

# 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, spectroscopic, and polarimetric analyses of pulsars (NICER/XMM-Newton/Swift/IXPE 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*

Kinematics of the OVI Circumgalactic Medium: Halo Mass Dependence and Outflow Signatures

**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

**The University of Auckland** 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**, et al. 2021. *NICER Spectroscopy of NGC 300 ULX-1*. In preparation.

D. J. K. Buisson, et al. (including **Mason Ng**) 2021. *Dips and eclipses in the X-ray binary Swift J1858.6-0814 observed with NICER*. In preparation.

Peter Bult, et al. (including **Mason Ng**) 2021. *Long term coherent timing of the accreting millisecond pulsar IGR J17062-6143*. In preparation.

F.A. Fogantini, D. Altamirano, et al. (39 co-authors including **Mason Ng**) 2021. *Extreme X-ray flaring in Swift J1858.6-0814 as seen by NICER, XMM-Newton and NuSTAR*. In preparation.

NICER team (including **Mason Ng**) 2021. *Evidence for a Compact Object in the Aftermath of the Extra-Galactic Transient AT2018cow*. In preparation.

**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*. ApJ, 908, L15.

Peter Bult, et al. (12 co-authors including **Mason Ng**) 2020. *The X-ray bursts of XTE J1739-285: a NICER sample*. ApJ, 907, 79.

Yuhan Yao, et al. (27 co-authors including **Mason Ng**) 2020. *A Comprehensive X-ray Report on AT2019wey*. Submitted to ApJ.

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

J.J. Eldridge, E.R. Stanway, et al. (7 co-authors including **M. Ng**) 2017. *Binary Population and Spectral Synthesis Version 2.1: construction, observational verification and new results*. 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 8.901</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
<b>Teaching Assistant for PHYSICS 107/107G/120</b> <i>Department of Physics, The University of Auckland</i>	2015 - 2016

## LEADERSHIP & OUTREACH

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<b>Graduate Student Member</b> <i>Graduate Admissions Committee, Department of Physics, MIT</i>	2020 - present
<b>Co-Organizer</b> <i>Physics Graduate Application Assistance Program, Department of Physics, MIT</i>	2020 - present
<b>Chair of Development Subcommittee</b> <i>MIT Graduate Student Council External Affairs Board</i>	2020 - present
<b>Committee Member (Graduate Student)</b> <i>MIT Open Space Programming Advisory Committee</i>	2019 - present
<b>Co-Chair of Public Outreach Subcommittee</b> <i>MIT Graduate Student Council External Affairs Board</i>	2019 - 2020
<b>MITvote Graduate Liaison</b> <i>MITvote</i>	2018 - present
<b>Volunteer Observer</b> <i>MIT Sidewalk Astrogazers</i>	2018 - present
<b>Executive Member</b> <i>Science Students' Association</i>	2017
<b>President</b> <i>The Physics Association of The University of Auckland (PAUA)</i>	2015 - 2017