

# Altium advances radio astronomy

Software company  
donates more than  
\$150,000 to UTAS Maths  
and Physics

Altium Limited, a leading developer of Windows-based electronics design software, is donating software, hardware, and support worth \$158,000 to the University of Tasmania Foundation.

The three-year donation, will fund two projects – a radio transient detector and a high-bandwidth interferometer – in advanced radio astronomy research being undertaken at the UTAS School of Mathematics and Physics.

The donation, presented by David Warren, non-executive director of Altium, includes a cash contribution, software, a “NanoBoard” and technical support and training.

#### Radio transient detector

This project, led by Professor John Dickey, involves the search to identify transient, giant bursts (pulses) of radio energy. There are numerous sources of pulses in the sky like collapsed stars and cosmic rays. Using the radio telescope located at the university, the detector will enhance the ability for researchers to find those sources and detect the pulses.

#### High-bandwidth interferometer

Led by Professor Peter McCulloch, this project will enable the UTAS research team

to prove that a class of variable radio sources are giant black holes at the centres of distant galaxies. The interferometer will bring signals from two telescope’s antennas and merge them in different ways. Dr. McCulloch and his team will use this data to monitor the variable sources that are suspected of being giant black holes.

“The nature of computations required in the projects results in immense data analysis tasks,” said Larry Forbes, Head of the School of Mathematics and Physics. “Both projects need to crunch data in real-time, but the technology up until now has been not available to do it. It was Altium’s FPGA technology that met our design needs.

“Altium technology is outstanding in its ability to integrate software tools, and in particular, to simulate programs in real-time before actually building the devices.”

Nick Martin, founder and CEO of Altium, said, “We are pleased to be part of the University of Tasmania’s research in radio astronomy, and provide the technology necessary for its advancement.”

Altium Limited is a global developer and supplier of electronics design software for the Microsoft Windows environment.



Dr Stefan Dieters with his Certificate of Recognition from NASA.



Head of the School of Mathematics and Physics Dr Larry Forbes with Altium’s Craig Rose, John Russell and David Warren and the Head of Physics Dr John Dickey.

## Hobart, we have recognition

At the Altium ceremony, the Faculty also celebrated the recognition by NASA of one of their own academics.

Dr Stefan Dieters received a Certificate of Recognition from the National Aeronautics & Space Administration for his contribution to the discovery of magnetars. Dr Dieters was one of a team of 11 people responsible for the 1998 discovery of magnetars, stars with extreme magnetic fields.

The award includes a \$500 honorarium, which Dr Dieters said he might use to buy a digital camera. But he said it is the recognition from the world’s premier space exploration agency that is most exciting.

That and the discovery itself, of course. Describing his feelings on discovering the magnetars, he said, “There’s just nothing like the feeling of being the only person on Earth to know something!”