

Angela G Marusiak, PhD

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EDUCATION

University of Maryland, PhD 2020

GPA: 3.78 out of 4.0

Boston University, B.A. 2013

Major: Geophysics and Planetary Sciences, Minor: Mechanical Engineering

GPA: 3.23 out of 4.0

EMPLOYMENT & EXPERIENCE

Postdoctoral Scholar at NASA/CalTech Jet Propulsion Laboratory (June 2020-Present)

Advisors: Mark Panning and Steve Vance

Graduate Research Assistant, NESSF Fellow at University of Maryland (July 2015- May 2020)

Thesis: Planetary Seismology Using Single-Station and Small Aperture Arrays:
Implications for InSight and Icy-Ocean Worlds

Advisor: Nick Schmerr

NASA Intern at JHU APL (Summer 2016)

Project Title: Impact Trajectory and Landing using PKDGrav and Small Bodies
Mapping Tool

Research Mentor: Olivier Barnouin and Carolyn Ernst

Lecturer and Grader at Rutgers University (September 2014-May 2015)

Assisted in Geochemistry, and Volcanoes and Earthquakes courses

Technical Assistant at Columbia University's Lamont Doherty Earth Observatory

(November 2013 -June 2014)

Borehole Building, Marine Division Supervisor: Gerardo Itturino, and David
Goldberg

Research Assistant at Center for Space Physics BU (October 2011-May 2013)

Project Title: Ionosphere's Response to Solar Cycle 23 at Geophysically Equivalent Sites
Research Mentor: Michael Mendillo

NASA PGGURP Intern at JHU APL (Summer 2012)

Project Title: Analysis of Pyroxene Thermo-Spectra using Reflectance Spectroscopy

Research Mentor: Noam Izenberg

Research Assistant in Earth Science Department (November 2010 to April 2012)

Project Title: 3D Olivine Melt Tracing

Research Mentor: Uli Faul and Gordana Garapic

AWARDS (Total ~ \$100,000)

NASA Earth and Space Science Fellowship (NESSF) (2018-2020) (\$87,022)
 Dean's Fellowship (2015-2020) (UMD) (\$12,500)
 Seismological Society of America (SSA) Travel Award (\$1,325)
 Goldhaber Travel Grant (\$600)
 Earth System Science Interdisciplinary Center (ESSIC) Travel Award: Spring 2017, Fall 2017, Spring 2018, Fall 2018, Fall 2019 (total ~ \$1000)
 Best Pre-Candidacy Graduate Student Talk 2017 (UMD) (\$250)
 2013 Center for Space Physics Prize for Excellence in Research (BU) (\$75)
 Dean's List for Fall 2010, Spring 2012 and Spring 2013 (BU)

SERVICE

IDEA (Inclusion, Diversity, Equity and Awareness) Committee Member (2019-2020)
 AGU Session Co-Convener (2019)
 Planetary Data System Reviewer (2019)
 Dwornik Judge for LPSC (2019)
 College of Mathematics and Natural Sciences Graduate Student Council, Geology Dept. Representative (2017-2019)
 NASA Panel Executive Secretary (2017-2019)
 Volunteer for Structural Geology Class Field Trip (2018)
 Volunteer for Field Geophysics Class Field Trip (2018)

OUTREACH

Two Scientists Walk into a Bar, October 2019
 Expert-Is-In, Smithsonian Natural History Museum, July 2019
 Member of AGU's Voices for Science Class of 2019
 Microblogger at LPSC 2019
 Volunteer for Geology Department at University of Maryland, Maryland Day Open House (2016-2019)
 Volunteer for IRIS at USA Science & Engineering Festival (2018)

WORKSHOPS ATTENDED

2019 Jet Propulsion Laboratory Planetary Summer Science School
 2018 American Geophysical Union's Sharing your Science Workshop
 2017 Polenet Glacial Seismology Training School

MEMBERSHIPS/COLLABORATIONS

NASA Discovery Mission InSight: Science Team Collaborator (Since 2015)
 Seismology Society of America (Since 2018)
 Potomac Geophysical Society (Since 2018)

American Geophysical Union (Since 2018)
 Geological Society of America, Planetary Sciences Division (Since 2015)
 Geological Society of Washington (Since 2015) Earth
 Science Women's Network (Since 2015)

INVITED/PUBLIC TALKS

Incorporated Research Institutions for Seismology (IRIS) webinar, September 25th 2019.
 “The InSight mission to Mars: Seismology in the Solar System”
 Potomac Geophysical Society, September 12th, 2019. “The InSight mission to Mars:
 Seismology in the Solar System”
 Geological Society of Washington, February 6th, 2019. "Investigating Icy Worlds: How
 Greenland can help us Understand Ocean Worlds"
 Thule Air Force Base, August 19th 2018. "Investigating Icy Worlds: How Greenland can
 help us Understand Ice Covered Worlds"

PEER REVIEWED PUBLICATIONS

Moore, K., Courville, S., Ferguson, S., Schoenfeld, A., Llera, K., Agrawal, R., ... **Marusiak, A.**, ... Budney, C. (Planetary and Space Sciences, submitted) Bridge to the stars: A mission concept to an interstellar object.

