

September 2013



Faculty of Science NEWSLETTER

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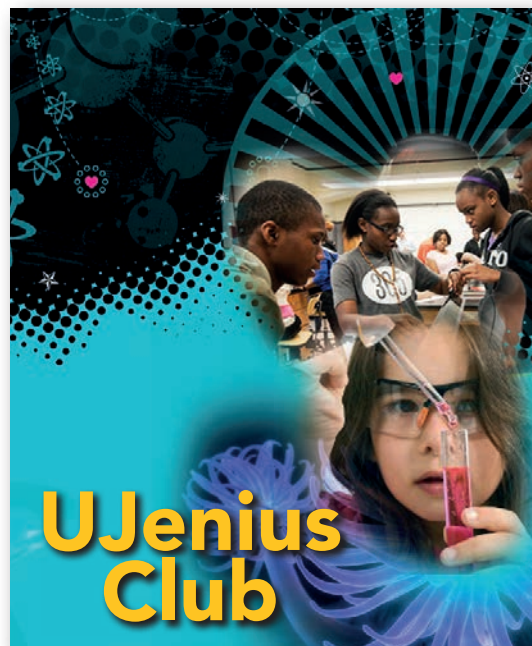
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FUTURE PUBLIC LECTURES 2013

- 11 September: C Les 402
Big Data/Data Analytics
- 17 September: Auditorium
Prof Hassina Mouri: Medical Geology: an interdisciplinary emerging field of science
- 3 October: Council Chambers
Dr Francois Durand: The fish within
- 16 October: Auditorium
Prof Simon Connell: Discoveries at the LHC and a new platform using TEDxCERN to promote Science for Survival

UJENIUS CLUB 2013



The purpose of the UJenius Club is to;

- Promote academic excellence as a core component of the UJ student identity
- Expose top students to other disciplines and to a broader range of academic debates
- Further promote UJ values, with participants expected to contribute as well as to receive
- Create a social space where top performing students (from different faculties and campuses) are able to interact and to build partnerships and friendships

The Faculty of Science is proud to announce that in 2013 ten students of the Faculty of Science are members of the *UJenius Club*, (formerly known as the UJ Top Achiever's Club) - a initiative of UJ to acknowledge outstanding performance by undergraduate students. Membership to the UJenius Club is by invitation only. Members have to achieve and maintain an annual average of at least 75% during their undergraduate studies and must achieve a final mark of at least 70% in each module. Membership commences at the end of the first year of study.

VARIOUS PRIVILEGES ARE ASSOCIATED WITH UJENIUS CLUB MEMBERSHIP; INTER ALIA, STUDENT EXCHANGES, STUDENT AMBASSADORSHIPS, INDUSTRY OR PROFESSIONAL MENTORSHIPS, UNDERGRADUATE RESEARCH OPPORTUNITIES, AND FIRST CHOICE RESIDENCE ACCOMMODATION.

THE UJENIUS CLUB MEMBERS OF 2013 IN THE FACULTY OF SCIENCE ARE:

FATIMA BAHDUR
(BSc Life and Environmental Sciences)



"To study in the Faculty of Science enabled me to develop numerous skills and enhance my thinking abilities and also change my view on the world. Doing subjects like physiology and biochemistry enhances writing, analytical, numerical and problem solving skills."

Practicals in the lab are also good for enhancing ability to work in a team, enhances communication and provides experience in high pressure situations. At the same time practicals also taught patience. My one major is psychology which is an extremely wide field and by doing a BSc degree I feel I am able to gain a better scientific understanding of the psychological processes in relation to the functioning of the body. As renowned neuroscientist Dr Candace Pert said: "Most psychologists treat the mind as disembodied, a phenomenon with little or no connection to the physical body. Conversely physicians treat the body with no regard to the mind or the emotions. But the body and mind are not separate and we cannot treat one without the other. Research has shown that the body can and must be healed through the mind and that the mind can and must be healed through the body." For this reason I felt that in order to excel in my career later on an undergraduate BSc degree would be the right foundation."

LEANI DE VRIES
(BSc Life and Environmental Sciences)



Leani de Vries is a third year student in Geography and Environmental Management.

"I have heard from various people about UJ and the outstanding Faculty of Science. I have always been interested in nature and the sciences. This is why I chose to study with the Faculty of Science. I am enjoying my studies with UJ very much as well as the passionate lecturers that make the challenge of becoming a 'scientist' very exciting."

