

Message from NSTF Executive Director

Women's Month 2017 – featuring 10 women in science

August is Women's Month, so we want to call attention to 10 outstanding women scientists who were crowned at the [NSTF-South32 Awards](#) or 'Science Oscars'. These awards showcase the research and development capacity of our nation. The excellence of the winners in science, engineering and technology (SET) and innovation brings hope for the advancement of our country and the social upliftment of all people in South Africa. A total of 17 Awards were made, consisting of 14 Awards for individuals and 3 for teams or organisations.

There were 10 women among the award winners

<p>Winners of the TW Kambule-NSTF Awards for research and its outputs</p>	<p>Prof Nancy Refilwe Phaswana-Mafuya Principal Investigator: South African Study on global AGEing and adult health; and Research Director: Human Sciences Research Council; and Honorary Professor, Nelson Mandela Metropolitan University</p>	<p>Prof Phaswana-Mafuya led the Study on global AGEing and adult health (SAGE Wave 1) that has contributed to unique methodological advances and informed national and global strategies and estimates. SAGE Wave 1 focused on elderly South Africans. The study used rigorous scientific methods, never previously used in combination in any one South African ageing survey. It provided information on 23 health indicators never measured nationally before. It also offered unique opportunities for analysis of complex ageing issues resulting in over 200 publications. There has been an improved understanding of the health of older South Africans in comparison to other countries, drawing attention to hypertension and multi-morbidity problems which have not received much visibility before. The data has informed national and international strategies and estimates. Read more in the M&G Supplement, p4.</p>
	<p>Prof Aletta Schutte Unit Director: Hypertension and Cardiovascular Disease, South African Medical Research Council; and Chair, Department of Science and Technology / National Research Foundation South African Research Chairs Initiative in Early Detection and Prevention of Cardiovascular Disease in Africa; and Professor, Physiology, Hypertension in Africa Research Team, North-West University</p>	<p>She was awarded for her contributions to the prevention and treatment of hypertension in Africa. Every year 10 million people around the world die needlessly because of high blood pressure or hypertension, making it the planet's single biggest killer. They will suffer a stroke, have a heart attack, or die from another related cardiovascular complication. This disease burden is greatest in sub-Saharan Africa, which is why Prof Schutte's research focus is on understanding and identifying early predictors for the development of hypertension in South Africa. She does this by employing the latest cutting-edge research and by using precision medicine to not only understand disease development but to identify novel strategies in preventing and treating hypertension. Read more in the M&G Supplement, p4</p>
<p>Winner of one of two TW Kambule-NSTF Awards for Emerging Researchers</p>	<p>Dr Robyn Pickering Department of Geological Sciences, UCT</p>	<p>Dr Pickering, a geochemist, developed the first set of direct ages for South African caves with early human fossils. She is an isotope geochemist with leanings towards palaeo-anthropology and archaeology. Her research seeks to understand where and, most importantly, when our early human ancestors evolved and what the environment they lived in was like. She has spent the last decade developing the uranium series techniques to date cave rocks associated with early human fossils from caves in South Africa. This provided the first set of direct ages for these caves and changed the way this record is viewed around the world. Read more in the M&G Supplement, p5.</p>

