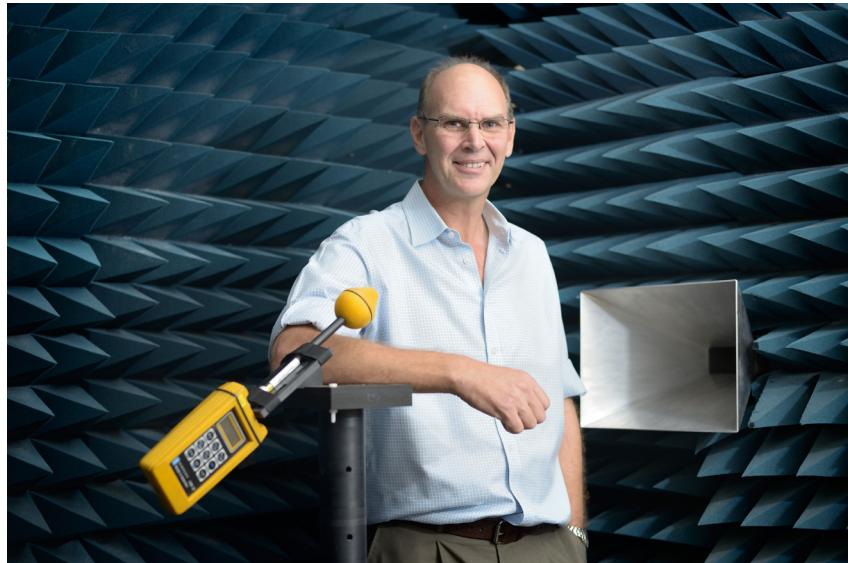


Faculty congratulates its exceptional achievers

In 2014, the Faculty of Engineering, Built Environment and Information Technology saw two of its researchers receive an Exceptional Achiever Award. This award is based on outstanding achievement in research, teaching and learning, and community service, and is presented annually to senior academics who have already achieved the status of professor and are highly regarded by their peers. Furthermore, five of the Faculty's researchers were newly rated by the National Research Foundation (NRF). These ratings are based on a researcher's recent research outputs and impact as perceived by international peer reviewers.



Exceptional Achiever Awards

Prof Johan Joubert

Prof Joubert is a professor in the Department of Electrical, Electronic and Computer Engineering, where he heads the Electromagnetism Research Group. His research is in the field of microwave antennae, *inter alia* on the size reduction of antennae as a result of communication devices becoming smaller. The miniaturisation of an antenna has a significant impact on its performance, and designing small antennae of satisfactory performance in terms of power handling, radiation pattern and bandwidth has become a challenging task. As integration increases, a single antenna is often used to support two or more wireless services across a broad frequency range, in which case an antenna with multiband or wideband characteristics is required. The concept of a novel reactive impedance surface as substrate for planar antennae, which can miniaturise size and significantly enhance both the bandwidth and radiation characteristics of an antenna, has been demonstrated.



Prof Wimpie Odendaal

Prof Odendaal is a professor in the Department of Electrical, Electronic and Computer Engineering and the Director of the Centre for Electromagnetism. His research effort is focused on achieving a high level of excellence in electromagnetic technology, particularly in the design, development and evaluation of microwave antennae, radar backscatter and antenna measurements. He has developed various novel antenna-radiating elements, as well as feeding and matching techniques with specific application in wireless and array technology. He has contributed to the practical implementation of polarisation optimisation for conformal antenna arrays.

NRF-rated researchers

The following researchers have been newly rated by the NRF:

Dr Kai-Ying (Alice) Chan



Dr Chan received a Y2-rating from the NRF. She is a senior lecturer in the Graduate School of Technology Management. Her research is focused mainly on theory-based empirical studies of knowledge networks and innovative behaviour of organisations. Her most significant recent publication was an article entitled "Knowledge exchange behaviours of science park firms: the innovation hub case", which was published in *Technology Analysis & Strategic Management* in 2010.

Dr Loek Cleophas



Dr Cleophas received a Y2-rating from the NRF. He is a research fellow in the Department of Computer Science. His main research interests are algorithms and automata for text- and tree-structured data processing, model-driven engineering (MDE), code generation, software language engineering, and software correctness-by-construction. He

obtained a PhD in Computer Science and Engineering from Eindhoven University of Technology in the Netherlands in 2008.

Prof Helene Gelderblom



Prof Gelderblom received a C3-rating from the NRF. She is an associate professor in the Department of Informatics. She works mainly in the field of human-computer interaction, with the emphasis on the design of technology for special user groups such as children, the elderly and computer-illiterate persons. She has a special interest in the evaluation of mobile and computer interfaces through eye tracking and in the application of technology in education.

Prof Gerhard Hancke



Prof Hancke received a B2-rating from the NRF. He is an emeritus professor in the Department of Electrical, Electronic and Computer Engineering, as well as the Programme Coordinator for Computer Engineering. He heads the Group for Advanced Sensor Networks (GSN) and enjoys international recognition for his work in the GSN,

especially with regard to industrial applications. He collaborates and publishes with researchers from all over the world.

Dr Nixon Ochara



Dr Ochara received a C3-rating from the NRF. He is a senior lecturer in the Department of Informatics. His educational background is in business, specifically in management science, with its emphasis on the application of scientific and mathematical approaches of operations research to managerial decision-making. His current research focuses on the disciplines of operations and information systems, and he is establishing himself as a professional and interdisciplinary researcher.

Prof Herman Steyn



Prof Steyn received a C3-rating from the NRF. He is a professor in the Graduate School of Technology Management, and has been researching various areas related to project management. His most recent work has involved the use of computer-mediated communication by project teams, and project management maturity. ☀