NEWT FOURIE
(BSc Computer Science and Informatics)



"The reason I chose UJ was because it was the most appealing out of the two Universities that I was interested in and also because UJ's Academy of Computer Science and Software Engineering has an accreditation with the BCS. I chose to do a BSc because I enjoy practical work much more than any business degree."

HERNA DE WIT
(BSc Biochemistry and Human Physiology)



Herna de Wit is a third year BSc Biochemistry and Human Physiology student.

"At UJ you get a sense of feeling inspired to greatness and to be the best you can possibly be. You realize you were born to be real, and not be perfect. This is especially true at the UJ Science Faculty - with lecturers and personnel that instil discipline and pride in your chosen field. Particularly the Department of Biochemistry supports and encourages you to think freely. At UJ Sciences I have learned that some things take time, that being rejected from something good, only means that you are being redirected to something better and we lose ourselves in the things that matter, but we find ourselves there too. I cannot be more proud to say that I'm a UJ Sciences student."

ROBYN HYSLOP
(BSc Life and
Environmental Sciences)



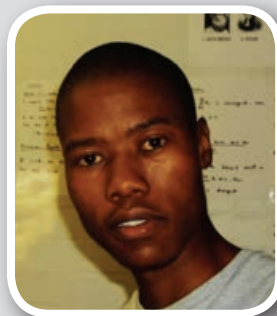
"I was encouraged to further my studies after matric. I decided on the Faculty of Science through a process of elimination as I knew I did not want to enter other areas such as teaching, accounting and economics. I had also done well in biology and science at school. My chosen course within the Faculty of Science gives me many opportunities in the medical field in which I am interested."

MARK HANS KOORN
(BSc Information
Technology)



"UJ was always my first choice for my tertiary education - the Academy of Computer Science and Software Engineering is one of the top in the country, and the degree I wanted to study is internationally recognized. The high levels of expertise and willingness of the lecturers to help, was a bonus."

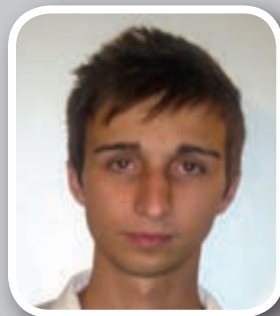
ABEL CLEMENT MNYAKENI
(BSc Mathematical
Sciences)



"UJ is a new and vibrant University and it brings the fun into learning - especially making science fun again - so for me that's what makes UJ a great learning environment. Even though I am more into academics, UJ gives you a chance to take part in non-academic activities like sport and other recreational activities which I think is great. In 2011 I read the 2010 Faculty of Science annual report; there are highly qualified staff members. The highlight has to be the internationally accredited programs that UJ offers. When I applied to study at UJ, my goal was to make it to the UJenius Club. If there are things like the UJenius Club then UJ certainly has potential for more great initiatives to value their students."

I am currently in second year and I am enjoying my studies considering the fact that this year I don't have to deal with residence initiation. Being a member of the UJenius Club keeps me determined to do well and work even harder to get A's so that I can make it to next years' group. Learning has never been so much fun for me right now."

MARCEL PRINSLOO
(BSc Computer Science and
Informatics)



"My reason for deciding to study Information Technology started with my love for computer games and software. I like technology growing up and cannot imagine a world without it. I also had an interest in maths at school and this was the obvious choice when deciding on a career. I enjoy what I am studying and I believe that is the reason for being a top achiever at UJ. UJ gave me an excellent platform to build a career from here."

CHEICK KADER TOURE
(BSc Mathematical
Science)



Cheick Kader Toure is currently studying a BSc Mathematical Science.

"Mathematics has always been my passion, and I knew that was what I wanted to study. After visiting the Department of Mathematics of UJ I then decided to study at UJ. I found the environment at the Department attractive and hospitable. Fortunately it was a good choice, because I am really enjoying my studies. The lectures are knowledgeable and very dedicated, and it is the perfect atmosphere to study and learn."

DANIELLA VISSER
(BSc Information
Technology)



Daniella Visser is a second year BSc Information Technology student.

