



EXCHANGE

Bringing you news about research, progress and development

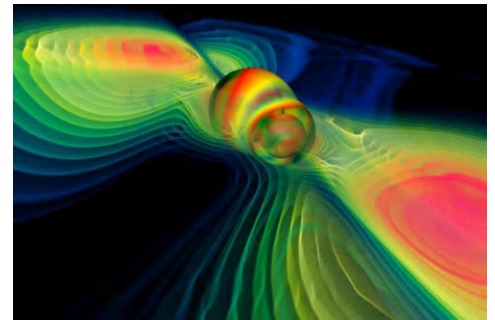
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Pg. 7 Prof. Nyokong wins AU Award



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Pg. 7 RU Scientists making waves

Edutainer to enhance Early Childhood Development

Brightening the corner where we are

A newsletter of the Rhodes University Communications and Advancement Division celebrating our funders who are integral to the complete Rhodes experience.

Welcome to the first issue of Exchange for 2016, the education edition. In this issue we give you an overview and update of what Rhodes is doing to ensure that we turn Grahamstown into a hub of academic excellence and celebrate our donors who are making this possible. We also touch on some of the latest research developments and awards.

We thank generous funders for their continued interest in and highly appreciated donations and contributions towards our educational initiatives.

In order to achieve the overarching goal of providing quality education for all in Grahamstown we need different and multiple interventions, this newsletter gives an overview of the bottom-up and top-down approaches being used.

Early into Dr Sizwe Mabizela's first term as Vice-Chancellor, in March 2015, he met with alumnus, Mr Chris von Christierson who committed an edutainer, specially fitted as an ECD Self-Contained School to develop an Early Childhood Development Centre. As promised, the edutainers arrived in Grahamstown earlier this month, to much excitement.

"We have committed Rhodes University to building stronger and wider pathways out of poverty for the future citizens of Grahamstown through education, and this begins with a solid foundation in the early years. We are working with community partners to establish Early Childhood

Development Centres of excellence. Community partners identify their goals and in partnership we establish how we can work together while ensuring the project is owned by the partner. Grahamstown presently reflects the education crisis in South Africa in that our learners are under-performing. Reports have shown that in order to address this issue we need to provide quality care from the bottom up," explains Dr Mabizela.

The model the University is currently working with, to transform Grahamstown into a hub of education excellence, has a bottom-up and top-down approach. This Edutainer project forms part of the bottom up approach.





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The original plan was to establish a brand new school, however, Makana Municipality was unable to allocate land and thus the search for a suitable school to develop began. Tyhilulwazi was chosen as it is well-run, established, has a strong School Governing Body (with solid parent involvement), is based in Grahamstown East, has large enough grounds to develop and was already working closely with the University.

The University has a self-funded unit, the Centre for Social Development (CSD) which partners with local ECD Centres to ensure training and to work with the ECD Centres. In addition we have the Siyakhana at Makhana programme where we have paired up Halls of Residence with ECD Centres. We are putting a lot of human resources into assisting community partners achieve the goals they have identified. We are trying to transform a whole community from within by reviving the schools and working with principals, teachers, parents and learners themselves to create new opportunities. We are tackling this by working from the bottom-up with our ECD Centres and top-down with our 9/10ths mentoring programme (working with Grade 12 learners), our Siyafundisa programme (working with Grade 8 learners), our parents support

programme and the High Impact Schools Initiative.

"We are grateful to our Alumnus Mr Chris von Christerson who committed an Edutainer in early 2015 and this project has been jointly funded by the Watch Hill Foundation and the Zoe Carss Education Trust. It is exciting to see the plan come to fruition and we look forward to seeing the change it will have and the impact it will have on the learners' education. Brightkid supplied the hardware and installation for the project," shared Dr Mabizela.

The official opening of the school will take place in October when Lord William will be visiting from the UK. In the meantime, the CSD will be establishing excellence through various courses and mentorship.

The first course, which takes place this month, will be about financial planning and is a collaboration between the CSD and another NPO, Early Inspiration.

