

## SAEES WINNERS

Category	Prize	Sponsor	Winner	Topic	Supervisor
<b>ORAL</b>					
SAEES Oral 3 <sup>rd</sup>	R5000	KZNDARD	Gary Denton	Determining the Water Use of Cannabis in Central KwaZulu-Natal Province, South Africa	Prof Alistair Clulow
SAEES Oral 2 <sup>nd</sup>	R10000	CAES	Sinikiwe Precious Khumalo	Optimizing Mixing Ratios Using Green Waste and Sewage Sludge as Feedstocks for Co-Compost Production	Prof Alfred Odindo
SAEES Oral 1 <sup>st</sup>	R15000	CAES	Peter Miguel Vermeulen	Petrographic and Geotechnical Characterisation of the K1060 Kimberlite at Petra Diamonds' Cullinan Mine	Dr Lauren Hoyer
<b>FLASH</b>					
SAEES Flash 3 <sup>rd</sup>	R3000	CAES	Zizile Yoliswa Jele	Testing the Applicability of MiniSASS and SASS5 for Intermittent Rivers and Ephemeral Streams in the Upper Awash Basin, Ethiopia	Prof Seifu Kebede Gurmessa
SAEES Flash 2 <sup>nd</sup>	R5000	KZNDARD	Ameera Yacoob	Estimating Evapotranspiration and Crop Water Stress from UAV-Derived Data to Facilitate Precision Water Management	Prof Seifu Kebede Gurmessa
SAEES Flash 1 <sup>st</sup>	R10000	CAES	Ayanda Lucky Shandu	The Influence of Disposable Nappies and Black Wattle	Prof Pardon Muchaonyerwa

				Biochar on Soil Water, Growth and Dry Matter Yield of Napier Fodder	
<b>BIGGEST CATEGORY IMPACT</b>					
SAEES Oral	R5000	CAES	Sinikiwe Precious Khumalo	Optimizing Mixing Ratios Using Green Waste and Sewage Sludge as Feedstocks for Co-Compost Production	Prof Alfred Odindo
SAEES Flash	R3000	SACNASP	Ayanda Lucky Shandu	The Influence of Disposable Nappies and Black Wattle Biochar on Soil Water, Growth and Dry Matter Yield of Napier Fodder	Prof Pardon Muchaonyerwa

## SCP WINNERS

Category	Prize	Sponsor	Winner	Topic	Supervisor
<b>ORAL</b>					
SCP Oral 3 <sup>rd</sup>	R5000	CAES	Ngonidzashe Ruwizhi	DFT investigation and characterization of novel pyrazole-functionalized N-heterocyclic carbene (NHC) metallodrugs as potential anticancer and antimicrobial agents	Prof Muhammad Bala, Dr Thishana Singh and Prof Bernard Owaga
SCP Oral 2 <sup>nd</sup>	R10000	CAES	Aaron Folkard	Novel synthesis approaches for $\gamma$ -Al <sub>2</sub> O <sub>3</sub> as an innovative candidate material for wastewater treatment	Prof Holger Friedrich
SCP Oral 1 <sup>st</sup>	R15000	SASOL	Ntombiphumile Perceverence Tenza	Harnessing Microalgae and Daphnia: Nature's Allies for	Dr Precious Mahlambi

				Antibiotics, Antiretroviral Drugs, and Nutrient Removal from Wastewater	
<b>FLASH</b>					
SCP Flash 3 <sup>rd</sup>	R3000	CAES	Esther Nnaeme	A highly efficient, low-cost, and sustainable method of water desalination using solar-driven interfacial evaporation	Prof Werner van Zyl
SCP Flash 2 <sup>nd</sup>	R5000	CAES	Nokwanda Hendricks	Occurrence of Microplastics in Aquatic Environment: Algoa and Cape Saint Francis Bay, South Africa	Mr Bhekumuzi Gumbi
SCP Flash 1 <sup>st</sup>	R10000	CAES	Silungile Mhlongo	The Anticancer Potential of Quinoxaline-Thiazotriazoles	Prof Neil Koorbanally
<b>BIGGEST CATEGORY IMPACT</b>					
SCP Oral	R5000	CAES	Ngonidzashe Ruwizhi	DFT investigation and characterization of novel pyrazole-functionalized N-heterocyclic carbene (NHC) metallodrugs as potential anticancer and antimicrobial agents	Prof Muhammad Bala, Dr Thishana Singh, and Prof Bernard Owaga
SCP Flash	R3000	SACNASP	Vuyolwethu Ndabankulu	Hydrogenolysis of Xylitol to Diols Over Nickel Supported On Metal Oxides	Dr Mzamo Shozi

## SEng WINNERS

Category	Prize	Sponsor	Winner	Topic	Supervisor
<b>ORAL</b>					
SEng Oral 3 <sup>rd</sup>	R5000	CAES	Cayley Hillier	Investigation of Sodium Acetate Trihydrate as a Low-Grade Heat Storage Material in South African Domestic	Prof Glen Snedden

