MONASH University
e-Research Centre

GROUP OF EIGHT

The Faculty of IT and the Monash e-Research Centre are proud to present the following seminar - part of the High Definition interactive video links of MURPA Seminar Series 2010

Gordon: A New Kind of Supercomputer for Data-Intensive Applications

By Prof Michael L. Norman

Professor of physics at UCSD directing the 'Laboratory for Computational Astrophysics'. Specialist in supercomputer simulations/visualisations. (Biography: http://www.sdsc.edu/about/Director.html)

Today's most powerful supercomputers have impressive floating point capabilities, but are rather unbalanced from the standpoint of memory and interconnect bandwidth, not to mention disk IO bandwidth. One measure of this balance is the Amdahl number, which is defined as the ratio of the IO bandwidth in Byte/s and the CPU performance in FLOPS. A balanced system has an Amdahl number of 1. The fastest machines on the Top500 list have Amdahl numbers in the range of 0.05 – 0.1, which makes them ideal for compute-intensive applications.
In 2011 the San Diego Supercomputer Center (SDSC) will deploy a supercomputer architected for data-intensive applications like data mining and database, which are growing in importance in science, engineering, medicine and the social sciences. I will describe the architectural features of Gordon and present some preliminary results using a prototype system at SDSC called 'Dash'.

Date: Friday 14 May
Time: 10am-11am
Location: Seminar Room 135, Building 26, Clayton campus
Registration by 13 May: Rob.Gray@infotech.monash.edu.au

MURPA Seminar Series 2010

Monash Undergraduate Research Projects Abroad (MURPA) supports a unique summer mode placement in a leading research group overseas. It not only provides a research experience at the undergraduate level, but does this in an international context. Students are placed for a period of eight weeks allowing them to integrate into the research groups as team members.

MURPA also involves an advanced seminar scheme, in which students can attend seminars given by world leading experts before they leave. The seminar scheme is novel, because it uses cutting edge High Definition interactive video links with the University of California - and often simultaneous links to Japan - making it feasible to attract some of the world's best researchers "virtually" to Monash. These seminars also allow students to "meet" potential UCSD mentors and obtain information about possible projects.

https://messagelab.monash.edu.au/MURPA/MURPA2010

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