Robert MARDUS-HALL

Nuclear Engineer, PhD

+61 433 614 163 @ robbie.mardus@gmail.com Extended CV
8/192-198 Princes Hwy, Fairy Meadow NSW 2519
Born July 11, 1990 in Canberra, Australia

Dedicated engineer with experience in both academic and professional spaces. History of strong academic performance that has translated to attention to detail in current professional roles. Learns new skills quickly and independently. Experience in numerical modelling of interdependent multi-physics systems utilising open source tools. Excellent communication skills with the ability to work well as a member of a larger team. Interested in exciting new areas of research and development and the applications of new technology to emerging and existing sectors.

Professional Experience

Current – Feb 2020 — Scientific Analyst, Nuclear Analysis Section, ANSTO, Sydney
- Analysis of existing thermal hydraulic control limits on cryogenic components within reactor, resulting in relaxation of these limits and subsequent decrease in reactor downtime
- Lead investigator in to design of novel cold neutron source for potential installation within the OPAL reactor
- Driving force behind implementation of latest hardware for Nuclear Analysis Section to improve productivity and capabilities whilst working from home.

StarCCM+ | MCNP | SolidWorks | Cold Neutron Source

Current – Dec 2019 — Co-founder/Technical Officer, Ouranos Systems Pty Ltd, Sydney
- Using skills developed through PhD, along with colleagues, created start-up concerned with the development of power solutions for space applications.
- Recipients of Industry Foundation scholarships, member of nandin Innovation Centre

Serpent | Monte Carlo | SolidWorks | OpenFOAM

Feb 2020 – Dec 2017 — System Administrator, Fire ARC, Sydney
- Administration of in-house HPC resources for research group
- Responsible for purchase, installation and maintenance of workstations within the confines of university IT protocols

Linux | bash | git | ssh

Feb 2020 – Mar 2016 — Doctoral Candidate, UNSW Faculty of Engineering, Sydney
- Independently researched and developed coupling methodology between various multiphysics codes
- Secondment to University of California, Berkeley
- Production of various publications and thesis entitled *Multiphysics Coupling for PB-FHRs*

OpenFOAM | LIGGGHTS | Serpent | Linux | HPC | LaTeX

Feb 2019 – Dec 2016 — Head Tutor, UNSW Faculty of Engineering, Sydney
- Responsible for leading and management of other tutors
- Produce assignment problems for students
- Management of tutorial classes

CFX | Fluent | SolidWorks | Slack

Dec 14/15 – Feb 15/16 — Mechanical Engineer Intern, Northrop Consulting Engineering Services, Canberra
- Mechnical HVAC design, CFD CO2 design for carparks, BMS data analysis

AutoCAD | ANSYS | Fluent | CFX | Camel | BMS | Excel

Education

2020 Doctor of Philosophy (Mechanical/Nuclear Engineering) - **University of New South Wales**
2015 Bachelor of Engineering (Mechanical), *1st Class Honours* - **University of Wollongong**
2015 Bachelor of Science (Physics), *with Distinction* - **University of Wollongong**

References

Guan Yeoh
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2 September, 2020