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Prof Wikus van Niekerk takes over as Dean

Prof Wikus van Niekerk.

Prof Wikus van Niekerk took over as Dean of the Faculty of Engineering on the 1st of July this year.

Prof Van Niekerk is a Professor in the Department of Mechanical and Mechatronic Engineering and was the Director of the Centre for Renewable and Sustainable Energy Studies at Stellenbosch University since 2006. He is regularly consulted by industry on a variety of areas including renewable energy systems and technology; solar, wind and ocean energy; and energy policy and research strategy.

Academic qualifications:

- BEng (Mechanical) cum laude Stellenbosch University (1986).
- MEng (Mechanical) cum laude University of Pretoria (1989).
- PhD (Mechanical Engineering) University of California, Berkley (1994).
- EMBA with distinction, Graduate School of Business, University of Cape Town (2017).

His PhD was on the active control of transient noise transmission. On 14 July this year, when he received his Executive MBA degree with distinction, he also received the Graduate School of Business Gold Medal Award for high professional performance and outstanding achievement as top achiever in his EMBA class. The title of his EMBA dissertation was *A Blueprint for a Sustainable, Greenfield Engineering Faculty in the Context of a Developing Country*.

After holding the Sasol Chair in Vehicle Engineering at the University of Pretoria he moved to Stellenbosch University in 2000. At Stellenbosch, he has been Head of the Mechanics Division, Chair of the Department of Mechanical Engineering and Director of the Institute for Thermodynamics and Mechanics. As Director of the Centre for Renewable and Sustainable Energy Studies he played a leading role to establish research, education and training programmes in renewable energy and influence funding and policy priorities on the national level.

Prof Van Niekerk is a fellow of the South African Academy of Engineers, the Southern African Acoustics Institute, and a member of the American Society of Mechanical Engineers and the Sustainable Energy Society of Southern Africa. He is a fellow and the President of the South African Institution of Mechanical Engineering and was a Board Member of the International Solar Energy Society. He is a member of the Advisory Board of the Fraunhofer Chile Research Center in Santiago.

"As Dean, my role will be to support the academic and research staff to pursue these opportunities while establishing a culture of cooperation in the Faculty. I look forward to working with the students and staff of the Faculty, our colleagues in other faculties as well as the University's senior management to reach Stellenbosch University's Vision 2030."

On his first day as Dean, Prof Wikus van Niekerk was welcomed by personnel in the Dean's Division.

Span sê totsiens aan prof Hansie Knoetze

Die dekaansafdeling het 29 Junie afskeid geneem van prof Hansie Knoetze, wie se vyfjaartermyn as dekaan einde Junie 2017 geëindig het. Hy keer terug na sy tuisdepartement, Prosesingenieurswese, en is vir die volgende paar maande met navorsingsvergunning.

Agter van links is Ulrich Smith (tegniese beampte), August Engelbrecht (studentewerwer), Minnaar Pienaar (fakulteitsbeampte), Liesel Koch (korporatiewe bemarker), Tanya Ficker (nagraadse koördineerder), Clinton Botha (assistent), prof Hansie Knoetze en Jimmy Abrahams (assistent). Voor van links is Enzo D'Aguanno (fakulteitsbestuurder), Abigail Lackay (MH-praktisyn), Portia Adonis (ontvangs) en Avril Ford (administratiewe beampte).

Industrial Engineering shines at awards ceremony

Prof James Bekker (left) receives his award from Waldo Viljoen, SAIIE President.

Two academics in the Department of Industrial Engineering were honoured with SAIIE awards at a gala function of the Southern African Institute for Industrial Engineering held on 21 July in Sandton. The SAIIE awards honour and celebrate outstanding contributions to industrial engineering in Southern Africa.

Prof James Bekker received the award for Outstanding Industrial Engineering Educator, while Prof Jan van Vuuren was the recipient of the Outstanding Industrial Engineering Researcher award. An alumnus of the Department, Arno van der Merwe (CEO and President of the Beijing Benz Automotive Company), won the Kris Adendorff award for Prominent Industrial Engineering Professional.

Prof Jan van Vuuren.

