

Matthew T. Reinholt

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Education

2019 - Present

Stanford University

Stanford, CA

PhD, Planetary Science. Expected 2025

- Thesis Adviser: Laura Schaefer, PhD. (e-mail: lkschaef@stanford.edu)

2017 - 2019

Pennsylvania State University

State College, PA

MS, Geoscience. Received August 2019

- Thesis Adviser: Bradford Foley, PhD. (e-mail: bif5382@psu.edu)

2013 - 2014

Southern New Hampshire University

Manchester, NH

M.Ed. Received July 2014

2007 - 2011

University of New Hampshire

Durham, NH

BSc, Physics: Astronomy. Received July 2011

- Thesis Adviser: David Mattingly, PhD. (e-mail: david.mattingly@unh.edu)

Volunteering and Outreach

November 2019 – Present

Guest Science Lessons for Elementary & Middle Schools

Palo Alto, CA

- Regular guest lectures at local elementary and middle schools.
- JLS Middle School: 6th Grade.
 - Teachers: Meagan Wilson (mewilson@pausd.org), Arianne Piedrahita (apiedrahita@pausd.org)
- Nixon Elementary: 4th and 3rd Grade.
 - Teachers: Stacey Soong (ssoong@pausd.org), Kerrie Edmonds (kedmonds@pausd.org), Sarah Bloom (sbloom@pausd.org) and Kristina Hayes (khayes@pausd.org).
- Oak Knoll Elementary: 5th Grade.
 - Teacher: Dylan Cline (dcline@mpcsd.org), Mindy Garagozzo (mgaragozzo@mpcsd.org) and Kimberly Nero (knero@mpcsd.org).

March 2020 – 2022

Category Judge – Synopsis Championship Science and Technology Fair

Santa Clara, CA

June 2018 – June 2019

Guest Science Lessons for Elementary School

State College, PA

- Weekly 5th grade guest lessons at Mount Nittany Elementary School.

- Teachers: Tim Kamats (e-mail: tmk14@scasd.org), Karen Styers (e-mail: krs11@scasd.org)

July 2016 – September 2016

English Teaching

Siem Reap, Cambodia

- Assistant English teacher at the Chea Smonn school.
- Principal: Phay Sopheak (e-mail: phaysopheak@yahoo.com)

Employment

February 2024 – Present

Planetarium Speaker - De Anza College Fujitsu Planetarium

Cupertino, CA

- Part-time planetarium presenter
- Director: Toshi Komatsu (komatsutoshi@fhda.edu)
- Supervisor: Mariah Panley (panelymariah@fhda.edu)

July 2020 – Present

Private Tutoring

Palo Alto, CA

- Topics: Astronomy, Geology, Chemistry, Physics, Mathematics
- Private tutor for numerous children between the ages of 4 and 10.
- Children's parents:
 - Jane Willenbring, PhD (e-mail: wiltenbring@stanford.edu)
 - Emily Fox, PhD (e-mail: ebfox@stanford.edu)
 - Carlos Guestrin, PhD, MSc (e-mail: guestrin@gmail.com)
 - Danielle Meyer (e-mail: danielleandramon@gmail.com)
 - Brice Gaudillere, PhD (e-mail: gbrice@stanford.edu)

September 2016 – July 2017

Online tutoring – Chegg.com

Candia, NH

- Topics: Astronomy, Optics, Classical Mechanics, General Relativity, Algebra

2015 - 2016

Denver Math Fellows

Denver, CO

- Math Teacher at West Generation Academy.
- Mathematics support and intervention for 6th and 8th grade students who are below grade level.
- Taught a group of high achieving 6th grade students the fundamentals of calculus.
- Site Supervisor: Tiffany Almon (e-mail: TIFFANY_ALMON@dpsk12.org)

2014 – 2015

BMAC (Blue Mountain Action Council) AmeriCorps.

Walla Walla, WA

- Teacher and academic aide at Lincoln High School serving high-need, at-risk students.
- Academic support for the Recovery school.
 - Ran program for students transitioning back into the school environment after rehab.