"When leaving high school, I was not sure what to study, and having to choose a field was no easy task. Once settling on a degree in IT, UJ was my first choice as it has one of the best IT departments. Attending the open day further cemented UJ as my university of choice. I find my degree to be both challenging and rewarding and I am very happy with the support I have received from the lecturers and the University. With dedication and hard work, UJ provides you with all the tools you need to excel."

67 MINUTES OF OUR TIME

Staff and students of the Faculty flocked together to take responsibility for changing the world into a better place.

On the APK Campus the Faculty contributed to Mandela Day by planting indigenous trees at Helen Joseph Hospital. This is an initiative to support the Johannesburg City Parks to introduce and relocate indigenous trees in the Johannesburg urban area. This Green Project would not be possible without the sponsorship of indigenous trees from Random Harvest Indigenous Nursery. This Nursery is situated on the border of Johannesburg within the urban areas. Not only do they supply indigenous trees but has various monthly events like children events, seedling workshops, a succulent display, butterfly and wildlife Gardens, training for gardeners as well as B & B cottages on the property.



The Dean of the Faculty and staff members planting trees



67 MINUTES OF OUR TIME

Staff and students on AKP and DFC packed food parcels for our science students. Each parcel consisted of:

- 1 packet of sugar
- 1 packet of rice
- 3 tins of canned food
- 1 packet of pasta sauce
- 1 tube of toothpaste or a bar of soap
- 1 packet of maize meal
- 1 packet of pasta
- 1 box long of life milk
- 2 packets of soup
- tea bags or a tin of coffee
- chocolate or a packet of sweets or biscuits



Mathematics Learning Centre Community Outreach

Inspired by Madiba's 67 minutes campaign, the Department of Mathematics decided to give back to the community. Tutors under the watchful eye of the Department gave an entire day to the Mug and Tree Nursery School and Care Centre in Krugersdorp.

The tutors played with 40 energetic youngsters after handing out surprise packs to each one of them. They also decided to spoil the parents by giving them clothing, shoes and even a handbag or two.

The Department not only hand packed each of their surprise packs, they also liaised with Trudie and Estelle, the founders and caretakers of the nursery, ensured ample transport and even convinced a few of the senior lecturers to join in the fun.



67 minutes of our time

Grade 9 workshop

At the Grade 9 Seminar for learners, teachers and parents, staff and postgraduate students of the Faculty assisted learners to make an informed decision in terms of subject choice. On the pictures Prof Reinout Meiboom from the Department of Chemistry and his postgraduate students and Dr Lizelle Piater, Dr Gerrit Koorsen from the Department of Biochemistry and their postgraduate students inspired learners to study in the Faculty of Science by exposing them to the wonders of natural sciences.





A-rated maths researcher clarifies the study of graphs

Professorial Inaugural address: Prof Michael Henning, from the Department of Mathematics delivered his inaugural address with the theme, *Graph Theory is everywhere*.

Abstract of the inaugural address by Prof Henning

The University of Johannesburg, and one of its predecessors the Rand Afrikaans University, has an established footprint in graph theory developed over four decades. In mathematics and computer science, graph theory is the study of graphs, mathematical structures used to model pairwise relations between objects from a certain collection. A graph is a finite nonempty set of objects called vertices together with a (possibly empty) set of unordered pairs of distinct vertices called edges. The basic concepts of graph theory are extraordinarily simple but can be used to express problems from many different subjects. Graph theory can be used in the planning of

such prosaic systems as traffic-light networks, mail delivery, and rubbish collection routes. It is used in town planning to find the best locations for service or emergency facilities.

One of the showpieces of real-world applications of graph theory is public transportation and GPS car navigation systems.

Although graph theory came into existence during the first half of the 18th century, during recent decades the subject has exploded and has developed into a major area of mathematics partly due to its real-world applications. However, it is the beauty of graph theory that has attracted so many to it. Graph

theory, more than any other branch of mathematics feeds on problems. In contrast to most traditional branches of mathematics, an unsolved or open problem in graph theory is often easy to state, but may still take years to solve without any guarantee of a solution.

In his address the basic concepts of graph theory were introduced and that graph theory is everywhere! Some applications of graphs, including the Chinese Postman Problem, GPS car navigation systems, the Travelling Salesman Problem, and the Instant Insanity Problem were discussed.