Arno van der Merwe, CEO and President of Beijing Benz Automotive Company (BBAC).

SSML Presents first course on Big Data in Transportation

The Stellenbosch Smart Mobility Lab (SSML), based at the Civil Engineering Department, hosted a short course on Big Data for students, academics and industry partners on 12 to 15 June 2017. The course provided training on the application of Big Data in the field of transportation engineering. The SSML is taking a leading role in the research of new data sources in transportation in South Africa, with particular focus on the application of Big Data in developing countries.

Data availability is fast expanding in all fields and creating unprecedented opportunities for planning and management in transportation. This so called Big Data is generated through the widespread utilisation of information and communications technologies. Transport practitioners and related industry are increasingly faced with performing analytics on Big Data containing millions of observations from sources such as ticketing systems, smart phones, GPS and sensors. This short course aimed to provide a thorough introduction to Big Data and provide tools to manage and process these big datasets.

Big Data Course delegates in front of the SSML's Freeway Management System screens, with Dr Nagui Rouphail seated in front (middle) and Prof Johann Andersen, course coordinator, standing behind him.

The course was presented by international experts in the field of Big Data and transportation. Dr Michael Pack, the Director of the Centre for Advanced Transportation Technology Laboratory (CATT Lab) at the University of Maryland and Dr Nagui Rouphail, the former director of the Institute for Transportation Research and Education (ITRE) at North Carolina State University, presented the four day course.

Skripsie wins best paper Award

Will Olivier, 2016 BEng (Civil) graduate, won the SAICE award for the Best Paper by a Young Professional at the annual Southern African Transport Conference in July. His paper, *Incident Analysis using Probe Data*, detailed research conducted for his final-year skripsie.

Co-authors Prof Johann Andersen and Megan Bruwer from the Civil Engineering Department, are excited about the achievement. The paper deals with a relatively new research field of the application of Big Data to transportation engineering, which is a core research focus of the Stellenbosch Smart Mobility Lab (SSML). The SSML aims to apply new transportation data sources in a Smart City approach to improve traffic management and transport planning in the Stellenbosch area, with future application to the developing country context. Probe Data consists of positional, timestamped vehicle traces. Anonymised probe data provides average speed and travel time on routes and is made available to the SSML through partnership with TomTom.

The paper presented a methodology for estimating the area of influence and severity of non-recurrent congestion events through the use of probe data. Historic TomTom probe data was used to determine the effect of a stationary truck on a major arterial during morning peak hour traffic, in which some lanes are closed to traffic. Actual incidents were studied along the R300 in Cape Town, and the N1 in Pretoria. The impact on the corridor and the immediate road network in terms of increased average travel time, average speed, delay and queue length was investigated.

From the left Megan Bruwer, Will Olivier, Prof Johann Andersen and Madeleen Engelbrecht of SAICE.

Engineering enables you to make a difference

Prof Thinus Booysen.

At the start of the second semester, many Engineering students may feel despondent due to work overload and burnout. Do not despair. Just focus and persevere, because one day you may have a satisfying career with numerous opportunities to make a difference not only through your professional life as an engineer, but also in your community.

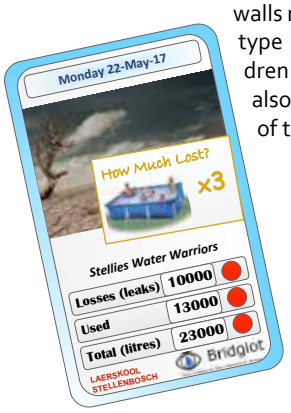
A perfect example of the latter is a project carried out by Prof Thinus Booysen (Department of Electrical and Electronic Engineering).