A parent programme, developed with funding from Anglo American, and an Emotional Intelligence Programme for teachers, which is designed to encourage positive discipline are also in the pipeline.



GADRA aids top student to achieve

In May 2015 local Grahamstown Grade 12 learner Shaolin Rademeyer joined the Grahamstown Area Distress Relief Association (GADRA) education programme through her high school Mary Waters. In six months of mentorship with GADRA, Rademeyer's results improved from no distinctions in June to four distinctions in her final exams. She was also lauded as the top achieving student in her district by the office of the MEC. Rademeyer has just begun her undergraduate Bachelor of Arts degree at Rhodes University, hoping to major in Law and Psychology. While she is unsure of which branch of law she is most fascinated by, hard-working Rademeyer knows that she will one day be a practicing lawyer. "I wanted to have a choice about what to do with my life," she said, explaining where she gets the inspiration to work hard. "I'm mainly self-motivated with a lot of support from my parents," she added. Dr Ashley Westaway's involvement stands out in Rademeyer's mind as being pivotal to her development. "Once a term we'd

have a meeting, just the student, their parents and him and he'd look at your progress and give you advice on how you could improve individually. We also had group meetings with everyone where he spoke about more general ways to improve," she said, explaining the programme.

"He definitely helped a lot, he was like a sounding board, always there. If you struggled he would give us tips on study methods to use," she said. As part of the GADRA programme Rademeyer also had a personal mentor, Stacey Conroy, for the last six months of the programme. Conroy was completing her PGCE in 2015. "She had about five or six students and we used to chat on Whatsapp if I needed help, and we met at the community library where I live," Rademeyer explained. The mentorship programme which assisted Rademeyer was the pilot programme for the Nine Tenth's programme which kicked off this year.



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VC'S APPEAL FOR STUDENTS IN NEED

Despite there being no fee increase in 2016, Dr Mabizela appealed to staff and students to support students in need; for students who had managed to scrape registration fees together but were struggling to make ends meet.

"I wish to draw your attention to heart-breaking levels of deprivation experienced by some of our students and appeal to you for assistance. Some of our students come from desperately poor families and cannot even afford some of the basic necessities that we take for granted such as toiletries. Some of these students are on Financial Aid while others managed to scrape together registration fees on their own. Some could only afford one or two sets of clothing and cannot even begin to think of buying books or stationery. Such is their need," explained Dr Mabizela in an appeal sent out to staff and students after registration.

"Given the limited bed space in our residences, some of our students are renting accommodation in less than ideal

conditions off campus. I know some of these students. I know of their plight. I am inspired by their resilience and determination to succeed. They have refused to be defined by the circumstances of their limited material or financial resources. In the context of widespread and debilitating poverty and deprivation in our society, many of us are in a privileged position and can afford to share with those in need," he added.

Heeding this call, the Rhodes Business School and Matthew Lester in particular put out a call to corporates and employers to provide tax free bursaries.

Employer donations to bursary funds rank for deduction in terms of section 18A of the income tax act. This is not always the preferred solution, as the employer is not allowed to select the recipient of the bursary. Now this is where employers can make a substantial contribution by simply recognizing that 'social investment starts at home'. So we need to challenge employers to come to the party to help solve the #feesmustfall crisis.

"But a tax nerd lives to those fine words 'there is more than one way to skin a cat'," states Professor Matthew Lester.

TAX FREE BURSARIES

There was an important development in the 2016/17 national budget. But in the excitement of the SARS WARS few noticed. The bursary provisions contained in section 10(1)(q) of the income tax act were revised upwards.

Today an employer can provide a tax-free

bursary to a relative of an employee if the employees' salary is less than R400 000 per annum. The bursary can be as much as R40 000 per annum. This potentially allows employers to help about 1,5 million more working parents with tax-free bursaries for their children.