Abbreviated CV of Prof Henning

Regarded as a world leader in domination theory in graphs, Prof Henning, obtained his PhD at the University of Natal in April 1989. He started his academic career as a lecturer at the University of Zululand, before accepting a lectureship in mathematics at the former University of Natal in January 1991. In January 2000, Prof Henning was appointed a full Professor at the University of Natal, which later merged with the University of Durban-Westville to form the University of KwaZulu-Natal in January 2004. After spending almost 20 years at the University of KwaZulu-Natal and one of its predecessors, the University of Natal, Prof Henning moved to UJ in May 2010 as a research professor.

Prof Henning's research interests are in the field of graph theory which is a major area of combinatorics. He has made significant contributions to several topics in graph theory

and hypergraph theory including colorings, matchings, independence, domination theory, identifying codes, transversals, and digraphs. Prof Henning is regarded as a world-leader in domination theory in graphs. Over the last few years, Prof Henning has combined forces with Prof Anders Yeo, currently at the Singapore University of Technology and Design, and they have focused their research on the interplay of total domination in graphs and transversals in hypergraphs. Prof Henning and Prof Yeo co-authored a book in 2013 entitled *Total domination in graphs* (Springer Monographs in Mathematics).

Prof Henning was awarded an international award, a Hall Medal, in 2000 that recognises outstanding research achievements by members of the *Institute of Combinatorics and its Applications* who are not over age 40. Only two Hall Medals were awarded in 2000, the other recipient

being an Australian mathematician. In 2009, he was the recipient of a National Research Foundation A-rating which is reserved for researchers 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. The rating is valid for the period 2009-2014.

Prof Henning has been a plenary and invited speaker at several international conferences in countries such as the USA, Germany, France, Poland, and Slovakia. He is a prolific researcher having published over 320 papers to date in international mathematics journals. He has over 3,700 journal citations to his articles. He serves as a section editor of five international journals, including co-managing editor of the Japanese based journal *Graphs and Combinatorics*.

L'OREAL TEAMING WITH APPLIED CHEMISTRY

Collaborations between L'Oreal, France (Research & Innovation Division) and the Department of Applied Chemistry have been agreed in principle.

Dr Céline Farcet and Dr Albert Duranton from the cosmetic group L'Oreal, France visited Prof Bheki Mamba, Dean of the Faculty of Science, and staff of the Department of Applied Chemistry to set up collaborations with the Department. The meeting agreed in principle to work together, share skills and expertise and to look at issues of water treatment and water purification. The French delegate was invited by Mr Jason Eason who initiated possible research collaborations with Prof Bheki Mamba together with Ms Poonam Sewraj.



On the photo are: (front row from left) Dr Innocent Msibi (Executive Director – Research and Innovation, UJ); Prof Bheki Mamba (Executive Dean – Faculty of Science, UJ); and Dr Céline Farcet (Manager of Open Research in Europe in Advanced Research); (back row from left) Prof Titus Msagati (Prof of Analytical Chemistry, Department of Applied Chemistry); Dr Sabelo Mhlana (Senior Lecturer in Materials Science and Nanotechnology, Department of Applied Chemistry); Mr Jason Eason (Manager for Scientific and Regulatory Affairs, sub Saharan Africa); Prof Catherine Ngila (Head of the Department of Applied Chemistry); and Dr Albert Duranton (Research Expert in Biology in Open Research in Europe, Advanced Research).

Spotlight on Departments

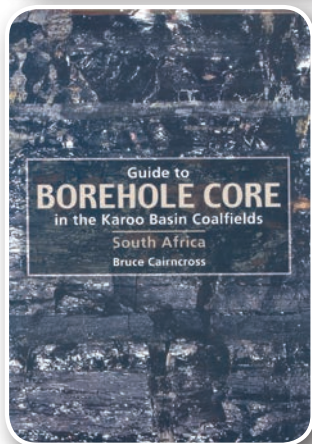
GEOLOGY



Mineral named after UJ academic

Prof Bruce Cairncross, HOD of the Department of Geology, was recently honoured by the International Mineralogical Association (IMA) by having a new mineral species named after him, *Cairncrossite*. The mineral, a strontium-calcium-silicate-hydrate is similar to minerals of the gyrolite and reyerite groups. It originates from the Wessels mine in the Kalahari manganese field and was discovered by the well-known collector, Dr Ludi von Bezing.

