

The DARA Big Data Project

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Abstract. The DARA Big Data project is a flagship UK Newton Fund & GCRF program in partnership with the South African Department of Science & Technology (DST). DARA Big Data provides bursaries for students from the partner countries of the African VLBI Network (AVN), namely Botswana, Ghana, Kenya, Madagascar, Mauritius, Mozambique, Namibia and Zambia, to study for MSc(R) and PhD degrees at universities in South Africa and the UK. These degrees are in the three data intensive DARA Big Data focus areas of astrophysics, health data and sustainable agriculture. The project also provides training courses in machine learning, big data techniques and data intensive methodologies as part of the Big Data Africa initiative.

Keywords. Radio Astronomy, Data Intensive, Big Data

The Development in Africa with Radio Astronomy (DARA) Big Data project is a sister program to the original DARA Project (www.dara-project.com), which provides training in radio astronomy to support the African partner countries of the Square Kilometre Array (SKA) project develop additional STEM capacity in high tech areas, ahead of the SKA and African VLBI Network (AVN) telescopes. The DARA Big Data project (www.darabigdata.com) builds on this capacity development to encourage translation of STEM skills from radio astronomy into other data intensive fields.

DARA Big Data provides bursaries for students from the AVN countries to study for MSc(R) and PhD degrees at universities in South Africa and the UK. These degrees are in the three data intensive DARA Big Data focus areas of astrophysics, health data and sustainable agriculture, and include co-supervision from academics in AVN countries. In addition to providing studentship bursaries, DARA Big Data also works in partnership with the South African SKA project, now incorporated into the South African Radio Astronomy Observatory (SARAO), and the Institute for Data Intensive Astronomy (IDIA; www.idia.ac.za) on the broader Big Data Africa training program. Big Data Africa provides training workshops in machine learning, big data techniques and data intensive methodologies across the three DARA Big Data focus areas. These workshops and training courses currently take place in South Africa, are open to students from across the AVN country network, and provide financial support for attendees.