- Assisting teachers in History, Science and College Prep classes.
 - Producing laboratory instruction videos for science class - Human Body Systems (HBS) online curriculum: https://www.youtube.com/watch?v=QyyMMTG0i_w
 - Science teacher: Erik Gordon (e-mail: erikggordon@gmail.com).
- Site Supervisor: Principal Marci Knauft (e-mail: mknauft@wwps.org)
- AmeriCorps supervisors: Belen Cardenas (e-mail: belenc@bmacww.org) and Cat Pond (e-mail: catp@bmacww.org)

2011 - 2013

Hubbard Center for Genome Studies.

Durham, NH

- Laboratory assistant working in analytical biochemistry.
- Trained in various analytical methods in Glycobiology and Glycomics :
 - Liquid and gas chromatography
 - Mass spectrometry
- Employer: Vernon Reinhold (e-mail: Vernon.Reinhold@unh.edu)
- Supervisor: Andrew Hanneman (e-mail: andy@andrewjshanneman.net)

Teaching and Mentoring

Stanford University

- Intro to Geology Lab (Spring 2021, Spring 2022)
- Mentored an undergraduate student in the Stanford SURGE program (2022)

Pennsylvania State University

- Introduction to Physical Geology Lab (Fall 2017, Spring 2018)

Research Experience

Stanford University

- Habitability of Terrestrial Planets with Extreme Internal Heating
- Nitrogen Cycling on Abiotic M-Dwarf Terrestrial Planets
- Longevity of Habitable, Earth-Like Planets around Long-Lived Stars

Pennsylvania State University

- Master's Thesis: *Constraints on Earth's Thermal Evolution from the Heavy Noble Gas Content of the Mantle.*

University of New Hampshire

- Undergraduate Thesis: *Deviations in Ultra-High Energy Neutrino Spectra due to CPT Violation.*

Publications

- **Reinhold, M., & Schaefer, L.** (2025). Ignan Earths: Habitability of terrestrial planets with extreme internal heating. *Journal of Geophysical Research: Planets*, 130, e2023JE008029.
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Conference Presentations

Habitability of Terrestrial Planets with Extreme Internal Heating

- Extreme Solar Systems V 2024: Poster
- Bay Area Exoplanet Meeting 2023: Talk
- AGU 2022: Talk
 - AGU Outstanding Student Presentation Award
- AbSciCon 2022: Talk

Constraints on Earth's Thermal Evolution from the Heavy Noble Gas Content of the Mantle

- AGU 2018 Poster
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Workshops

July 2023

Other Worlds Laboratory (OWL) Summer Program

Santa Cruz, CA

- Exoplanet Summer Program at UC Santa Cruz
- Director: Johnathan Fortney (e-mail: jfortney@ucsc.edu)

February 2015

Neutral Ground Dispute Resolution Center

Walla Walla, WA

Certificate, Received May 2015

- 40-hour Fundamentals of Facilitative Mediation Training
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Additional Information

- **Language proficiencies:**
 - English, Swedish
- **SCUBA Certification: Open Water Diver**
 - Certified on 8/28/2022 through Scuba Fusion.
- **International travel experience:**
 - Argentina, Cambodia, Chile, Colombia, Egypt, Iceland, Malaysia, New Zealand, Tanzania, Turkey, Vietnam.
- **Caving**
 - Deer Cave, Sarawak Chamber (2016)

- Hang Son Doong (2025)

- **Notable Mountaineering Ascents**

- All 48 4000 footers of New Hampshire (2002)
 - Pemi Loop (2005, 2006), Mt. Washington (Winter ascents - 2019, 2021)
- 20 of the Colorado 14ers (Aug – Nov 2015)
 - Crestone Traverse, Capitol Peak, Kit Carson Peak
- Mt. Whitney (2016)
- Colchuck Peak, Dragontail Peak, Mt. Adams (2015), Mt. Hood (2023), Mt. Baker (2024)
- Mt. Kilimanjaro (2023)
- Cotopaxi (2024), Chimborazo (2024)
- Denali (2025)