Parents paving the way

"It's like I am walking in Heaven's streets," said proud father, Mr Mzukisi Madakana after taking his daughter Sinazo Madakana on tour of the Rhodes University campus. As a staff member of the Rhodes University Campus Protection Unit for over ten years, Mr Madakana knows all the ins and outs of campus. "I am bringing my daughter to an institution of higher education and all I feel is joy because she will be the first person in our family to get a degree," he shared. Eighteen-year-old Sinazo, will study at Rhodes after receiving recognition as the top achiever of Ntsika High School. "I am so happy to be receiving this opportunity," said Sinazo. She has just received a cheque of R5000 from the Sarah Baartman Municipality for being the top student at Ntsika High School.

"It also helped that I was a member of the Ikamva Youth Programme, where we had tutors from Rhodes University helping us

with homework and assignments and we also had mentors guiding us through the pressures of matric."

Her outstanding final results are proof that such programmes have a positive effect on the learners involved. "Last year I was having a lot of difficulty with Maths Literacy because there was no teacher for it at Ntsika," explains Sinazo, "Fortunately, through the programme I was able to attend Maths Literacy classes during the weekends." Sinazo passed the subject despite the hardships she faced during the year.

Sinazo got involved with Ikamva Youth Programme after her father heard about the programme and went to the Community Engagement Office to find out how his children could get involved. Ikamva Youth is a Non-governmental Organisation that specialises in giving academic support to pupils who attend under-resourced schools. The pupils registered with Ikamva meet with

tutors and mentors from Rhodes University two afternoons per week and on Saturday mornings to receive academic support in various areas.

Mr Madakana feels very strongly about supporting his children's academic careers and going above and beyond to make sure they succeed. "Parents mustn't give up, they must try to give their children education because the only weapon that we can use to be successful is education," he says passionately.



Sinazo Madakana with her proud parents.



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Revitalizing Grahamstown Education Initiative

RHODES' INITIATIVES ASSIST MATRICULANTS GAIN BACHELOR ENTRANCES

About 50 first-year Rhodes University students who overcame financial, educational and other disadvantages to enrol at Rhodes University received a personal welcome from Vice-Chancellor, Dr Sizwe Mabizela, during Orientation Week.

Many of the students were assisted with gaining a Bachelor's pass through intense interventions initiated by Rhodes University, in partnership with local education NGO Gadra Education. Dr Mabizela told the students that they had accessed Rhodes largely as a result of their own efforts to overcome impossible odds. "Whatever your past, you now have

access to a quality education and the opportunity to make a difference. You have the opportunity to build a better future for yourself, your family and the community you came from."

The students are required to access Rhodes through academic merit which is why interventions to make Rhodes more accessible, to disadvantaged local youth, by assisting them to improve their matric performance at local schools is vital. The "Revitalising Grahamstown Education" initiative, has, with Gadra Education, the Community Engagement Office, with some 150 student volunteers, introduced mentoring interventions at local schools,

Ntsika Secondary School and Mary Waters, as well as running the longer term enrichment and study skills intervention programme known as High Impact Supplementary School.

While some of the local students welcomed by Dr Mabizela came from local high schools involved in these initiatives, many achieved their bachelor matric pass through the local Gadra Matric School (GMS). This year, the GMS was the biggest feeder school to Rhodes University.

GMS offers under-performing matriculants a year of intense tuition and a second chance at their matric exams.





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Nine-Tenths of Success is Encouragement

"Everyone should have an equal opportunity for a good education, and it should sit uncomfortably with all of us until we act to achieve this."

These are the words of Dr Sizwe Mabizela, who is leading an educational drive for schooling equality, starting in the University's town of Grahamstown. There are so many challenges in Grahamstown and that is why Rhodes University has been firm in its commitment to local challenges. If we are to be taken seriously as an institution of higher learning we should be immersed in the local challenges with a view to developing knowledge and scholarship that may inform how to deal with similar challenges in other parts of the country and, indeed, the world.

Towards achieving greater schooling equality, Dr Mabizela has initiated four key programmes in Grahamstown as part of the initiative he is driving called 'Reviving Grahamstown Schools'.

This month he launched the 'Nine-Tenths' programme. The name is from a quote by French poet, journalist and novelist, Anatole France, who said: "Nine tenths of education is encouragement."

