

# Marc Teng Yen Hon

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

	— MSc research co-mentor (Shabib Rizvi)	2017
	<b>Lab Assistant, University of Wollongong</b>	
	— PHYS141/142 Fundamentals of Physics	2015
	— PHYS225 Electromagnetism and Optoelectronics	2015
<b>Professional Membership and Service</b>	— 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 &amp; 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
<b>Grants and Proposals</b>	— Galactic Evolution via the Asteroseismology of the Northern Continuous Viewing Zone, TESS GI Cycle 6 (Pending), <b>PI</b>	2023
	— Lithium in TESS Red Giants, Magellan Telescopes, <b>3n, Co-I</b>	2023
	— Chemical Signatures of Planetary Engulfment in Red Giants, CFHT, <b>16h, PI</b>	2023
	— Confirming <i>Gaia</i> Binaries with Impossibly Small Separations, Keck I, <b>10h, PI</b>	2023
	— Fossil Magnetic Fields at the Surface of Seismically Peculiar Red Giants, CFHT, <b>10h, PI</b>	2022
	— Confirming the First Close-in Planet Surviving Host Giant Star Evolution, Keck I + CFHT, <b>2n + 10h, PI</b>	2021-2022
	— TESS's Ear on The Metal-Poor Milky Way, TESS GI Cycle 5 (G05162), <b>Co-I</b>	2022
	— NASA Hubble Fellowship Grant, STScI, <b>sole Chief Investigator, \$250k</b>	2020-2023
	— Exploring the Planet Population Around Evolved Stars with TESS, TESS GI Cycle 4 (G04179), <b>Co-I</b>	2021
	— The K2-HERMES follow-up program, AAT, <b>69n, Co-I</b>	2016-2019
	— The HERMES-TESS program, AAT, <b>31n, Co-I</b>	2016-2018

<b>Awards and Scholarships</b>	— 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
<b>Outreach and Presentations</b>	— <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
<b>Selected Press</b>	— ”The ‘Forbidden Planet’ That Escaped a Fiery Doom”, <a href="#">The New York Times</a>	June 2023
	— ”8 Ursae Minoris b: Scientists unlock mystery of planet that escaped death”, <a href="#">BBC News</a>	June 2023
	— ”NASA’s TESS Tunes into an All-sky ‘Symphony’ of Red Giant Stars”, <a href="#">NASA</a>	Aug 2021
	— ”An all-sky red giant star symphony”, <a href="#">EarthSky</a>	Aug 2021
	— ”Stellar pulses are transformed into a celestial	Aug 2021

- symphony”, [Space.com](#)
- ”How AI Can Determine the Future of Red Giants Like Our Sun”, [Nvidia Blog](#)
- ”Scientists Are Using Artificial Intelligence to Plot the Galaxy”, [Inverse](#)

## Observing Experience

Anglo-Australian Telescope 3.9 meter, HERMES spectograph 9 nights

## References

*Daniel Huber*

Assistant Astronomer (faculty)      Email: [huberd@hawaii.edu](mailto:huberd@hawaii.edu)  
 Institute for Astronomy  
 University of Hawai'i – Manoa

*Dennis Stello*

Associate Professor      Email: [d.stello@unsw.edu.au](mailto:d.stello@unsw.edu.au)  
 School of Physics  
 UNSW Sydney

*Marc Pinsonneault*

Professor      Email: [pinsonneault.1@osu.edu](mailto:pinsonneault.1@osu.edu)  
 Department of Astronomy  
 The Ohio State University