

WEI CHIEH (MASON) NG

Massachusetts Institute of Technology

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EDUCATION

Massachusetts Institute of Technology (MIT) 2018 - present

Ph.D. Candidate in Physics

Advisor: Professor Deepto Chakrabarty; GPA: 4.60/5.00

The University of Auckland 2017

Bachelor of Science (Honours) in Physics

Advisor: Professor Richard Easther; GPA: 8.63/9.00

The University of Auckland 2014 - 2016

Bachelor of Science

Majors: Physics and Mathematics; GPA: 8.74/9.00

RESEARCH EXPERIENCE

Massachusetts Institute of Technology 09/2018 - present

Graduate Research Assistant, Advisor: Prof. Deepto Chakrabarty

X-ray pulsation searches, timing, and spectroscopic analyses of pulsars (NICER/XMM-Newton/Swift data)

Australian National University 02/2018 - 07/2018

Graduate Research Assistant, Advisor: Prof. Martin Asplund

Modeling stellar atmospheres in 3D with different magnetic field configurations and strengths

Swinburne University of Technology 12/2017 - 02/2018

Summer Vacation Scholar, Advisors: Dr. Nikki Nielsen and Assoc. Prof. Glenn Kacprzak

Modeling stellar atmospheres in 3D with different magnetic field configurations and strengths

The University of Auckland 02/2017 - 11/2017

BSc (Honours) Student, Advisor: Prof. Richard Easther

Inflationary Model Selection ft. Dark Matter in the CMB

Australian National University 11/2016 - 02/2017

Summer Scholar, Advisors: Assoc. Prof. Christian Wolf and Dr. Christopher Onken

Diagnosing poor seeing of the SkyMapper telescope

The University of Auckland 12/2015 - 02/2016

Summer Research Scholar, Advisor: Assoc. Prof. Jan Jamie Eldridge

Modelling the spectra of hot stars

PUBLICATIONS

Mason Ng, Paul S. Ray, Peter Bult, Deepto Chakrabarty, et al. (2021). NICER Discovery of Millisecond Pulsations and an Ultracompact Orbit in IGR J17494-3030. In preparation.

Mason Ng et al. (2021). NICER Spectroscopy of NGC 300 ULX-1. In preparation.

M. Ng, N.M. Nielsen, G.G. Kacprzak et al. (2019). Kinematics of the OVI Circumgalactic Medium: Halo Mass Dependence and Outflow Signatures. *The Astrophysical Journal*, 886, 66.

J.J. Eldridge, E.R. Stanway, L. Xiao, L.A.S. McClelland, G. Taylor, **M. Ng** et al. (2017). Binary Population and Spectral Synthesis Version 2.1: construction, observational verification and new results. *Publications of the Astronomical Society of Australia (PASA)* 34.

PRESENTATIONS

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|---|------|
| Poster - Celebrating 20 Years of Chandra Science Symposium <i>Spectral Evolution of NGC 300 ULX-1</i> | 2019 |
| Invited Talk - Auckland Astronomical Society <i>Modelling the spectra of hot stars</i> | 2016 |
| Talk - Royal Astronomical Society of New Zealand Conference <i>Modelling the spectra of hot stars</i> | 2016 |

TECHNICAL SKILLS

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|-----------------------------------|--|
| Programming | Python, HTML/CSS, IDL, L ^A T _E X |
| High Performance Computing | OpenMP, MPI, Slurm |

HONORS & AWARDS

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| Department of Physics Scholarship, 2017 (<i>The University of Auckland</i>) | 2016 |
| University of Auckland Postgraduate Honours/PG Diploma Scholarships | 2016 |
| Joyce Mary Clark Scholarship (<i>The University of Auckland</i>) | 2016 |
| First in Course Award (x6) (<i>The University of Auckland</i>) | 2014 - 2017 |
| Scholarship (<i>New Zealand Qualifications Authority</i>) | 2014 |
| The Trusts Charitable Foundation Scholarship (<i>The Trusts Charitable Foundation</i>) | 2013 |
| Dux Litterarum (<i>Lynfield College</i>) | 2013 |

TEACHING EXPERIENCE

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| Graduate Teaching Assistant for 8.282J <i>Department of Physics, Massachusetts Institute of Technology</i> | Spring 2021 |
| Graduate Teaching Assistant for 8.282J and 8.284 <i>Department of Physics, Massachusetts Institute of Technology</i> | Spring 2020 |
| Graduate Teaching Assistant (Physics) for PHYSICS 107/107G <i>Department of Physics, The University of Auckland</i> | 2017 |
| Marker (MATHS 110/150/208/250/362) <i>Department of Mathematics, The University of Auckland</i> | 2015 - 2017 |

Teaching Assistant for PHYSICS 107/107G/120

2015 - 2016

Department of Physics, The University of Auckland

LEADERSHIP & OUTREACH

Graduate Student Member

2020 - present

Graduate Admissions Committee, Department of Physics, MIT

Co-Organizer

2020 - present

Physics Graduate Application Assistance Program, Department of Physics, MIT

Chair of Development Subcommittee

2020 - present

MIT Graduate Student Council External Affairs Board

Committee Member (Graduate Student)

2019 - present

MIT Open Space Programming Advisory Committee

Co-Chair of Public Outreach Subcommittee

2019 - 2020

MIT Graduate Student Council External Affairs Board

Volunteer Observer

2018 - present

MIT Sidewalk Astrogazers

Executive Member

2017

Science Students' Association

President

2015 - 2017

The Physics Association of The University of Auckland (PAUA)