Left: A photograph of the recently discovered mineral Cairncrossite, 7 mm, from the Wessels mine in the Kalahari manganese field, South Africa.



Guide to borehole core in the Karoo Basin Coalfields

Prof Bruce Cairncross has been working for some time on a handbook describing borehole core from the Karoo basin coalfields. This is a project sponsored by Coaltech and the book has now been published.

One of the fundamentals of any coal exploration or coal mining program is drilling and logging of borehole core. Accurate descriptions of core are critical for determining the depositional environment of the original sediment and associated coal; accurate rock descriptions are also important for rock engineering purposes. This book illustrates borehole core of most of the rock-types encountered in the Karoo Basin coalfields and it serves to standardize the documentation and description of borehole core. Additional photographs of present-day sedimentological deposits and structures and equivalent ancient rock outcrop, complement the borehole core illustrations. A grain size chart, grain shape and grain sorting illustrations are provided to assist in the core logging process.

Prof Cairncross is qualified as a coal sedimentologist and after working for Rand Mines Ltd coal division in the early 1980s, entered academia. His work and that of his students focuses on the stratigraphy, origin and formation of the region's Permian coalfields. He has authored and co-authored over hundred coal-related journal articles and conference proceedings and supervised sixteen postgraduates who have researched various aspects of the Karoo Basin coalfields.

The academic side

Prof Nic Beukes was awarded a prestigious Cox Fellowship by Stanford University and he will be appointed as visiting professor for the duration of his stay at Stanford. He will be in the USA from the mid-September to mid-December 2013.

Dr Clarisa Vorster, *New Generation Scholars*, recently completed her PhD that dealt with laser ablation ICP-MS age determinations of detrital zircon populations in the Phanerozoic Cape and lower Karoo Supergroups (South Africa) and correlatives in Argentina. The UJ's New Generation Scholars, are top achieving doctoral candidates who were offered special bursaries by UJ and, after completion of their studies, get appointed as lecturers in the relevant department. In this way, the best postgraduates are kept as academic employees at the University.



Prof Nic Beukes



Dr Clarisa Vorster



Prof Fanus Viljoen

The Faculty of Science is pleased to announce that the South African Department of Science and Technology Research Chair in Geometallurgy was renewed for a further five years, for the period June 2013 to June 2018. The Chair in Geometallurgy was originally granted to Prof Jens Gutzmer, starting January 2008, and was transferred to Prof Fanus Viljoen in June of 2008, in the Department of Geology. The Chairs are granted by the DST for a period of five years, and the first cycle of the chair in Geometallurgy expired at the end of 2012.

GEOLOGY

Renewal of the South African Department of Science and Technology Research Chair in Geometallurgy

The primary thrust of Prof Viljoen's research is to develop and apply geometallurgical methods to quantify the mineralogical and textural characteristics of ore bodies, ores, concentrates and successor products in resource types relevant to the South African minerals industry. Research is currently focussed on the characterisation of platinum-group element and Ni mineralisation within the Bushveld complex, as well as gold and uranium in the Witwatersrand. This is accomplished utilising mineralogical, geochemical, and metallurgical techniques such as X-ray

diffraction analysis, scanning electron microscope-based automated mineralogy, electron microprobe analysis, and laboratory scale milling and flotation testing. Research is also focussed on geometallurgical aspects of diamond, the base metals (copper-lead-zinc), coal, lime, and manganese, with a view on the optimisation of treatment plants and optimised metal recovery.

Six MSc projects, six PhD projects, and two post-doctoral projects are currently in progress.



Prof Hassina Mouri

Councillor for IMGA

Prof Hassina Mouri has been elected as Councillor for the International Medical Geology Association (IMGA) at their annual general meeting. The IMGA aims to provide a network and a forum to bring together the combined expertise of geologists and earth scientists, environmental scientists, toxicologists, epidemiologists, and medical specialists, in order to characterize the properties of geological processes and agents, the dispersal of geological material and their effects on human population. IMGA was founded in 2006 and manages affairs and funds, plans conferences, elections and publications, and they are also a way of encouraging growth and recognition in the field.



Prof Axel Hoffman

NRF Grant

Prof Axel Hoffman was awarded an NRF National Equipment Programme grant to upgrade the Department-owned WITec alpha300M confocal laser Raman microscope to an alpha300R with True Surface imaging capability now allowing high-precision Raman imaging even of irregular surfaces. The equipment is available to any user, both in academia and in industry, who requires high-resolution Raman spectroscopy and mapping.

