PAUL COSTER

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EDUCATION

University of Melbourne Bachelor of Computer Science, July 2008 First Class Honours

University of Melbourne Bachelor of Science, July 2005 Major in Mathematics and Statistics Specialisation in Applied Mathematics

SUMMARY

A high performance computing expert with degrees in mathematics and computer science and a background in digital signal processing in the field of radio-astronomy.

I am the primary author of the worlds fastest Pulsar search software. This data intensive GPU supercomputing software provides a means of searching the galaxy for tight binary pulsar systems to be used as laboratories for the study of General Relativity.

Experience designing algorithms, writing high performance code in C and C++ and writing GPU software.

EXPERIENCE

PhD Candidate, Astrophysics Swinburne University of Technology Jan 2011-2014 Melbourne, Australia

In the course of my PhD candidacy I have written a new GPU software suite to search for relativistic pulsars. I have collected data using the Parkes Radio Telescope to contribute to a dataset of over a Petabyte and written software to use hundreds of thousands of GPU hours to search for characteristic signals of relativistic pulsars. In this process I have developed high performance code using the CUDA framework for a GPU cluster. I have also developed research techniques in the astronomy, computing and mathematical domains and have written numerous grant applications.

Honors Year, Computer Science University of Melbourne 2010 Melbourne, Australia

My honors year comprised of advanced coursework and a thesis component worth almost half the grade. My thesis focussed on cutting edge paralelel string sorting algorithms. This work touched on GPU programming that I developed further as a PhD candidate in astrophysics. I recieved first class honors for both my thesis work and overall.

Lead Programmer	University of Melbourne ARC	Jun 2006-Oct 2008
	Melbourne, Australia	

As the lead programmer at the Assessment Research Centre, I designed and wrote software to perform central tasks for the centre. I led a team of three in the development and implementation

of two major products. One of these products allowed researchers to analyse student responses with details of responses to online question items. The second was an online reporting suite that provided reports for students at schools across the state.

Database Programmer

Bicycle Victoria Melbourne, Australia Oct 2008-Feb 2009

In this diverse contract position I performed a wide range of tasks requiring skill in computing and communication. I was responsible for creating new software to manage the membership base of a large organization as well as extend other elements of membership services.

COMPUTING SKILLS

Digital Signal Processing Algorithm Design Cluster Scripting for Big Data applications High performance GPGPU programming for science C C++ Python Fortran

HONORS AND AWARDS

CSIRO Postgraduate Scholarship SUPRA Postgraduate Scholarship First Class Honours, University of Melbourne, Computer Science Apple University Consortium Honours Scholarship President Swinburne University Climbing Club South Australian Men's Track and Field Champion 800m