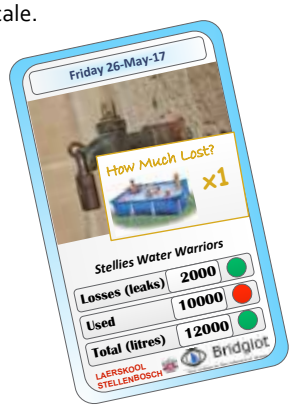
"I have a passion for the conservation of natural resources, and especially water," he says. He is fortunate that he can pursue this passion with research projects that have already shown astounding results. His research group developed a smart geyser controller that gives remote access to a geyser through a mobile device or PC. This system, called the Geasy, analyses consumption patterns, recommends and applies optimised control schedules, gives water and energy costs in rands for each bath or shower taken, and controls the water temperature. It also shuts off water supply when a burst is detected. The Geasy, that sensitises its users regarding consumption, aims to reduce geyser energy and water use by at least 30%. This technology has shown so much potential, that an Innovus spin-out company, BridgIoT (Bridge to the Internet of Things), has been established.

Prof Booysen's sensitivity towards water and resource conservation is so strong that it even surfaced one day as he dropped his children off at a local school. He wondered how much water the school used per month and was shocked to learn that a typical school's water and energy bill ranges between R30 000 and R60 000 per month. The bills are more or less split in half by water and energy costs, with all the schools he looked at using more than 20 kL of water per day. "I thought this was crazy and offered to help, which they accepted."

He continues: "The first step was for BridgIoT to install one of our minutely updating smart water meters on the school's municipal water supply to understand in real-time what the water was for any given time of the day. This allowed us to quickly establish that there were losses seen during the night. We were able to identify the sources of those losses, and to consistently reduce them from 9 kL per day to 1 kL per day. Moreover, we were able to identify abnormal consumption and take remedial steps to curb wastage."

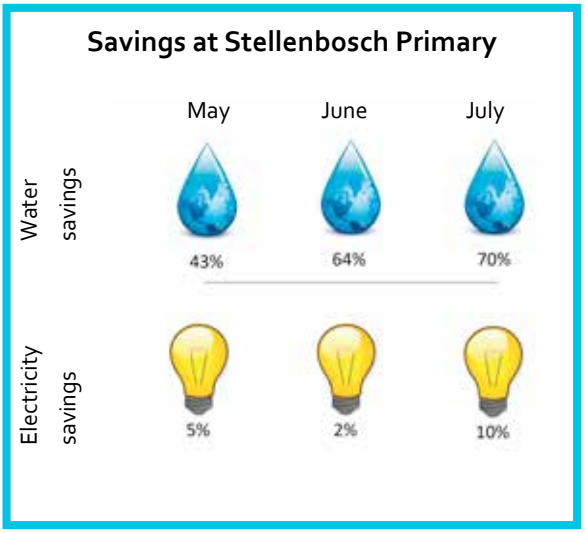
The results were also presented to the teachers, and it was explained what measures to take to save water at the school. As an intervention, the summary was presented to the teachers during break times on the TV screen in the tea room, summarising posters were put on the walls next to the bathrooms and a 'top trump'-type play cards were handed out to the children in foundation phase, to ensure that they also engage with the figures and are aware of the scale.





Since July this year, municipal water tariffs have doubled, which makes it of cardinal importance for users to curb their usage, not only to conserve water, but to save money.

"Compared to May 2016, the school's consumption was down by well over 350 kL, a reduction of more than R10 000 at the old rates. The average consumption per weekday is down by 57%. With the increased water rates, we are saving the school more than R30 000 per month. At one stage during the intervention, builders struck a supply pipe and did not notify the right people. We were able to identify the problem within 24 hours, potentially saving 300 kL of water. During the July holidays the main water supply pipe of the school burst, which would have gone unnoticed without this system. However, we could identify and solve the problem within hours.



The services that BridgIoT now supply to the school, are:

1. Continuous measuring and monitoring of the school's water and electricity usage that can be viewed on the Bridglot web portal for both real-time and historic usage: http://lstellen.bridgiot.co.za/.
2. Automatic real-time notices via SMS when a water pipe bursts or after-hour leakages occur, or when the maximum demand for electricity is exceeded.
3. Automatic scheduling and control of equipment that has high consumption of electricity such as geysers, as well as scheduling and control of valves in cloakrooms for instance urinals.
4. Continuous identification of non-optimal water and energy consumption.
5. Maintenance of BridgIoT equipment.
6. Management reports with comparative statistics and costs.

