018 – Oswald Research & Creativity Competition, University of Kentucky
2018 – Dean's List, University of Kentucky
2018 – High Scholarship in Physics, University of Kentucky Dept. of Physics & Astronomy
2017 – High Scholarship in Physics, University of Kentucky Dept. of Physics & Astronomy

SERVICE

+ 2021 – Intern Mentor. NASA Goddard Association of Postdoctoral and Early Career Scholars (NGAPS+).
+ 2020 - 2021 – Bridge Program Committee Member. NASA GSFC.
+ 2019 - 2020 – Honors thesis reviewer for Lillie Cole. University of Kentucky.
+ 2018 - Present – Physics Policy Advocate. American Physical Society (APS).
+ 2018 - Present – Solar System Ambassador. NASA JPL.
+ 2018 - 2019 – Undergraduate Chapter Representative. Association for Women in Mathematics (AWM).
+ 2017 - 2018 – Chapter President. Sigma Pi Sigma (ΣΠΣ).
+ 2016 - 2017 – Chapter Treasurer. Sigma Pi Sigma (ΣΠΣ).

TEACHING EXPERIENCE

University

Undergraduate courses
+ EES395: Expanding Your Horizons STEM Conference, University of Kentucky (Spring 2018, Spring 2019).

K-12+

Planetarium programming and community classes
+ Farish After Dark, Living Arts & Science Center (Fall 2019, Winter 2020, Spring 2020).
+ Amateur Astronomy Club, Living Arts & Science Center (Fall 2019).
+ “Hidden Figures” Summer Camp, Living Arts & Science Center (Summer 2019).
+ SpaceTrek, Morehead State University (Summer 2019).