Nunn, C., Garcia, R., Nakamura, Y., **Marusiak, A. G.**, Kawamura, T., Sun, D., ... Zhu, P. (Space Science Reviews, in revision) Lunar Seismology: A Data and Instrumentation Review

Marusiak, A.G., Nicholas C. Schmerr, Danielle DellaGiustina, S. Hop Bailey, Veronica J. Bray, Erin Pettit, Peter H. Dahl, Brad Avenson, Natalie Wagner. (2020) The Deployment of the Seismometer to Investigate Ice and Ocean Structure (SIIOS) on Gulkana Glacier, Alaska. *Seismol. Res. Lett.*, 1–11, doi: 10.1785/0220190328

Marusiak, A.G., Schmerr, N.C., Banks, M.E., Daubar, I.J., (2020). Terrestrial Single-Station Analog for Constraining the Martian Core and Deep Interior: Implications for InSight. *Icarus* 335, 113396. DOI:10.1016/j.icarus.2019.113396

Panning, M. P, Pike, T., Lognonne, P., Banerdt W., Murdoch, N.,... **Marusiak, A.**,...Warren, T., (2020) On-deck seismology: Lessons from InSight for future planetary seismology. *J. Geophys. Res. Planets*. DOI: 10.1029/2019JE006353

Garcia, R.F., Khan, A., Drilleau, M., Margerin, L., Kawamura, T., Sun, D., Wiczorek, M.A., ... **Marusiak, A. G.**, ...Zhu, P. (2019) Lunar Seismology: An Update on Interior Structure Models. *Space Science Reviews*. 215:50 DOI: 10.1007/s1121

Mendillo, M., **A. G. Marusiak**, P. Withers, D. Morgan, and D. Gurnett (2013), A new semiempirical model of the peak electron density of the Martian ionosphere, *Geophys. Res. Lett.*, 40, 5361–5365, doi:10.1002/2013GL057631.

Mendillo, M., C. Narvaez, and **A. G. Marusiak** (2013), Are ionospheric storms the same during different solar cycles?, *J. Geophys. Res. Space Physics*, 118, 6795–6805, doi:10.1002/2013JA019102.

CONFERENCE ABSTRACTS

(1st author only, see <https://scholar.google.com/citations?hl=en&user=EbNyUCgAAAAJ> for complete list)

- Marusiak, A.G.**, Schmerr N.C, Avenson, B., Bailey, S. H., Bray, V. J., DellaGiustina, D. N., ... Weber, R. C. (2020). Cluster Analysis of Thermal Icequakes Using using the Seismometer to Investigate Ice and Ocean Structure (SIIOS): Implications for Ocean World Seismology, LPSC LI, Abstract 1424.
- Marusiak, A.G.**, Schmerr, N. C., Bailey, H., DellaGiustina, D., Bray, V. J., Weber, R., ...Wagner N.(2019). Ambient Seismicity on European Analogs using the Seismometer to Investigate Ice and Ocean Structure (SIIOS). *AGU Fall Meeting*.
- Marusiak, A. G.**, Schmerr, N. C., Bailey, S. H., Dellagiustina, D. N., Bray, V. J., Dahl, P., ... Weber, R. C. (2019). Location of Seismicity with a Small Aperture Seismometer Array: Implications for Seismology with an Ocean World Lander. In *50th LPSC*. Woodlands, TX, Abstract 1546.
- Marusiak, A. G.**, Schmerr, N., DellaGiustina, D., Bailey, H., Bray, V., Broadbeck, J., ... Avenson, B. (2018). The Seismometer to Investigate Ice and Ocean Structure (SIIOS) in Greenland: Testing Instrument Performance on an Icy World Analog. AGU Fall Meeting. Washington D.C
- Marusiak, A.G.**, Schmerr, N.C., Weber, R.C., DellaGiustina, D.N., Bailey, S.H., Bray, V.J., ... Siegler, M., (2018). SIIOS In Alaska- Active Source Compartitive Test for an Europa Lander Seismometer, LPSCXLVIX, Houston. TX. Abstract 2478.
- Marusiak, A.G.**, Schmerr, N.C., Banks, M.E., Daubar, I.J., (2017). Terrestrial Single-Station Analog for Constraining the Martian Interior, LPSCXLVIII, Houston. TX. Abstract 2294.
- Marusiak, A.G.**, Schmerr, N.C., Banks, M.E., Daubar, I.J.,(2016). Terrestrial Single-Station Analog for the Detection of the Martian Core, LPSCXLVII, Houston. TX. Abstract 2010.

REFERENCES

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