The results will be presented at the biennial GWD 2017 conference in October. (Ground Water Division of the Geological Society of South Africa.)

Other Stellenbosch schools have now also come on board with the project. Prof Booysen is excited about the potential of his water and energy conservation project at schools. "Shoprite has also approached BridgIoT to roll it out to a school as a pilot in Wallacedene, and if this proves to be successful, it may lead to a countrywide effort. With this initiative, I can now fulfil my needs on three levels, namely research, business and outreach."

Welkom nuwe kollegas/Welcome new colleagues

Prof Sampson Mamphweli

Prof Sampson Mamphweli.

In July this year, Prof Sampson Mampheli took over as new Director of the Centre for Renewable and Sustainable Energy Studies (CRSES), based in the Faculty of Engineering.

Prof Mamphweli hails from Vuwani in Limpopo. After Matric he wanted to study Medicine, but due to budget constraints, he could not follow that dream. He therefore opted to study Environmental Science (undergraduate and Honours) at the University of Venda.

After graduating, he started working at the Kruger National Park in 2002 in a research section as a field assistant. "I never stopped studying," he says. "In 2003, I started my master's degree at the University of Venda and graduated in 2004 with distinction. I then joined the University of Fort Hare, Institute of Technology in 2005 as an Eskom Research Fellow. I also tackled my PhD in Physics in the field of biomass gasification. After completing my PhD, I started working at the University of Fort Hare as a Researcher, conducting research on biomass and solar energy projects. My job now carried more responsibility and also included fund raising and community projects. I was also responsible for the implementation of biomass and solar energy projects such as solar systems for home lighting and provision of electricity for schools to enable schools to use printers and computers."

In 2012 Prof Mamphweli received the University of Fort Hare Vice-Chancellor's Emerging Researcher Medal in recognition of his research and community projects. In 2013 he was promoted to Senior Researcher at the Institute of Technology at his University where he also supervised postgraduate students. Another promotion followed in 2014, this time to Associate Professor. Between 2010 and now, he supervised 17 master's and PhD students to completion, published more that 40 articles in peer-reviewed journals, contributed 3 chapters in books and presented more that 30 research articles at conferences, including 5 invited talks.

"I am quite excited about my appointment as Director of the Centre," he says. "It is a big responsibility. One of the tasks will be to align the Centre with national policies. The Centre will also be able to assist government with service delivery issues including grand challenges as identified by the Department of Science and Technology, especially in the field of energy. The Centre is well positioned to do so as a result of its research. My main task will be to draw up a strategic plan for the Centre which includes research, marketing and collaborations. We will define what the Centre will focus on with regard to research and marketing and we will use our collaborations to share knowledge within the National Systems of Innovation, which include Science Councils and other Universities. On the academic side, I will also co-supervise master's and doctoral students."

After many productive and satisfying years in his field, Prof Mamphweli admits he can now clearly see that his first choice, Medicine, was "not his thing". Regarding his life away from work he says: "I am an outdoor kind of person and really enjoy fishing and, once in a while, professional hunting. My family comprises my wife, Pinkie, daughter (aged 15) and son (aged 1 year and 3 months). We come from Fort Beaufort which is a small town. Here things are different. The Cape is a great place and we really enjoy shopping as a family, as everything is around and available."

Dr Bernard Bekker

Dr Bernard Bekker.

Dr Bernard Bekker is vanaf 1 Junie aangestel in die Eskom Leerstoel in Kragstelselsimulasie wat onder die Departement Elektriese & Elektroniese Ingenieurswese ressorteer. Hy is ook aangestel as die mededirekteur van die Sentrum vir Hernubare en Volhoubare Energiestudies en dra dus as't ware twee hoede en vervul 'n verskeidenheid take op verskillende vlakke.

Dr Bekker is 'n alumnus van die US Fakulteit Ingenieurswese (BIng - 1996; MIng - 2004), en van die Universiteit Kaapstad waar hy sy PhD in 2010 verwerf het.

Hy sluit by die US aan na jarelange ondervinding in die bankwese, asook die groen geboue en sonkragindustrie.

