Paige Yeung

pcy@mit.edu · (408) 256-2003 · paigeyeung.com · Cambridge, MA

Education

Massachusetts Institute of Technology Sep 2021 - Jun 2025

B.S. in Mathematics and Earth, Atmospheric, and Planetary Sciences GPA: 4.9/5.0

- *Selected coursework (* indicates graduate course):* Real Analysis (18.100B), Complex Analysis (Harvard MATH 113), Nonlinear Dynamics (12.006), Theory of Probability (18.675*), Theory of Partial Differential Equations (18.152), Abstract Algebra (18.701), Solar System Dynamics (12.603*), Planetary Science (Harvard E-PSCI 220*), Design and Analysis of Algorithms (18.410)
- *Fall '23 coursework*: Modeling Environmental Complexity (12.586*), Algebraic Topology (18.905*), Physical Mathematics (Harvard APMTH 201*)

Research Experience

Leiden University Jun 2023 - Aug 2023

Undergraduate Researcher | Advisors: Paul Carter, Arjen Doelman

- One of three students selected to participate in UC Irvine and Leiden University's REU program in pattern formation and PDEs, supported by the NSF grant DMS-2204758. Investigated front dynamics of the three-dimensional Gatenby-Gawlinski tumor growth model using tools from singular perturbation theory and functional analysis.

MIT Department of Earth, Atmospheric, and Planetary Sciences Sep 2022 - Present

Undergraduate Researcher | Advisor: Daniel Rothman

- Investigated applicability of mathematical methods to identify nonlinearities in the carbon cycle. Analyze isotope time series data to identify major paleoclimate events and predictors of critical slowing down in the climate system.

AEye, Inc. Jun 2022 - Aug 2022

Research Intern | Advisor: Allan Steinhardt

- Researched and designed algorithms for denoising and analyzing lidar waveforms and point cloud data in MATLAB. Employed matched filtering, regression, and SVD-based approaches to correct frames, identify object orientation, and analyze pulse width. Presented final results to company executives.

MIT Kavli Institute for Astrophysics and Space Research Feb 2022 - May 2022

Undergraduate Researcher

- Worked with Transiting Exoplanet Survey Satellite (TESS) team, building a variational autoencoder to model light curves of astronomical transient objects and investigate rates of observation of transients in TESS data.

NASA Exoplanet Watch Jan 2020 - Jul 2022

Student Researcher

- Investigated measurements of TrES-1 b transits to search for transit timing variations and fit an updated ephemeris. First-author paper published in the *Journal of the Korean Astronomical Society*.

Publications

- **P Yeung**, Q Perian, P Robertson, M Fitzgerald, M Fowler, F Sienkiewicz, and K Tock. Searching for Transit Timing Variations and Fitting a New Ephemeris to Transits of TrES-1 b, JKAS, **55**, 111, August 2022 (arXiv:2207.01559).
- E Yang, D Mendoza, PA Mendoza, V Pandian, K Tota, and **P Yeung**. Analyzing Transit Timing Variations of Qatar-1 b. JAAVSO, **50**, 20, June 2022.

Presentations

- **P Yeung.** Supporting Students and Researchers in a Virtual Exoplanet Research Workshop. American Association of Variable Star Observers Annual Meeting, November 2021.
- **P Yeung.** Science Education for Scientific Literacy: Involving Students in Citizen Science Initiatives. American Geophysical Union, December 2020. Abstract #ED045-0005.

Activities and Community Leadership

MIT Undergraduate Society for Women in Mathematics Sep 2022 - Present
President (2023-24)
Corporate Relations Chair (2022-23)
- Direct and organize annual Math in Industries event, featuring industry representatives from Jane Street and Deloitte, to introduce different career opportunities to MIT undergraduates interested in industrial applications of mathematics.

MIT Climate and Sustainability Consortium Sep 2022 - Present
Research Scholar, Cohort 2 (2023-24)
Student Council Member (2022-23)

Undergraduate Math Association Sep 2021 - Dec 2022
Mentor for 18.100A/B Real Analysis (2022)
DEI & Outreach Committee Member (2021-22)

Exoplanet Research Workshop Apr 2020 - Aug 2022
Founder, President
- In collaboration with NASA astronomers, guided 200+ high school students to contribute research findings to NASA's Exoplanet Watch, a citizen science project.
- Created resource website (exoplanetresearch.com), featured on Exoplanet Watch's resource page.
- Presented about workshop at astronomy and science education conferences, including the AAVSO Annual Meeting and the AGU Fall Meeting.
- Raised funding from the MIT Kavli Institute for Astrophysics and Space Research.

The Tech Jan 2022 - Present
Weather Reporter

Other Projects

Into the Zooniverse, Volume III Jun 2021 - Nov 2021
Interviewed researchers hosting projects on Zooniverse and co-authored book detailing projects and their broader impacts.

Citizen Science Primer (citsciprimer.netlify.app) Jun 2022 - Present
Writing an introduction to community-driven science. Currently paused.

Battlecode 2022 Jan 2022
Programmed an autonomous game player in Java in a team of 2, ranking top 32 in US.

Skills

- Proficient in MATLAB, Python, Java; familiar with R
- Other skills: mathematical modeling, data analysis, technical writing