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Alex Kemp

Education

Bachelor of Aerospace Engineering (Honours) and Bachelor of Science — Feb 2014 - Dec 2018
Monash University (Australia)
Majors: Applied Mathematics, Astrophysics. Minor: Physics
Honours Weighted Average Mark: 86.7 (GPA 3.83)

Published Research

On the discovery of K-enhanced and possibly Mg-depleted stars throughout the Milky Way [Kemp et al] – MNRAS Vol 480, p1384-1392 — 2018

Discovery of s-process enhanced stars in the LAMOST survey, [Norfolk, Casey, Miles, Kemp et al] – MNRAS (Submitted) — 2018

Awards and Achievements

Dean's List (Monash University) — 2014, 2015, 2016, 2017
Summer Research Scholarships (Monash University) — 2016-2017, 2017-2018
Monash University Robotics Competition - Finalist (2015), 3rd (2016) — 2015, 2016
Highest Academic Performance - Introductory Astronomy — 2014

Computer Skills

Programming Languages:	Python, Matlab, Fortran 90, Arduino C..
Software:	TOPCAT, LaTeX, SolidWorks CAD software (CSWA Certified) and FEM modelling packages, ANSYS Fluent, Tecplot 360, OpenVSP, Microsoft Office Suite, Pages, Keynote
Operating Systems:	Mac OSX, Windows, Linux (Ubuntu).

Scientific Research Experience

Competitively Awarded Summer Research Scholarship — Nov 2017 - Mar 2018
Monash University Department of Physics & Astronomy
Supervised by Dr. Andrew Casey

I applied a novel match-filtering technique to search for stars with unusual Mg and K abundances within the Milky Way using LAMOST data.

Research Student (Monash University) — Jun 2017 - Nov 2017
Dept. of Physics and Astrophysics - Optional Research Unit
Supervised by Dr. Paul Lasky and Dr. Eric Thrane

I developed a specialised PDE solver to investigate the late-time gravitational wave signal following binary black-hole merger. The project aimed to investigate whether information about the distribution of matter around the black hole system could be inferred from the late-time gravitational wave signal.

Engineering Research Experience

Research Student — Nov 2016 - Mar 2017
Monash University Wind Tunnel - Summer Research Scholarship
Supervised by Mr. David Burton

I was responsible for the design and construction of a large-scale wind tunnel model for testing an acoustically-driven active flow control system, with the purpose of investigating possible effects on bluff body drag and wake dynamics. I then used the model to conduct a brief experimental investigation using Monash University's 450 kW wind tunnel.

Referees Available Upon Request