GEOLOGY

INTERNATIONAL WORKSHOP HOSTED BY UJ GEOLOGY

The Department hosted an international field workshop that emphasized the thermal regime, fluid activity, and magmatism of Precambrian granulite facies terranes, with special reference to the Limpopo Complex of South Africa. The field workshop was preceded by a seminar in the Department during which researchers from Japan (Toshiaki Tsunogae), Germany (Daniel Harlov), Russia (Oleg Safonov, Leonya Aranovich, and Elena Dubinina), the USA (Robert C Newton, Craig Manning, and Adam Makhluף) and UJ (Dirk van Reenen, Andre Smit, Jan Kramers, and George Belyanin) shared recently acquired data on topics related to the focus of the field workshop.

The field workshop focused on studying field evidence for pervasive and channeled (shear zone-hosted) fluid-rock interaction that included regional hydration of metapelitic granulite, the main pulse of anatexis, shear zone-hosted high-temperature metasomatic alteration of quartzofeldspathic gneisses, and melt-enhanced deformation. The results of this workshop will be published as a special issue of Precambrian Research in the second half of 2014, and will also be presented as a special session of IMA 2014 in Johannesburg.

GOODBYE AND WELCOME

Mrs Elsje Maritz, who has been the departmental secretary for twenty nine years, retired at the end of June. Ms Reshika Moodley was appointed as the new departmental secretary.

IN AND OUT OF THE DEPARTMENT

Researchers from different parts of the world visited the Department recently. In July, Alina Fiedrich from the University of Kiel in Germany arrived for a two months internship in the Department as part of the DAAD-sponsored RISE project. Dr Robert Bolhar from the University of Queensland spent three months for collaborative research with Prof Axel Hoffman working on various aspects of Archaean sediment geochemistry. Dr Arnold Gucsik, an expert on Raman spectroscopy and luminescence studies in the Earth and Planetary Sciences, joined the Department from Hungary to take up a postdoctoral position. Dr Gucsik holds a doctoral degree in geochemistry from the University of Vienna and has been working as a postdoctoral fellow and visiting Professor in laboratories in Europe, Japan and the US. His presence as a researcher at UJ will open new pathways in mineralogical and petrological studies using Raman- and luminescence-based techniques.

GEOGRAPHY, ENVIRONMENTAL MANAGEMENT AND ENERGY STUDIES

THE GREENEST EVENT

Associate Professor of Energy Studies, **Prof John Ledger**, was one of the organisers of *The Greenest Event*, held at the Sandton Sun Conference Centre and attended by a number of delegates from business and industry.

Hosted by Future Group, in association with Servest Group, *The Greenest Event* set the tone in this year's edition of the One Day MBA on Planet Management on World Environment Day. Promoted as the foremost thought-provoking short environmental conference to attend and in its third year, highlights on the day were constraints in South Africa's economy, how technology may enable us to continue on a growth path and how to invest in an economy that may stay flat for the next thirty years.

Chief Policy Advisor for the Strategic Environmental Intelligence Environmental Advisory Services Unit, Department of the Environment, Dr Peter Lukey and a range of senior environmental experts used the platform of *The Greenest Event* on World Environment Day to highlight the major environmental threats facing South Africa over the coming decades. Of particular concern to Lukey was the prospect of marine Phosphate mining,

with many of the country's prime fishing grounds off the west coast under prospecting for bottom dredging by international firms.

Phosphates are a major component of commercial fertilizer and are a non-renewable resource mined around the world, but particularly in China, Morocco and South Africa. While Phosphate supplies on dry land are potentially running low, the material is abundant on the continental shelves around the world. It is these deposits that are becoming a target for dredging firms off southern Africa's west coast.

Other potential threats highlighted by speakers were fracking (specifically if poorly regulated), the increase of alien plant invasion aided by climate change and water quality issues and concerns over the capacity of our bureaucrats to properly administer our environmental laws.

"Over the last few years The Greenest Event has set the tone for the sustainability industry as it looks at challenges pertaining to South Africa and the world," said Simon Gear in closing an interesting and information-filled day.