"As an institution of higher learning we cannot sit and watch when young people amongst us are condemned to a life without hope; a life of despair because of the failure to provide them with the education they need and deserve. We

must brighten the corner where we are," Dr Mabizela said during his inauguration address in February 2015.

The programme is based on the mentoring for success model.

"Rhodes University has an incredible human resource of students who are rolling up their sleeves to mentor and encourage Grade 12 learners from two township schools in Grahamstown, Mary Waters and Ntsika. These are our pilot schools from which we will grow the programme," Dr Mabizela explains.

"This year we are teaming up 227 Grade 12 learners, boys and girls, from these two schools, with student volunteers through our University's Community Engagement Office."

The Director of the Community Engagement Office, Ms Di Hornby, explains that 114 volunteer student mentors from second year upwards have been paired with the learners: "Each student pairs with two learners, with whom they will have nine one-on-one mentoring lessons during the course of this year."

The mentoring lessons are based on an accredited short course, during which the students are trained to mentor the learners.

Rhodes University's Faculty of Education together with GADRA Education - a leading educational NGO based in Grahamstown - designed the short course, which includes a number of modules.

It starts with the mentors helping the

learners to set goals and personal plans, such as aspiring to get into university or college, and what points they need to achieve this. From here the mentors teach the learners effective learning methods.

Throughout the year they go over the work the learner has completed as part of their matric curriculum, discuss their test results and ways to improve them. They also help the learners to apply for university or college. Encouragement and support is sustained throughout the year.

"We are aiming for an 80 – 90% matric pass rate at these schools and at least 25% of the learners from these two schools achieving a university entrance pass as the end of this year, which equates to about 40 learners," says Ms Hornby. "We want to build the two pilot schools into Centres of Excellence, from which our mentor-based programme can be extended to other schools in Grahamstown, the Eastern Cape and nationally."

The Vice-Chancellor is leading this programme, which he regards as central to Rhodes University's transformative agenda and a national imperative.

"The requirement to rapidly improve our public schools system through affordable, effective programmes is highlighted by the statistic that 34% of South Africa's official population of 54 million is under the age of 15," says Ms Hornby.





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ELRC awarded R13 million to lead international project

The Environmental Learning Research Centre (ELRC) at Rhodes University has been awarded R13 million to lead a project on learning-centred transformation in social-ecological sciences (SES). The International Social Science Council (ISSC) announced the funding of three "Transformative Knowledge Networks" as part of the innovative Transformations to Sustainability Programme earlier this year. The ELRC is leading the only Network from the South which involves nine partners from four continents, under Professor Lotz-Sisitka.

"Initially over 500 applications were received by the ISSC, out of which 40 were granted seed funds for development of substantive proposals. In the second round, 99 applications were submitted, of which three were funded"

explains Professor Lotz-Sisitka, project leader and newly appointed as a Tier 1 SARCHI Chair in Global Change and Social Learning Systems at Rhodes University. "We are excited to be amongst the three that were funded, and to work with such a creative international network and programme," shares a delighted Professor Lotz-Sisitka.

The need for more radical forms of learning-centred transformation is increasingly recognised in the social-ecological sciences (SES). The Intergovernmental Panel on Climate Change (2014) recently reported that there is a strong need for learning-centred approaches to climate change adaptation. To address this gap, the ELRC, together with consortium partners from four continents (Africa, Asia, Latin America and Europe) will use the grant from the ISSC



Project Leader, Prof. Lotz-Sisitka and Rhodes University Vice-Chancellor, Dr Sizwe Mabizela

for the formation of a transformative knowledge network focusing on transformative and transgressive learning, under their 'Transformations to Sustainability' programme.

These approaches to learning remain under-developed and undertheorised in the SES and limited research has been done on this type of learning, or on how such learning emerges or can be expanded and up-scaled to strengthen agency for sustainability transformations at multi-levels.

Working with civil society, youth, academic, government and community partners across nine countries in diverse areas that are vulnerable to arising impacts at the climate-energy-food-water security and social justice nexus the project aims to initiate, frame and investigate expansive, transgressive approaches to learning. The programme will examine how such learning can initiate and expand sustainability transformations in selected community sites in Africa, Asia, Latin America and Europe.

