

# CURRICULUM VITAE

of  
Marshall John Styczinski

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## PERSONAL

**Information:** US Citizen, born 1988 in Dublin, California.

**Position:** Doctoral Candidate at University of Washington.

**Interests:** Space physics and astrobiology research; science communication and public outreach

**Website:** <http://students.washington.edu/mjstyczzi/>

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## EDUCATION

**09/2012 – present** University of Washington

In progress: Doctor of Philosophy, Physics

Complete: Graduate Certificate, Astrobiology

Degree conferred: Master of Science, Physics

**09/2006 – 06/2010** University of California, Davis

Degree conferred: Bachelor of Science with Highest Honors, Physics

Significant works: “On the Return of HP West: The Revival and Restoration of a Hewlett-Packard 5950A Photoelectron Spectrometer” ([Undergraduate Honors Thesis](#), May 2010)

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## HONORS AND AWARDS

**09/2018 – 08/2021** [NASA Earth and Space Science Fellowship](#) recipient

**05/2020 – 08/2020** [JPL Planetary Science Summer School](#) participant

**04/2019 – 09/2019** Visiting Scholar, University of Oregon Planetary Science Group

**08/2018 – 09/2018** Visiting Scholar, University of Melbourne Astrophysics Group

**06/2018 – 08/2018** [JPL Space Grant Summer Internship](#) participant

**03/2017 – present** Science Communication Fellow, [Pacific Science Center](#)

**06/2010** Bachelor of Science with Highest Honors from UC Davis

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## SCIENTIFIC PUBLICATIONS

1. **M. J. Styczinski** and E. M. Harnett. Induced magnetic moments from a nearly spherical ocean. *Submitted to Icarus*, 2020. Preliminary manuscript available upon request.
2. S. D. Vance, B. G. Bills, C. J. Cochrane, K. M. Soderlund, N. Gómez-Pérez, **M. J. Styczinski**, and C. S. Paty. Magnetic induction in convecting galilean oceans. *Earth and Space Science Open Archive; Submitted to Journal of Geophysical Research: Planets*, 2020. DOI: [10.1002/essoar.10502420.1](https://doi.org/10.1002/essoar.10502420.1)
3. G. T. Seidler, D. R. Mortensen, A. J. Remesnik, J. I. Pacold, N. A. Ball, N. Barry, **M. Styczinski**, and O. R. Hoidn. A laboratory-based hard x-ray monochromator for high-resolution x-ray emission spectroscopy and x-ray absorption near edge structure measurements. *Review of Scientific Instruments*, 85(11):113906, 2014. DOI: [10.1063/1.4901599](https://doi.org/10.1063/1.4901599)

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## PROFESSIONAL AFFILIATIONS

Affiliate, [Europa Clipper Science Team](#)

Board of Directors, “Engage” science communication program  
University of Washington Astrobiology  
American Physical Society  
American Geophysical Union

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### SELECTED PRESENTATIONS

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**08/2018** University of Melbourne Astrophysics Colloquium  
**12/2017** Pacific Science Center’s “Science in the City”  
**05/2016** Town Hall Theater’s “UW Science Now” speaker series

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### PROFESSIONAL QUALIFICATIONS

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Extensive experience with UNIX, bash, L<sup>A</sup>T<sub>E</sub>X, Fortran, C++, Python, Matlab, LabVIEW, and more  
6 years formal experience teaching university physics, including TA training and exam writing

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### RESEARCH POSITIONS

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**08/2012 – present** *Doctoral Candidate*, University of Washington  
Research focus: Magnetic sounding of Jupiter’s moon Europa  
Magnetospheric plasma modeling  
Advisor: Affiliate Professor Erika Harnett

**01/2014 – 03/2017** *Graduate Student*, University of Washington  
Past research: Improving the efficiency of conceptual instruction in- and out-of-class  
Student understanding of Gauss’s law  
Interdisciplinary learning in science courses  
Advisor: Professor Paula R. L. Heron and Peter S. Shaffer

**04/2011 – 07/2012** *Junior Specialist*, University of California, Davis  
Duties: Design, build, test, and analyze cryogenic bubble detection experiment (Tripathi);  
Develop and implement software for analyzing irradiated magnets,  
assess radiation damage of magnets used in Linear Collider R&D (Pellett);  
Supervisor(s): Professor S. Mani Tripathi, Professor Emeritus David Pellett

**07/2010 – 04/2011** *Development Technician*, University of California, Davis  
Duties: Restore, repair, and improve indium evaporative deposition system (Tripathi);  
Construct sensitive Double Chooz neutrino detector in international team (Svoboda);  
Train and mentor undergraduate laboratory assistants  
with x-ray photoemission spectrometer (Fadley)  
Supervisor(s): Professor S. Mani Tripathi, Professor Robert Svoboda, Distinguished Professor  
Charles S. Fadley

**05/2008 – 06/2010** *Undergraduate Research Assistant*, University of California, Davis  
Duties: Restore and optimize X-ray photoemission spectrometer system, analyze Si/Mo  
multilayer crystal native oxide properties  
Supervisor(s): Distinguished Professor Charles S. Fadley

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### TEACHING EXPERIENCE

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**09/2012 – 06/2018** *Graduate Teaching Assistant*, University of Washington  
Courses: Introductory physics tutorials and laboratories, advanced electromagnetism tutorials,  
and introductory courses in astrobiology, planetary science, and space science

Structure: Sole or co-instructor leading discussions in 24–32 student classrooms  
Note: Most terms as head TA, leading training sessions for other TAs, writing exams, and course administration (including curriculum writing and revisions)

**09/2012 – 06/2018** *Physics Study Center Staff*, University of Washington

Courses: Introductory and advanced physics

Structure: Individual homework and conceptual guidance

**10/2007 – 06/2012** *Physics Club Volunteer Tutor*, University of California, Davis

Courses: Introductory physics and calculus

Structure: Individual homework and conceptual guidance