Die toename van verspreide energiehulpbronne (bv. hernubare energie, laskantbestuur en batterye) op die kragnetwerk, het 'n impak op Eskom se tradisionele netwerk en dr Bekker sal die invloed hiervan bestudeer, soos byvoorbeeld die optimale opwekking en verspreiding van krag, kragkwaliteit, netwerkstabiliteit en onderhoud. Nog 'n belangrike funksie van die Leerstoel is die koördinering van kragstelselsimulasie en hernubare energienavorsing binne EPPEI (Eskom Power Plant Engineering Institute). Deel van die EPPEI-program sluit in om nagraadse studieleiding te bied aan Eskom beurshouers en werknemers, en om Eskom ingenieurs en tegniese personeel se tegniese vaardighede te ontwikkel.

"Die EPPEI leerstoel bied 'n wonderlike geleentheid om 'n relevante bydrae tot Eskom se uitdagings te lewer, weens die sterk belyning tussen die navorsingfokusareas en Eskom se tegniese behoeftes. Alhoewel ek nie gaan klasgee nie, is ek tog betrokke by die aanbied van nagraadse kortkursusse deur die Sentrum vir Hernubare en Volhoubare Energiestudies. Ek is baie opgewonde oor my nuwe pos. Dis 'n lekker uitdaging!"sê hy.

Dr Bekker is getroud met dr Annie Bekker wat verbonde is aan die Departement Meganiese en Megatroniese Ingenieurswese. Hulle het drie kinders, 'n seun van 5 en 'n tweeling seun en dogter van 2. Dis daarom te verstane dat die gesin se ontspanning en vermaak op hierdie stadium hoofsaaklik draai om "baie speel met die kinders!" Die Bekkers hou ook van die natuur, musiek en reis, maar met drie jong spruite, sal saamspeel vir 'n hele rukkie die familie se hooftydverdryf wees.

Tsholofele Seroalo

Tsholofelo Seroalo was appointed senior secretary in the Division of Construction Engineering and Management, Department of Civil Engineering, on 1 April. After gaining many years' experience in secretarial and administrative positions, it seems she has now found her niche.

Originally from Potchefstroom, and the only child at home, she studied Tourism Management at Technikon North West (now TUT) in Pretoria. She says: "Tourism was just being introduced in the nineties and was the 'in thing'. It turned out that it was not what I expected, as I thought it would involve more field work. I did my internship at Rustenburg and Potchefstroom Tourism Information Centres. At the latter, they noticed my potential for hard work and offered me a contract. While I was there, I was 'hijacked' by one of the directors of the Potchefstroom City Council (now Tlokwe) as her administrative assistant. In 2006 I moved to the Cape and over the next ten years I worked at the Drakenstein Municipality in several different capacities from clerk to executive secretary."

About her new appointment, she says: "It was time to make a change. The four months that I have been with Stellenbosch University so far has been amazing. The academic environment is totally different to my previous 15 years' work experience where I had to type letters and manage diaries. The administrative work I do here is on a much higher level and I find it intellectually stimulating. My colleagues at the Department of Civil Engineering and the Finance Department have been so supportive and everyone is eager to assist me. As I have a 4/8 post, I am now able to drop my son off at school and fetch him in the afternoon. I now also have time to watch him participate in playing hockey, cricket and soccer. Having a stimulating job plus the opportunity to spend more time with my son, is exactly what I needed."

Ms Seroalo is very involved in her church. She is a member of the Women's Manyano at Bellville Methodist Church (Boston Society). She spends most Saturday mornings watching her son's soccer matches. Saturday afternoons and Sunday mornings they spend at church and get-togethers with the ladies (mostly from church). "I have a lot of amazing friends - all from my church."

Ms Seroalo studied Financial Management at Northlink College and would now like to continue her studies, this time in Education and Psychology.

Dr Herman Kamper

"Daar is nie 'n beter plek as Stellenbosch nie!" sê dr Herman Kamper wat vanaf 1 Julie as lektor in die Departement Elektriese en Elektroniese (E&E) Ingenieurswese aangestel is. Hy is pas terug van 'n paar jaar in die buiteland waar hy studeer en gewerk het, en die Departement E&E is nét die plek waar hy wil wees.

