



Dr James Keaveney

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James Keaveney is the director of the UCT–CERN Research Centre and a Senior Lecturer in the Department of Physics which he joined in March 2019. He holds a B2 rating from the National Research Foundation (NRF). In 2022 he was elected as coordinator of the NRF’s national SA–ATLAS platform, which facilitates South Africa’s major involvement in the ATLAS experiment at CERN. Prior to his arrival in the country, James was a postdoctoral researcher at Deutsches Elektronen-Synchrotron (DESY), Hamburg (2016–2019). Before this he was a Pegasus Marie Curie Fellow at Vrije Universiteit Brussel (VUB), Brussels (2012–2015). James holds a BSc in Experimental Physics from the University of Galway, Ireland (2007) and a PhD in Experimental Particle Physics from University College Dublin, Ireland (2011).

His research is concerned with understanding the inner workings of nature at the most fundamental level. He uses data from the ATLAS experiment at CERN to pin down the properties of the top quark and ultimately discover evidence of new physics.

James has led top quark physics groups within both the ATLAS and previously CMS experiments. He has also led major contributions to the upgrade and development of detector technologies at CERN from South Africa. He is currently active in the transfer of technologies developed within particle physics, such as Machine Learning and novel detector concepts, to applications outside of basic research such as the growing field of Muon Tomography.