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## The Alan Cousins Telescope - A Multi-Purpose Automatic and Remote Access Telescope

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**Abstract content**   
 (Max 300 words)   
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The Alan Cousins Telescope is a 0.75-m telescope at the Sutherland site of the South African Astronomical Observatory station in Sutherland intended for multi-purpose automatic and remote access observing. A failure of the control systems nearly 10 years ago prompted a complete upgrade of the telescope's control systems and related hardware and software. For the last 3 years, intensive work has been done in order to develop the software counterpart for the new control systems and to bring the telescope system (the telescope itself, the science instrument and all supporting hardware and software) to a point where it is ready for regular use.

Many factors needed to be considered while developing the control software - including efficient automatic operation, easy access for remote observers, safe operation during all observing modes and any environmental conditions and maximising the amount of science that can be done with the telescope. The new control software for the ACT neatly exemplifies how these ideals can be achieved by employing modern and novel software design and implementation principles.

Most of the recent work on the ACT has been concerned with commissioning the telescope system. Some of the major challenges included characterising and correcting for the pointing and tracking errors in the telescope mount and performing the photometric calibration of the science instrument.

The presentation will focus on the recent developments regarding the control software and the rationale behind these changes, the commissioning of the telescope system and potential future upgrades to the telescope system.

**Apply to be considered for a student award (Yes / No)?**

Yes

**Level for award (Hons, MSc, PhD)?**

PhD

**Main supervisor (name and email) and his / her institution**

Peter Martinez, South African Astronomical Observatory, peter@sao.ac.za

**Would you like to <br> submit a short paper <br> for the Conference <br> Proceedings (Yes / No)?**

Yes

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