Sy rigting, elektroniese ingenieurswese, het hy op 'n vroeë ouderdom gekies. Twee aspekte het in hierdie keuse 'n rol gespeel, sê hy. Sy vader, 'n elektriese ingenieur en ook verbonde aan die Fakulteit, het aan sy twee seuns van kleins af ou rekenaars gegee waarmee hulle kon maak wat hulle wil. Die gebroeders Kamper het toe gou hulself leer programmeer. Die tweede faktor in sy loopbaankeuse, was die blootstelling wat hy by MTN SUNSTEP gehad het waar hy geleer het om stroombane te soldeer. So, dit was 'n geval van *kan programmeer en soldeer, so nou word ek 'n elektroniese ingenieur!*

Dr Kamper het sy BIng (E&E) cum laude in 2009 aan die US verwerf en was ook die ontvanger van die ECSA Meriete Medalje wat jaarliks toegeken word aan die beste finalejaar Matie ingenieurstudent. Dit het hy opgevolg met 'n meestersgraad in spraakherkenning cum laude, ook aan die US. In September 2013 is hy na die Universiteit van Edinburgh in Skotland om sy doktorale studie aan te pak nadat hy die vorige ses maande klas gegee het by die US Departement Toegepaste Wiskunde. Vanaf September verlede jaar tot einde Junie vanjaar was hy 'n nadoktorale genoot by Toyota Technological Institute, 'n laboratorium verwant aan die Universiteit van Chicago.

Alhoewel hy ander werksaanbiedinge in Amerika gekry het, asook die aanbod van twee ander poste by die US, was die een by E&E sy hartsbegeerte. "E&E is soos my huis en ek wou baie graag terugkom hierheen," sê hy. Tans doseer hy Rekenaarprogrammering 143. Wat sy navorsing betref, is hy lid van die Tekekommunikasie & Informatika-groep in sy Departement. Sy spesialisveld is masjienleer en patroonherkenning (spraak, visie en taalprosessering).

Dr Kamper is getroud met Helena, wat hy in sy M-jaar ontmoet het. "Sy is baie pragtig en ons geniet dit om baie dinge saam te doen. Ons eet heeltemal te veel uit en kyk heeltemal te veel 'series'. Ons het baie lekker in Skotland en Amerika saam gereis." Tog is daar sekere belangstellings waar hulle totaal van mekaar verskil: "Ek hou van stap in die berge en Helena hou weer daarvan om op 'n Saterdagoggend laat te slaap. So, as die weer beter word, sal ek dus op 'n Saterdagoggend in die berge kan gaan stap, terwyl sy ongestoord haar laatslapie kan geniet," sluit hy af.

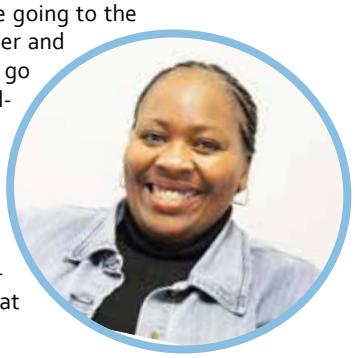
Bulelwa Manxiwa

The Department of Process Engineering has a new, cheerful face at reception to greet visitors, students and suppliers. Bulelwa Manxiwa joined the Department as its admin officer and receptionist on 1 July.

Mrs Manxiwa grew up in Cape Town and studied marketing at the Cape Peninsula University of Technology, previously known as Peninsula Technikon. Thereafter she worked at several government departments such as the Department of Transport (admin clerk), the Department of Health (Directorate of Labour Relations), and Alexandra Hospital (senior admin clerk). Her next step was to enter the tertiary education sector, first as admin assistant at the Civil Engineering Department at the University of Cape Town. Thereafter she was promoted to admin officer overseeing postgraduate administration and funding processing in the Department of Physics at UCT. When her contract ended, she did a short course in Public Relations at UNISA followed by a post in the Faculty of Health and Wellness Sciences Department of Teaching and Learning at the Cape Peninsula University of Technology (CPUT) as a teaching & learning academic administration assistant.

