

Activities of the Theory and Computation Committee

Members

Robert Thacker (Chair)	2002-2005	Queen's University	thacker@astro.queensu.ca
David Schade	2002-2005	NRC, CADC	David.Schade@nrc.ca
Joseph Hahn	2004-2007	Saint Mary's University	jhahn@ap.stmarys.ca
Ue-Li Pen	2004-2007	CITA	pen@cita.utoronto.ca

As in previous periods, due to the geographic dispersion of the committee members, and Ue-Li Pen being on sabbatical in China, we have been unable to hold face-to-face meetings. However, we have continued using email which has proven to be an effective communication method. The past year has seen a flurry of activity in relation to the deployment of a “Tier 1” computing facility for Astronomy. Members of the committee have been directly involved in the discussions and have been instrumental in moving the issue forward.

Following-up on the suggestion that it would be a good idea to organize a meeting focusing on a Tier 1 facility, a short discussion was held in January 2005 within a meeting at CITA (organized by Ue-Li Pen). The primary purpose of the meeting was to review the successes of the “McKenzie” cluster and to examine future needs of various computational researchers. Despite some problems with scheduling, the meeting was attended by researchers from across Canada, and a good cross-section of fields were represented. Following a series of scientific presentations a round-table discussion on a Tier 1 facility was held. CITA representatives also discussed their plans to put forward a proposal within a larger University of Toronto CFI application.

During the discussion, some negative opinions about the feasibility of Astronomy applying for a facility “on it's own” were expressed. The argument was made that other fields have equal demands for HPC, although experiences from developing the wider C3.ca Long Range Plan for High Performance computing do not fully support this assertion. Preliminary discussions relating to hardware were broached. It was immediately clear that there are widely differing opinions on precisely what hardware should be purchased. No firm conclusions were drawn, and a Birds-of-a-feather meeting at CASCA will revisit this issue.

Although the CFI Board did indeed meet in February 2005, no date for the next round has been set. This has caused some difficulty for planning, although it is now believed letters of intent for the next round will be accepted in 2H05. More importantly, the announcement of the National Platforms Fund now provides a specific pool for funding HPC.

Outside of Astronomy, the new Long Range Plan for HPC has been released by C3.ca and is available on their website. Direct support for a single Tier 1 facility is expressed in the report, and it is reasonable to believe that—if the plan becomes policy—a multi-disciplinary Tier 1 facility will be built. In discussions held with C3 representatives, there appears to be cautious but broad support for the idea of a pilot Tier 1 project which was largely run by Astronomy. This issue will be further reviewed at the upcoming HPCS in Guelph which will be attended by representatives from the TCC.

On the administration front, replacements for Thacker and Schade have been decided upon; Lorne Nelson of Bishop's University and Julio Navarro have been nominated to the CASCA board. The new committee Chair will be Ue-Li Pen. The web pages have been moved from McMaster to the main CASCA site at Queen's (www.casca.ca/astro_comp).