Marc Teng Yen Hon

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Principal Interests

Asteroseismology, Stellar Evolution, Exoplanetary Science, Machine Learning

Research Experience

Institute for Astronomy, University of Hawai'i at Mānoa
NASA Hubble Fellow, Nov 2020 - Present
Unraveling the History of the Galaxy with TESS Asteroseismology
Advisor: Prof. Daniel Huber

UNSW Sydney, New South Wales, Australia
Doctor of Philosophy, Astrophysics, July 2020
Thesis: Deep Learning in Asteroseismology
Advisor: Prof. Dennis Stello

Education

University of Wollongong, New South Wales, Australia
Bachelor of Science Advanced (1st Class Honours),
Physics and Mathematics, December 2015
Thesis: Magnetic Vortices in Micro-magnetic Materials
Advisor: Prof. Alexey Pan

Awards and Scholarships

NASA Hubble Fellowship Program	2021-present
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
UoW Australian Institute of Physics Prize	2015

Outreach and Presentations

— *Global Malaysian Astronomers Convention*, Kuala Lumpur, Malaysia (Invited) 2023
— *American Astronomical Society 241, Winter Meeting*, Washington, Seattle 2023
— *AMNH Astro Seminar*, AMNH, New York, USA (Invited) 2022

— *TESS Science Talk* MIT, Cambridge, USA (Invited) 2022
— *Cosmic Origins Program Seminar Series*, 2022
NASA Stars Science Interest Group (Invited)
— *Science, Mathematics and Technology Seminar Series* 2022
SUTD, Singapore (Invited)
— *TESS Science Conference II*, MIT, Cambridge, USA 2021
(Contributed Talk)
— *Astronomy Colloquium*, Yale University, 2021
New Haven, USA (Invited)
— *Institute for Astronomy Colloquium*, 2021
University of Hawai'i, USA (Invited)
— *TASC-5/KASC-12 Conference*, MIT, Cambridge, USA 2019
(Contributed Talk)
— *TASC-4/KASC-11 Conference*, 2018
Stellar Astrophysics Center, Aarhus, Denmark (Contributed Talk)
— *SAGE Seminar*, Max Planck Institute for Solar System 2018
Research, Göttingen, Germany (Invited)
— *Stars in Sydney Conference*, Macquarie University, 2017
Sydney, Australia (Contributed Talk)

Teaching Experience

Research Supervisor, Institute for Astronomy, Hawai'i
ASTR699 Research (1 student) 2022-present
Research Experiences for Undergraduates (4 students) 2022
Academic Lecturer, Institute for Astronomy, Hawai'i
ASTR 631 Radiative Transfer Stellar Atmospheres 2022
Academic Tutor, School of Physics, UNSW Sydney
PHYS3116 – Astrophysics Tutor 2019
PHYS3116 – Astrophysics Lecturer 2018
Research Supervisor, School of Physics, UNSW Sydney
PhD program supervision (1 student) 2021-present
Honours project supervision (2 students) 2018-2019
Undergraduate research program (6 students) 2017-2019
Lab Assistant, University of Wollongong
PHYS141/142 – Fundamentals of Physics 2015
PHYS225 – Electromagnetism and Optoelectronics 2015

Professional Membership and Service

— Institute for Astronomy Colloquium Committee 2022-present
— Journal Referee for *The Astrophysical Journal* 2020-present
— Journal Referee for *Monthly Notices of the Royal Astronomical Society* 2019-present
— Journal Referee for *Astronomy & Astrophysics* 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	
	— *Kepler* Asteroseismic Science Consortium	2016-present

Proposals

— Confirming *Gaia* Binaries with Impossibly Small Separations, Keck I, **10h, PI**	2023
— Fossil Magnetic Fields at the Surface of Seismically Peculiar Red Giants, CHFT, **10h, PI**	2022
— Confirming the First Close-in Planet Surviving Host Giant Star Evolution, Keck I + CHFT, **2n + 10h, PI**	2021-2022
—TESS's Ear on The Metal-Poor Milky Way, TESS GI Cycle 5, **Co-I**	2022
— Exploring the Planet Population Around Evolved Stars with TESS, TESS GI Cycle 4, **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

Selected Press

— "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

References

Daniel Huber
Assistant Astronomer (faculty) — Email: huberd@hawaii.edu
Institute for Astronomy
University of Hawai'i – Manoa

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Associate Professor — Email: d.stello@unsw.edu.au
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The Ohio State University