				Water Heating	
SEng Oral 2 <sup>nd</sup>	R10000	CAES	Demian Mukansi	Detecting Trends in Hydrological Extremes and Incorporation of Non-Stationary Hydrological Models into Design Flood Estimation in South Africa	Prof Jeff Smithers
SEng Oral 1 <sup>st</sup>	R15000	SASOL	Elijah Joseph	Design and Analysis of a Printed Antenna with Improve Performance for Ultra-Wideband Applications	Prof Pradeep Kumar and Prof Thomas J.O Afullo
SEng & SMSCS Flash 3 <sup>rd</sup>	R3000	Standard Bank	Shavani Naicker	Studies in Modified Gravity	Prof Sunil D. Maharaj
SEng & SMSCS Flash 2 <sup>nd</sup>	R5000	Allan Gray	Alaa Aldein Mohamed Suliman Ibrahim	Designing a new deep convolutional neural network for accurate steel surface defects classification	Prof Jules-Raymond Tapamo
SEng & SMSCS Flash 1 <sup>st</sup>	R10000	FNB	Melusi Sibanda	Reconfiguration Planning as an Enabler of Sustainability in Dynamic Cellular Manufacturing Systems	Dr Jared Padayachee
<b>BIGGEST CATEGORY IMPACT</b>					
SEng Oral	R5000	CAES	Elijah Joseph	Design and Analysis of a Printed Antenna with Improve Performance for Ultra-Wideband Applications	Prof Pradeep Kumar and Prof Thomas J.O Afullo
SEng & SMSCS Flash	R3000	SACNASP	Ntandazo Mpisi	The Application of the Block Hybrid Method to Fluid Flow Problems	Prof Sicelo Goqo

## SLS WINNERS

Category	Prize	Sponsor	Winner	Topic	Supervisor
<b>ORAL</b>					
SLS Oral 3 <sup>rd</sup>	R5000	CAES	Njabulo Mdluli	Zooplankton Assemblages Associated with Submarine Canyons Off the East Coast of South Africa	Dr Nicola Carrasco
SLS Oral 2 <sup>nd</sup>	R10000	CAES	Muhammad Khan	The Antidiabetic and Anti-obesogenic Potential of <i>Codium fragile</i> , a Seaweed Collected from South African Coastlines	Prof Shahidul Islam
SLS Oral 1 <sup>st</sup>	R15000	CAES	Nkosinathi Ndlazi	The Microbiological Quality of the uMsunduzi River is not Suitable for Full-Contact Irrigation of Ready-to-Eat Produce	Prof Stefan Schmidt
<b>FLASH</b>					
SLS Flash 3 <sup>rd</sup>	R3000	CAES	Phila Mbambo	The Microbial Burden of Leafy Green Fresh Produce from Local Farms and Retailers	Prof Stefan Schmidt
SLS Flash 2 <sup>nd</sup>	R5000	CAES	Sinethemba Yakobi	A Systematic Review of Neisseria Gonorrhoeae Drug Resistance Development in South Africa	Dr Ofentse Poee
SLS Flash 1 <sup>st</sup>	R10000	CAES	Priyashini Dhaver	Optimization of the Production of Xylooligosaccharides by Native and Recombinant Xylanase Using Chicken Feed Substrates, and Toxicity Testing	Dr Roshini Govinden
<b>BIGGEST CATEGORY IMPACT</b>					
SLS Oral	R5000	CAES	Muhammad Khan	The Antidiabetic and Anti-obesogenic Potential of	Prof Shahidul Islam

				<i>Codium fragile</i> , a Seaweed Collected from South African Coastlines	
SLS Flash	R3000	SACNASP	Sinethemba Yakobi	A Systematic Review of Neisseria Gonorrhoeae Drug Resistance Development in South Africa	Dr Ofentse Poee

## SMSCS WINNERS

Category	Prize	Sponsor	Winner	Topic	Supervisor
ORAL					
SMSCS Oral 3 <sup>rd</sup>	R5000	Allan Gray	Mangaliso Mngomezulu	Solar Flare Forecasting Using Individual and Ensemble RNNS	Dr Mandlenkosi Gwetu and Dr Jean Fonou-Dombeu
SMSCS Oral 2 <sup>nd</sup>	R10000	Standard Bank	Samah Ali	Cross-diffusion effects on the onset of double-diffusive convection in a rotating vertical heterogeneous porous cylinder with vertical throughflow	Prof Precious Sibanda
SMSCS Oral 1 <sup>st</sup>	R15000	FNB	Shimon Corcos	Irreducibility and Sobriety in the Lower Vietoris Topology	Prof Dharmanand Baboolal and Dr Cerene Rathilal
BIGGEST CATEGORY IMPACT					
SMSCS Oral	R5000	Standard Bank	Ajith Sampath	An Approach to Understand the Instrument that Tries to Understand the Universe	Prof Kavilan Moodley