Jack Lönnborn   *Curriculum vitae*

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OVERVIEW

Interests: I am interested in a broad range of topics spanning energy systems and markets, batteries and hybrid systems, physics, mathematics and programming. I thrive in collaborative environments, and have experience managing and delivering large-scale projects. These projects have drawn on my ability to identify and prioritise tasks, efficiently assimilate the information required to complete them, and communicate clearly with clients.

I have contributed to the Python mathematical battery modelling project PyBaMM .

Key skills: Python, MATLAB, shell scripting and Linux systems, numerical modelling and differential equations, statistics, cloud computing and HPC, relational databases

EMPLOYMENT HISTORY

July 2019 – Present	**Forecast Analyst**, Proa Analytics *Solar energy forecasting, modelling and analysis. Algorithm and software development. System architecture and operations. Project management.*
January 2017 – Present	**Teaching Associate**, University of Melbourne School of Mathematical Sciences *Experimental Design and Data Analysis in R, Calculus 1, Calculus 2, Linear Algebra*
January 2019 – July 2019	**Student Advocacy and Support Officer**, Monash Student Association *Advice and advocacy for students facing academic progress or misconduct proceedings, and other issues*
2016 – 2017	**Teaching Associate**, Monash University School of Mathematical Sciences *Advanced Engineering Mathematics A and B*
2012 – 2015	**Academic Support Worker**, Disability Support Services Monash University *Taking notes, scribing exams and interpreting for students with disabilities*

EDUCATION

2018	**Master of Science (Physics)**, University of Melbourne Thesis Grade: H1 (90) Thesis Topic: *Superfluid Vortex Dynamics and Heat Transport in Neutron Stars* Advisor: Professor Andrew Melatos
2016	**Bachelor of Science (Physics, Mathematics)**, Monash University

2014	**Bachelor of Arts (German)**, Monash University
	Bachelor of Laws (Honours, H1), Monash University
	Thesis Topic: *Theories of interpretation of the Australian Constitution in light of contemporary philosophy of language*
	Advisor: Assoc. Prof. Patrick Emerton
2007	**Victorian Certificate of Education**, Trinity Grammar School
	ENTER score: 99.95

REFEREED JOURNAL PUBLICATIONS

2019   Lönnborn, J. R., Melatos, A. and B. Haskell, "Collective, glitch-like vortex motion in a neutron star with an annular pinning barrier" (2019) *Monthly Notices of the Royal Astronomical Society*, 470:1, 702-710; eprint

Acknowledgment in:
Nguyen, E. V. and B. A. Pereira et. al., "Proteomic profiling of human prostate cancer-associated fibroblasts (CAF) reveals LOXL2-dependent regulation of the tumor microenvironment" (2019) *Molecular & Cellular Proteomics*; eprint

ACADEMIC ACHIEVEMENTS

2015   Summer research scholarship (Astrophysics), Monash University
Topic: *Core-collapse supernovae and nucleosynthesis in massive stars*
Advisors: Alexander Heger, Bernhard Müller

First prize, *Physics for Astrophysics (ASP3222)*, Monash University

2014   Third prize, Essay Competition, Australian Legal Philosophy Students' Association
Judged by Susan Crennan, former Justice of the High Court of Australia

2011   First prize, Level 10 German Studies

2009   *Dean's List Fellowship Award*, Faculty of Science, Monash University

2008   *Monash University Scholarship for Excellence*

Australian Student Prize, Department of Education, Employment and Workplace Relations

2007   *Premier's VCE Award for English Literature* (awarded to the top 5 students in Victoria)

Premier's VCE Award for English (awarded to the top 10 students in Victoria)

School prizes:

- Trinity School Council Prize for Dux of School
- W. H. S. Dickinson Prize for Dux of Humanities
- George Clarence Arnold Prize for English Literature
- J. D. Levick Prize for Physics
- Prize for German
- The Trinity Prize

2006   *The Monash Prize* (top student in year eleven)

OTHER QUALIFICATIONS

2011   German, level C1
Common European Framework of Reference for Languages

REFEREES

Dr Andrew Melatos
Professor, School of Physics, University of Melbourne
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Eugene Moore
Student Advocacy and Support, Monash University
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