

Seminar Outline: High Throughput Computing at Monash

High Throughput Computing (HTC) has enabled a silent revolution in research. Once upon a time, researchers were lucky if they could perform a few computational experiments to validate their empirical models. Today, thanks to a combination of high powered workstations and clusters (driven by exponential gains in processor performance) and novel software, there is ample computational power for previously impossible experiments. As a result, researchers can explore much larger design spaces, leading to more realistic and accurate models of the real world. Exemplars abound in fields such as computational chemistry, physics, biosciences and even economics and the social sciences.

In this seminar I will present Monash's High Throughput Computing strategy. This consists of a Grid of computational resources such as various compute clusters and networked laboratories, configured with software such as SUN Grid Engine, Condor and Nimrod. These systems allow various levels of interaction from simple queue management software through to sophisticated search and optimization tools. The architecture interacts with external HPC suppliers at VPAC and other ARCS services.

Biography: Professor David Abramson

Professor David Abramson has been involved in computer architecture and high performance computing research since 1979. Previous to joining Monash University in 1997, he has held appointments at [Griffith University](#), [CSIRO](#), and [RMIT](#). At CSIRO he was the program leader of the Division of Information Technology High Performance Computing Program, and was also an adjunct Associate Professor at RMIT in Melbourne. He served as a program manager and chief investigator in the Co-operative Research Centre for Intelligent Decisions Systems and the Co-operative Research Centre for Enterprise Distributed Systems.

Abramson is currently an [ARC](#) Professorial Fellow; Professor of Computer Science in the [Faculty of Information Technology](#) at [Monash University](#), Australia, and associate director of the [Monash e-Research Centre](#).

Abramson has served on committees for many [conferences and workshops](#), and has published over [150 papers and technical documents](#). He has given [seminars](#) and received [awards](#) around Australia and internationally and has received over \$3.6 million in research funding.

He also has a keen interest in R&D commercialization and consults for [Axceleon](#) Inc, who produce an industry strength version of [Nimrod](#), and [Guardsoft](#), a company focused on commercialising the [Guard](#) relative debugger.

Abramson's current interests are in high performance computer systems design and software engineering tools for programming parallel, distributed supercomputers and [stained glass windows](#).