<p>Winner of one of two Engineering Capacity Development Awards</p>	<p>Prof Diane Hildebrandt Professor: Chemical Engineering; and Director: Material and Process Synthesis Research Unit, University of South Africa (Unisa); and Director: JMDD Energy (Pty) Ltd</p>	<p>Prof Hildebrandt has been training students to lead and green the African process industry. Her research is focused on synthesising and optimising chemical processes. Chemical reactions, in particular the inefficient conversion of fossil fuels, contribute to greenhouse gas emissions and thus global warming. It is especially important for Africa and other developing countries to develop efficient industries to supply electricity, fuel and jobs while being economically competitive and reducing environmental impact. To this end, Prof Hildebrandt has supervised more than 100 postgraduate students in engineering, almost all from South Africa and other developing countries, in techniques to optimise processes, greening Africa and leading industry and government. Read more in the M&G Supplement, p6.</p>
<p>Winner of the Research Capacity Development Award</p>	<p>Prof Colleen Downs Professor and SARChI Chair: Ecosystem Health and Biodiversity in KwaZulu-Natal and the Eastern Cape, University of KwaZulu-Natal</p>	<p>Prof Downs' work as a biologist has been focused on understanding terrestrial vertebrate persistence with changing land use and climate change. She is a biologist with broad and interdisciplinary research interests, including conservation, ecology and physiology, especially the behaviour of terrestrial vertebrates (reptiles, birds and mammals) with changing land use and climate change. She is well known for her work with the Cape Parrot, as well as other rare and threatened species (such as the blue swallow and the Nile crocodile). Another interest is science education and the development of research capacity, at both undergraduate and postgraduate levels, where she has made important contributions. Read more in the M&G Supplement, p7.</p>
<p>Winner of the Research leading to Innovation Award for a small, medium or micro enterprise</p>	<p>CenGen (Pty) Ltd whose Director and owner is Dr Renée Prins</p>	<p>The endeavours of the CenGen Team, through research and practical application, resulted in the implementation and use of molecular genetic technologies in South African agriculture. CenGen (Pty) Ltd is a privately-owned company that provides molecular genetic services to various agricultural industries. Through its endeavours (research focus and implementation), many role players in the agricultural sector now gain access, for the first time, to leading technologies. The CenGen team's contribution is broader than a single research finding. The research outputs they generate, with an extensive network of collaborators, and the immediate transfer of these findings to various practical applications are of significance to the industry and the economy. An example is the tracking of useful genes and DNA fingerprinting for clarifying identity. Read more in the M&G Supplement, p10.</p>
<p>Winner of the Non-Governmental Organisation (NGO) Award</p>	<p>The Mobile Agri Skills Development and Training NPC whose Executive Director is Ms Lynette Bezuidenhout</p>	<p>MASDT's incubation programme provides a comprehensive, integrated, practical and technological approach to developing emerging farmers in remote and rural areas. MASDT operates in the agricultural sector with emerging farmers. It provides an incubation process that assists the farmers in the production (essential to local and regional food security), job creation and income generation of agricultural produce on a small-scale commercial basis. These farmers contribute significantly to the local economy by supplying agricultural products and buying local goods and services. MASDT is unique because it combines</p>

		<p>accredited training services to emerging farmers with an integrated technical and technological support package. The package includes: extension support, farm planning, soil and water testing, provision of equipment (mechanisation support) and of cost-price inputs (seeds, fertiliser, seedlings), and facilitated market access. Read more in the M&G Supplement, p10.</p>
<p>Wwinner of the Award for Communication for Outreach and Creating Awareness</p>	<p>The DST/NRF Centre of Excellence in Strong Materials (CoE-SM) team, Wits, led by Prof Lesley Cornish and of the four-person team, three are women</p> <p>University of the Witwatersrand Communications Team: Prof Lesley Cornish, Professor: Physical Metallurgy, Director: DST/NRF CoE-SM, and Director: African Materials Science and Engineering Network Prof Alex Quandt, Physics Prof Deena Naidoo, Physics Mr Casey Sparkes, Operations Manager</p>	<p>Communication by a Wits team of experts from the academic world of materials for a world built with materials. The CoE-SM and Materials for Energy Research Group develop students using research which is cutting-edge, exciting and that leads to benefits for South Africa (with a significant output of students and publications). This needs communication across different disciplines and academic backgrounds to demonstrate the importance of the work thus encouraging students to take up careers in materials and other science, engineering and technology disciplines. The communication occurs in various places including visits to Career Fairs, National Science Week, other universities and schools, showing how the work will impact South Africa with a focus on human capacity development, career opportunities and technological advances. Read more in the M&G Supplement, p11, and Business Report, p21.</p>

See who the other 2016/2017 NSTF-South32 Award [winners](#) are and [more photographs](#) of all the winners. Also see the [Who's Who publication](#) for descriptions of the work for which finalists were nominated, including those of the winners.

Ms Jansie Niehaus
NSTF Executive Director and Spokesperson