With her solid experience in administration, good exposure to students and the tertiary education environment and her bubbly personality, Mrs Manxiwa is an excellent asset to have at reception. About her new post, she says: "It is quite exciting. I have never worked in a reception area. I think it is God's plan for me to be here to interact with people. It has opened another door for me as I am a people's person. I am passionate about people and would have loved to do Social Work, but because I did not pursue it, I obtained a certificate in Human Resources, which I am currently following up with a diploma in Human Resources at UNISA."

Mrs Manxiwa was widowed many years ago, but is fortunate to now have a very supportive partner, Kanyisa Adonisi, by her side. She has two children aged 14 and 7. "I like going to the gym. During weekends, my partner and I unwind with the kids. We often go out to the movies or take the children to Wonderland at N1 City to play games. I also make certain that I spend a lot of time with my mother and feel blessed to have her around. I try to embrace her as much as I possibly can. Sundays my family and I like to spend at church."



Dedicated committee = successful Engineering Winter Week

The annual Engineering Winter Week in the June holidays aims to introduce high school learners to the life of an engineering student at Stellenbosch, as well as to give them insight into the practical applications of engineering in the working world. Winterweek is organised and coordinated by a committee of approximately 20 Matie engineering students.

The dedicated and enthusiastic 2017 Winter Week committee.

This year, 160 learners attended and were given mock lectures so as to prepare them for the content and style of teaching at University level. They were also given tours of the various engineering departments.

The learners visited companies in order to get an idea of what is expected of engineers in industry. Although Winter Week places a very strong focus on the academic side of engineering, there were also group social activities in the evening, such as an Amazing Race, a movie night, and dance social.

The learners were tasked with a multi-disciplinary engineering-style group project to teach them practical thinking skills and to expose them to team work.

Here is some feedback from parents and learners:

"What a wonderful experience you gave our budding young engineers. Many thanks for a well run, well organised, efficient and effective programme."

"Thank you so much for a fabulous Winter Week, I thoroughly enjoyed my time spent in Stellenbosch. I found the week informative and enlightening and I have come away inspired to continue working hard in my school work. I am thankful for being exposed to so many new ideas and people and I feel that I have really grown as a person in the past week. I appreciate all the hard work that you and your team put into the week in order for it to be a success."

Tracey-Lee February (Director: Engineering Winter Week) says: "I have been a part of this week for the last three years and in my opinion, Winter Week has always been a huge success and this year was no different. Both the student committee and the Winter Week learners thoroughly enjoyed themselves. I am also really pleased that we achieved our goal of providing both an informative and a fun-filled experience for the attendees.

Follow @SUwinterweek on Instagram to see some of the highlights of the 2017 Engineering Winter Week.

Stiff competition during the popular group engineering project.

Retire, rejoin and relocate at Process Engineering

On 28 June the Department of Process Enginering bade farewell to three colleagues.
They are from the left Prof Kim Clarke (who is retiring),
Brent Gideons (who has joined the Department of Electrical and Electronic Engineering)
and Yvonne Singh (who has resigned to join her husband who moved to Sasolburg at the end of last year.)

Engineering students in Misinga

As part of the Community Interaction portfolio of the Engineering Students' Council a group of willing engineering students was funded to join a mission to Msinga Top in Kwazulu-Natal by the Msinga Outreach Society. The Msinga Outreach Society is a student-based and student-run society of Stellenbosch University, based at the Tygerberg Medical Campus. The outreach started over thirty years ago and has evolved into a broad interdisciplinary mission, serving the Msinga community in the Midlands of Natal. The heart of the Society lies in providing relief, as well as uplifting and empowering the community with projects that are sustainable, measurable and efficient.

The team set off on June 16 on a 24-hour long bus ride to Pomeroy. Just through this small town riddled with cows and goats, the group arrived at Msinga Top. The Msinga team comprised different portfolios of which an engineering portfolio was created for this year. The engineering portfolio set up two main objectives to complete during this mission:

1. To build a small dam or water catchment area. At Msinga Top the community relies on only two water sources - a hand pump that stops pumping water after 100 liters of water and a small stream that flows down from Msinga Top. Needless to say, this stream is used by the whole community for many purposes such as washing and drinking. The group decided to build a small catchment area where the local women could wash their clothes a few meters downstream from where the drinking water is being collected. This means that they now do not have to walk so far to get their washing done.

