

# WEI CHIEH (MASON) NG

Massachusetts Institute of Technology

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## EDUCATION

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**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 Easter; 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

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**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 Easter*

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

**Australian National University** 12/2015 - 02/2016

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

Modelling the spectra of hot stars

## PUBLICATIONS

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

## TECHNICAL SKILLS

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<b>Programming</b>	Python, HTML/CSS, IDL, L <sup>A</sup> T <sub>E</sub> X
<b>High Performance Computing</b>	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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<b>Graduate Teaching Assistant for 8.282J</b> <i>Department of Physics, Massachusetts Institute of Technology</i>	Spring 2021
<b>Graduate Teaching Assistant for 8.282J and 8.284</b> <i>Department of Physics, Massachusetts Institute of Technology</i>	Spring 2020
<b>Graduate Teaching Assistant (Physics) for PHYSICS 107/107G</b> <i>Department of Physics, The University of Auckland</i>	2017
<b>Marker (MATHS 110/150/208/250/362)</b> <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**

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**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)*