Stellenbosch University awarded SARCHI Research Chair

http://blogs.sun.ac.za/news/2009/12/03/stellenbosch-university-awarded-sarchi-research-chair/

Stellenbosch University has been awarded an additional research chair via the South African Research Chair Initiative (SARCHI) of the Department of Science and Technology (DST) and the National Research Foundation (NRF).

An announcement that five research chairs – made available to South African universities as part of South Africa's commitment to strengthen cutting-edge science and engineering in South Africa and to hosting the Square Kilometre Array – was made at the 4th Annual Postgraduate Bursary Conference that commenced at the Wallenberg Research Centre at STIAS yesterday.

The Chairs are together worth R240 million over a period of of 15 years, subject to review every five years. This is in addition to the R140 million which the DST has already committed to a bursary programme – the SKA Youth into Science and Engineering – for study in astronomy, physics and engineering in fields related to the Square Kilometre Array and South Africa's MeerKAT Radio Telescope.

South Africa is competing against Australia to host the world's most powerful radio telescope, the €1.5-billion Square Kilometre Array. The 80-dish MeerKAT telescope – the pathfinder which will contribute to the development of the technology required for the SKA – is currently being constructed near the town of Carnarvon in the Northern Cape. The final decision on the successful host country, made by a consortium of the major international science funding agencies, is expected in 2012.

The SKA will be a mega radio telescope, some 50 – 100 times more sensitive than any other existing radio telescope on earth. It will consist of approximately 3 000 dish-shaped antennae and other hybrid receiving technologies, with a core of about 2 000 antennas and outlying stations of 30 to 40 antennas each, spiralling out of the core. These stations will be spread over a vast area of up to 3 000 km. The combined collecting area of all these antennas will add up to one square kilometre, or one million square metres.

In her keynote address to mark the opening of the SKA Conference in Stellenbosch on Wednesday night, the Minister of Science and Technology, Naledi Pandor stated that the excitement and challenges of astronomy and space science are already attracting some of South Africa's best students.

"The South African SKA project's Human Capital Development programme has a deliberate focus on capacity development, and this has been recognised internationally as unique and highly successful," she said. "Heads of astronomy departments and radio

astronomy engineering facilities around the world have commented on the high quality of research being done by the postgraduate students and academic staff working with the MeerKAT team," she said.

"The SKA represents an unprecedented opportunity for the development of very high level scientific and technological skills and expertise in Africa; skills which will be crucial in the next ten to twenty years in the global knowledge economy, she added."

"The SKA represents an unrivalled opportunity in Africa for high-level capacity building in telecommunications, imaging technology, receiver technology, high speed computing, antenna engineering, space physics and advanced computation," Dr Bernie Fanaroff, SKA project director, said at the event.

The Research Chair awarded to Stellenbosch will focus on electromagnetic systems and EMI (Electromagnetic Interference) Mitigation for the SKA.

Other universities that have received research chairs are those of Cape Town, the Western Cape, the Witwatersrand and Rhodes University. The successful universities are now expected to find an internationally recognised and dynamic researcher to take up the position.

International astronomers that will be presenting at this year's conference include Dr Andrew Faulkner (University of Cambridge), Prof Tony Brown (University of Manchester), Prof Daniel Joseph Pisano (University of West Virginia), Dr Matt Jarvis (University of Hertfordshire), Dr Somanah Radhakrishna (Mauritius Radio Telescope), Prof Marc Verheijen (University of Groningen), Dr Lister Staveley-Smith (International Centre for Radio Astronomy Research in Perth), and Dr Girish Kumar Beeharry (University of Mauritius).

Published on December 3, 2009