2. To improve on the Msinga project for women where a group of elderly ladies in the community are given the chance to make bags and sell them to various companies. This initiative is led by Dr Carinne Wasserfal, who is a GP and a Msinga legend. The group of students assessed the working place and made the necessary changes to improve production. For example, the light bulbs were changed to provide better lighting for precision tasks, and enough proper chairs were supplied.

Furthermore, currently the women were each making an entire bag at a time. The students gave them a production sequence so that each of them only makes a part of the bag. This seemed to improved production drastically.

The women were also taught to fix basic problems that the machines might have.

Their production capacity was also determined to give an indication as to what they will be capable of, as this could help them with future orders.

The engineering students also helped out on the other portfolios after successfully completing all of their objectives.

"This was an amazing experience for the engineering students and we hope to make this an annual mission for the Community Interaction portfolio of the Engineering Students' Council, says Pieter de Villiers, the Council member for Community Interaction.

Nathan Conrad, Laubsher van der Merwe and Pieter de Villiers with the sewing ladies.

SU receives exceptionally large individual donation - Engineering students to benefit

Stellenbosch University (SU) has received one of its largest individual donations ever – an amount of R194,6 million. This huge gift came in the form of a bequest by the late Mr DW (Dirk) Ackermann, an engineer by profession.

"An investment in the future of a new generation of Maties." This is how Prof Wim de Villiers, Rector and Vice-Chancellor of SU, describes the bequest to the University. "It is the definitely one of the most significant donations the University has ever very received from one individual to date. We are very grateful and most appreciative of this bequest from Mr Ackermann," he added.

Mr Ackermann, who passed away some years ago, bequeathed R8,4 million to the Stellenbosch University in the form of a share portfolio in 2006.

"The value of these shares has in the meantime grown from R8,4 million to R194,6 million. Subject to the conditions of the bequest from Mr Ackermann, this gift recently came to vest at full value at the University," explained Mr Hugo Steyn of SU's Development and Alumni Relations Division.

As stated in Mr Ackermann's will, the University will use this bequest to establish the DW Ackermann Bursary Fund to benefit deserving students in the electrical and electronic engineering disciplines, invest the capital accordingly, and use the annual income for bursaries, which are to be awarded in terms of the criteria set out in his will.

"The fund will be managed as an endowment fund and will be sustainably used to benefit many students in future. The funds will be available soon and, after consultation with the Faculty, we should be able to award bursaries from 2018," said Mr Steyn.

Total donations to SU in 2016 were up 53% from the previous year and also exceeded donations received in 2014.

"The assumption that all SU students are from affluent backgrounds is incorrect. Substantially more than a third of our most recent graduates received some form of financial assistance during their studies," added Prof De Villiers. "And it is fascinating to see how this has changed over time. In 2000, 28% of Maties received some form of financial assistance. By 2014, this was up to 38% of our students. And last year, 41% of our students were from the so-called missing middle, i.e. from households with a combined income of R600 000 or less per annum."

At the beginning of 2017, SU received R1,1 million in philanthropic donations specifically earmarked for addressing financial need among students. These donations were aligned with the purpose and role of the 'Register All' bursaries administered by the SRC.

SU set three new records in the 2016 academic year. The final figures show that the University awarded a total of 8 348 qualifications, 5,6% more than the year before. These included 1 468 master's degrees – the most ever awarded by SU. The same goes for the number of doctoral degrees awarded, namely 278, of which 47% (over against 39% in 2015) went to black African, coloured, Indian and Asian candidates.

"This confirms SU's valuable contribution as a national asset and it sends a strong signal to potential donors who have an interest in continued student success, and a desire to see a consistent output of graduates for the economy. Recent research also pointed out that we have done well in retaining donors and increasing the amount of money they are giving us," commented Prof De Villiers.