

Marc Teng Yen Hon

Institute for Astronomy
University of Hawai'i, United States
Email: mtyhon@hawaii.edu
Website: mtyhon.github.io

Principal Interests	Variable Stars, Asteroseismology, Machine Learning, Data Science, Exoplanetary Science
Research Experience	<p>Postdoctoral Associate 2023-present <i>Kavli Institute for Astrophysics and Space Research, MIT</i></p> <p>NASA Hubble Postdoctoral Fellow 2020-2023 <i>Institute for Astronomy, University of Hawai'i at Mānoa</i> Project: Unraveling the History of the Galaxy with TESS Asteroseismology</p>
Education	<p>UNSW Sydney, New South Wales, Australia <i>Doctor of Philosophy, Astrophysics, July 2020</i> Thesis: Deep Learning in Asteroseismology Advisor: Prof. Dennis Stello</p> <p>University of Wollongong, New South Wales, Australia <i>Bachelor of Science Advanced (1st Class Honours),</i> Physics and Mathematics, December 2015 Thesis: Magnetic Vortices in Micro-magnetic Materials Advisor: Prof. Alexey Pan</p>
Teaching and Mentoring	<p>Research Supervisor, Institute for Astronomy, Hawai'i — Research Experiences for Undergraduates 2023 (Jakob Bindas)</p> <p>— ASTR699 Research (Keyan Gootkin) 2022-present</p> <p>Academic Lecturer, Institute for Astronomy, Hawai'i — ASTR 631 Radiative Transfer & Stellar Atmospheres 2022</p> <p>Academic Tutor, School of Physics, UNSW Sydney — PHYS3116 – Astrophysics Tutor 2019 — PHYS3116 – Astrophysics Lecturer 2019</p> <p>Research Supervisor, School of Physics, UNSW Sydney — PhD research co-mentor (Claudia Reyes) 2021-present — Honours research co-mentor 2018-2021</p>

	(Lauren Taylor, Rudy Xu, Tommy Lee)	
	— Taste for Research Undergraduate program (Noah Vinod, David Nguyen, Ryan Oldfield)	2018-2020
	— MSc research co-mentor (Shabib Rizvi)	2017
	Lab Assistant, University of Wollongong	
	— PHYS141/142 Fundamentals of Physics	2015
	— PHYS225 Electromagnetism and Optoelectronics	2015
Professional Membership and Service	— Astronomy Mentoring Program for Upcoming Postdocs (AMP-UP)	2023-present
	— Malaysia Olympiad on Astronomy & Astrophysics Academic Council	2023-present
	— Institute for Astronomy Colloquium Committee	2022-present
	— Journal Referee for <i>The Astrophysical Journal</i>	2020-present
	— Journal Referee for <i>Monthly Notices of the Royal Astronomical Society</i>	2019-present
	— Journal Referee for <i>Astronomy & Astrophysics</i>	2018-present
	— Astronomical Society of Australia Member	2017-2021
	— APOGEE-2-Kepler Asteroseismology and Chemical Abundance Collaboration	2018-present
	— TESS Asteroseismic Science Consortium	2017-present
	— TESS Data for Asteroseismology Core Member	
	— <i>Kepler</i> Asteroseismic Science Consortium	2016-present
Grants and Proposals	— Galactic Evolution via the Asteroseismology of the Northern Continuous Viewing Zone, TESS GI Cycle 6 (Pending), PI	2023
	— Lithium in TESS Red Giants, Magellan Telescopes, 3n, Co-I	2023
	— Chemical Signatures of Planetary Engulfment in Red Giants, CFHT, 16h, PI	2023
	— Confirming <i>Gaia</i> Binaries with Impossibly Small Separations, Keck I, 10h, PI	2023
	— Fossil Magnetic Fields at the Surface of Seismically Peculiar Red Giants, CFHT, 10h, PI	2022
	— Confirming the First Close-in Planet Surviving Host Giant Star Evolution, Keck I + CFHT, 2n + 10h, PI	2021-2022
	— TESS's Ear on The Metal-Poor Milky Way, TESS GI Cycle 5 (G05162), Co-I	2022
	— NASA Hubble Fellowship Grant, STScI, sole Chief Investigator, \$250k	2020-2023
	— Exploring the Planet Population Around Evolved Stars with TESS, TESS GI Cycle 4 (G04179), Co-I	2021

	— The K2-HERMES follow-up program, AAT, 69n, Co-I	2016-2019
	— The HERMES-TESS program, AAT, 31n, Co-I	2016-2018
Awards and Scholarships	— UNSW Dean’s Award for Outstanding PhD Theses	2021
	— Nvidia Developer Grant	2018
	— UNSW International Scholarship	2016
	— University of Wollongong (UoW) University Medal	2015
	— UoW Australian Institute of Physics Prize	2015
	— UoW Kittel-Lewis Prize	2015
	— UoW David Martin Award	2015
Outreach and Presentations	— <i>Global Malaysian Astronomers Convention</i> , Kuala Lumpur, Malaysia (Invited)	2023
	— <i>American Astronomical Society 241, Winter Meeting</i> , Washington, Seattle	2023
	— <i>AMNH Astro Seminar</i> , AMNH, New York, USA (Invited)	2022
	— <i>TESS Science Talk</i> MIT, Cambridge, USA (Invited)	2022
	— <i>Cosmic Origins Program Seminar Series</i> , NASA Stars Science Interest Group (Invited)	2022
	— <i>Science, Mathematics and Technology Seminar Series</i> SUTD, Singapore (Invited)	2022
	— <i>TESS Science Conference II</i> , MIT, Cambridge, USA (Contributed Talk)	2021
	— <i>Astronomy Colloquium</i> , Yale University, New Haven, USA (Invited)	2021
	— <i>Institute for Astronomy Colloquium</i> , University of Hawai’i, USA (Invited)	2021
	— <i>TASC-5/KASC-12 Conference</i> , MIT, Cambridge, USA (Contributed Talk)	2019
	— <i>TASC-4/KASC-11 Conference</i> , Stellar Astrophysics Center, Aarhus, Denmark (Contributed Talk)	2018
	— <i>SAGE Seminar</i> , Max Planck Institute for Solar System Research, Göttingen, Germany (Invited)	2018
	— <i>Stars in Sydney Conference</i> , Macquarie University, Sydney, Australia (Contributed Talk)	2017
Selected Press	— ”The ‘Forbidden Planet’ That Escaped a Fiery Doom,” The New York Times	June 2023
	— ”8 Ursae Minoris b: Scientists unlock mystery of planet that escaped death”, BBC News	June 2023

- "NASA's TESS Tunes into an All-sky 'Symphony' of Red Giant Stars", [NASA](#) Aug 2021
- "An all-sky red giant star symphony", [EarthSky](#) Aug 2021
- "Stellar pulses are transformed into a celestial symphony", [Space.com](#) Aug 2021
- "How AI Can Determine the Future of Red Giants Like Our Sun", [Nvidia Blog](#) Aug 2017
- "Scientists Are Using Artificial Intelligence to Plot the Galaxy", [Inverse](#) May 2017

Observing Experience

Anglo-Australian Telescope 3.9 meter, HERMES spectograph 9 nights

References

Daniel Huber

Assistant Astronomer (faculty)
Institute for Astronomy
University of Hawai'i – Manoa

Email: huberd@hawaii.edu

Dennis Stello

Associate Professor
School of Physics
UNSW Sydney

Email: d.stello@unsw.edu.au

Marc Pinsonneault

Professor
Department of Astronomy
The Ohio State University

Email: pinsonneault.1@osu.edu