## Engineers improve their research ratings

A researcher's rating with the National Research Foundation (NRF) is an indication of the quality of his or her research outputs in the recent past.

It is undertaken by national and international peers and reviewers who are requested to critically scrutinise completed research, and it also gives an indication of the quality of a faculty's research and academic performance.



→ Prof Xiaohua Xia, A-rated researcher.

An A rating is the highest rating for individuals who are unequivocally recognised by their peers as leading international scholars in their field for the high quality and impact of their recent research outputs. B-rated researchers enjoy considerable international recognition by their peers for the high quality and impact of their recent research outputs.

The School of Engineering currently has two A-rated researchers, Prof Xiaohua Xia and Prof Brian Rand.

## Rated researchers

Prof Xiaohua Xia of the Department of Electrical, Electronic and Computer Engineering received an A-rating from the NRF in 2009. He heads the South African National Hub for Energy Efficiency and Demandside Management. His research

interests include non-linear feedback control, observer design, time delay systems, hybrid systems, modelling and control of HIV/AIDS, and energy modelling and optimisation.

**Prof Brian Rand** of the Department of Chemical Engineering received an A-rating from the NRF in 2010. He is the current incumbent of the Department of Science and Technology (DST) Chair in Carbon Technology and Materials in the Institute of Applied Materials. His research interests are in carbon, graphite, nuclear graphite, refractories and ceramic processing. A major feature of his research has been the study of carbonaceous mesophase and its use in the fabrication and control of the structure of carbon fibres, composites and films. He has developed a novel approach to the transformation of pitch to carbon products.

The School of Engineering has a number of established B-rated researchers. These include Prof Johan Joubert (Electrical, Electronic and Computer Engineering), Prof Josua Meyer (Mechanical and Aeronautical Engineering), Prof Willie Nicol (Chemical Engineering), Prof Wimpie Odendaal (Centre for Electromagnetism), and Prof Jan Snyman (Mechanical and Aeronautical Engineering).

In the latest round of ratings by the NRF, another two researchers were recognised for the high quality and impact of their recent research outputs.

Prof Corné Olivier of the
Department of Electrical, Electronic
and Computer Engineering is a
member of the Intelligent Systems
Group, which is funded by the
Unit for Defence Research at the
Council for Scientific and Industrial
Research (CSIR). His research
interests are probabilistic reasoning
within artificial intelligence, intent
estimation, detecting change in
low-resolution satellite data and
images, and telecommunications
and information theory.

Prof Monuko du Plessis is Director of the Carl and Emily Fuchs Institute for Microelectronics (CEFIM). He is the key inventor of the injection-enhanced silicon in avalanche (INSiAVA) technology and the principal research engineer leading the ongoing development work to refine this light-emitting technology for widespread use in industry.

Within the broader Faculty of Engineering, Built Environment and Information Technology, Prof Andries Engelbrecht and Prof Brian Watson of the Department of Computer Science also have a B-rating from the NRF. •



→ Prof Brian Rand, A-rated researcher.



→ Prof Corné Olivier, B-rated researcher.



→ Prof Monuko du Plessis, B-rated researcher.