This research programme falls under the newly established 'Transformations to Sustainability' programme of the ISSC which is part of the wider FutureEarth global research alliance programme.

A first academic paper on the programme has already been published in the *Current Opinion on Sustainability Journal* and can be accessed at <http://dx.doi.org/10.1016/j.cosust.2015.07.018>





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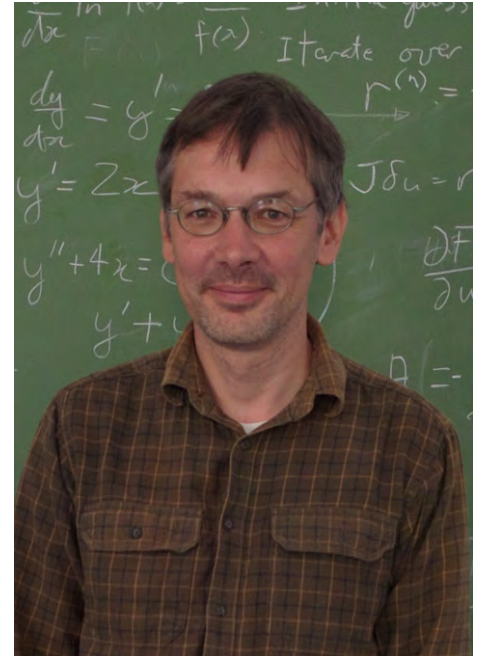
Rhodes scientists contribute to gravitational waves detection

Local scientists in the Rhodes University Mathematics Department happen to make up South Africa's first gravitational wave research group, and have been developing the theoretical models that contributed directly to the detection of gravitational waves earlier this year. Prof Pollney, who has been working on binary black hole modelling for over twenty years, explains what these gravitational waves are and the Maths models that his Department have been developing which have contributed to the detection.

"Gravitational waves are a prediction of Albert Einstein's. His theory of general relativity is a theory of gravity, but it is one which is built on geometry, the study of shapes and surfaces. Relativity is a radical departure from the old idea that gravity is a force that pulls things to Earth. Instead, according to Einstein, a heavy object distorts the world around it, stretching space and time like a ball on a rubber

sheet. When a football arcs in the air and comes back to earth, it is actually following the straightest possible path within a spacetime that is curved," shares Pollney. Therefore when heavy objects move in space, they distort the space fabric and send ripples through space but these move at the speed of light which makes measuring them very difficult. Scientists have built measuring devices in the world for exactly the purpose of analysing these distortions of spacetime. The LIGO instruments (Laser Interferometer Gravitational wave Observatory).

"What has energized the astrophysics community most of all has been the event which created the wave that was caught by LIGO. Every gravitational wave signal carries the fingerprint of the source which created it. And this wave was so large that the pattern was unambiguous," states Pollney. Black holes are another outrageous prediction of general relativity and this is the special focus of scientists working at Rhodes.



Another Accolade for Distinguished Prof. Nyokong

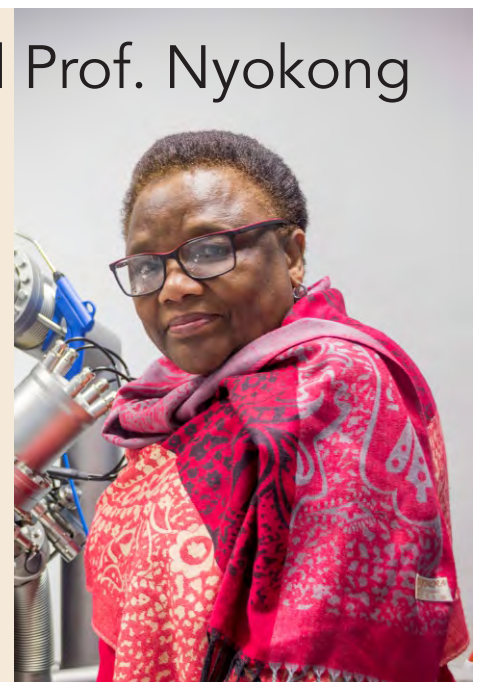
President Jacob Zuma congratulated renowned South African scientist and Rhodes University's Distinguished Professor Tebello Nyokong after winning the African Union (AU) Kwame Nkrumah Scientific Award.

Professor Nyokong received the award at AU Summit of Heads of State and Government on 30 January in Addis Ababa, Ethiopia.

The AU Kwame Nkrumah Awards are given annually to African scientists who have distinguished themselves in the fields of science, technology and innovation.

President Zuma said it was through investment in science and technology that African governments will nourish the potential of people and find home-grown solutions to the many socio-economic and developmental challenges facing the continent.

"The AU acknowledges that Africa's most important resources are her people. South Africa will continue to invest in the fields of science and technology, skills development and support innovation" said President Zuma.





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The Constitution will guide us through student protests

Judge Nambitha Dambuzza, the Judge of the Supreme Court of Appeal was the guest speaker at the Law Faculty's opening early this month.

Dambuzza told the law students that there is a high demand for honest, dedicated lawyers in the country and the demand is only going to increase in the future. "What we choose to do now determines our future," she said. "I will not attempt to recount the ghosts of our past life but our experiences in the past will always consistently haunt us. It is for this reason, that we worked long and hard building the monument that is our Constitution that will readily be accessible as a reminder of our past." Dambuzza added that the Constitution will provide us with a context for our present and will guide us as we journey towards our future.

Dambuzza shared her views on the ongoing student protests across the Country. "I think most of the people here are more familiar than I, with the intricacies of the current nationwide protests at our universities," she said. "Reaction to these protests have varied depending on one's life experience. In the beginning expressions used to describe the protest ranged from 'long overdue', 'life changing' to 'acts of ill-discipline', 'hooliganism' and 'barbarism'." Dambuzza went on to explain that there has to be a general understanding that these protests are founded on a justified need for the fulfilment of promises in the Constitution, revealed long ago.

"It is important therefore that as all of



Rhodes University Chancellor, Judge Lex Mpati, Vice-Chancellor, Dr Sizwe Mabizela, Lutho Dzedze, an attorney at the Law Clinic with Judge Nambitha Dambuzza

us continue to grapple with our struggles in the spheres of our societal life, we do not ignore the power that lies in our Constitution," said Dambuzza. "As you, the students, affirm your ownership of your institutions of higher learning, the protests are a critical step in the Country's journey to the future but I would also like to add that we should not underestimate the power you have in the Constitution." Dambuzza went on to add that the poor in this country have used the Constitution to secure access to basic needs such as homes, water, medicine and education.

Dambuzza ended her talk by explaining why she values Ubuntu as a key contributor to her education. "My life story is one of many stories that speak of people whose lives have been shaped by the helping hands extended by many," she said. "I want to emphasize to you as students of this University, not to underestimate the opportunity that you have been afforded. This is where your dreams come true, needless to say that you must work hard for it to happen."

Rhodes International Economic Law programme leading

Rhodes University LLB soon-to-be graduate, Jason McMillan won the prestigious international SIEL/CUP Essay Competition for 2015. The essay competition is open to law graduates from around the world. Winners of this competition are usually from Cambridge, Harvard and Georgetown universities.

"Jason submitted an edited version of his LLB Research Essay to the competition, competing against LLM and PhD graduates from other, much larger international universities with more established international economic law programmes. In this context, his achievement is extraordinary." says McMillan's Law Lecturer, Vicky Heideman.

Rhodes set to host ELSA Moot Court Competition

Rhodes University's Law Students' Association (ELSA) Moot Court Competition on World Trade Organisation (WTO) Law from 29 March to 2 April 2016.

The Final Oral Round will take place in Geneva in June this year where the winners from the African Regional Round at Rhodes University will represent the Continent.

Rhodes University has been successful in both previous African Regional Rounds and Rhodes' teams have participated in the Final Oral Round in Geneva in both 2014 and 2015.