BIOTECHNOLOGY

Sania Kadanyo from the Department of Biotechnology was the first student to graduate cum laude in the BTech Biotechnology. She completed her Diploma in Biotechnology at the University of Johannesburg in 2011. Gauteng Department of Agriculture and Rural development (GDARD) awarded her a bursary in 2011 and 2012.

During the GDARD awards ceremony in August 2013, Sania received the award as best Biotechnology student at UJ and a second award as best Biotechnology student in Gauteng for the year 2012. As part of the prize she will be sent to the Agricultural Biotechnology International Conference in Canada in September 2013 where she will do a presentation on her Microbial Fuel Cell research. She has also been invited to visit selected Biotechnology Industries in Canada.

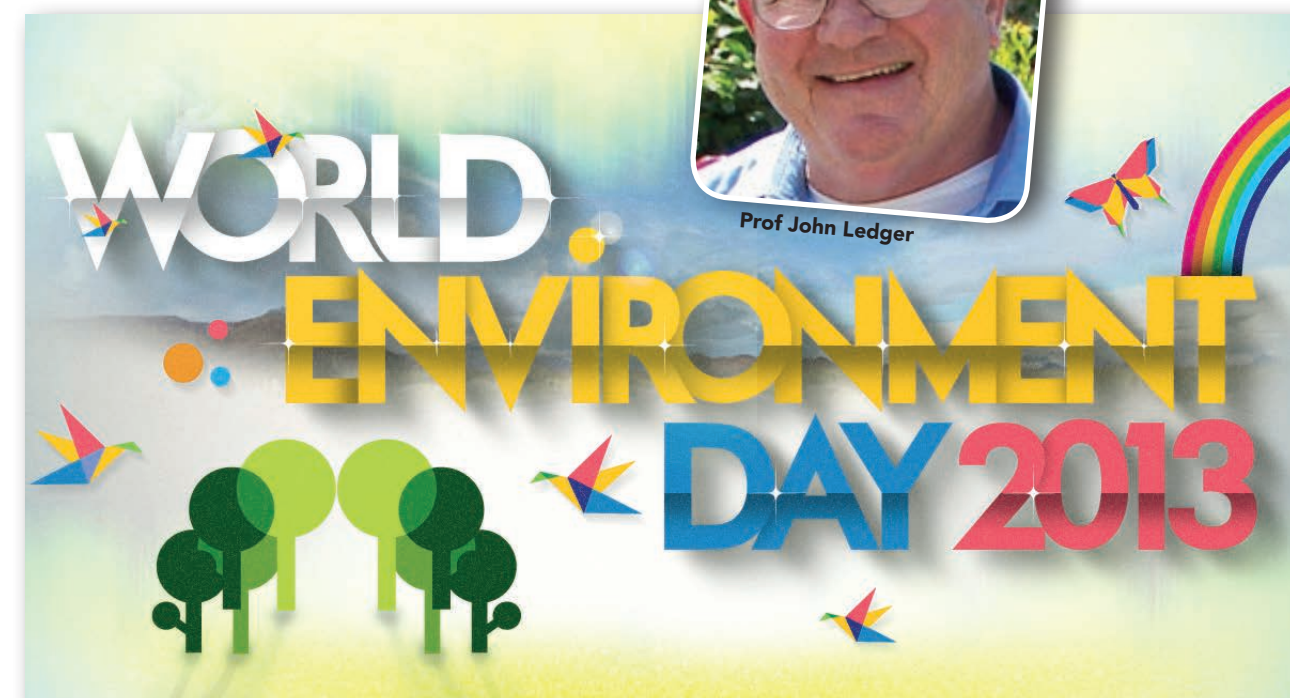
She is currently enrolled for an MSc in Nanoscience Majoring in Nanobiomedicine, her project entails *Selective laser photothermal therapy of Cancer cells using Aptamer conjugated gold nanoparticles (Theranostics)*.

The UJ Biotechnology Science and Technology Forum (SAT), a student initiative currently chaired by **Lesego Kekae**, have liaised with AfricaBio to host a career day at UJ DFC. This event will take place during September 2013.

Mr Lesley Mabasa from AfricaBio compiled a list of twenty different biotechnology companies and government departments/parastatals as well as other Universities in the Gauteng Province that he would like to bring on board to address the needs of biotech students ranging from technology developers to pathology labs. These stakeholders will give an insight to students on what they are offering on entry level jobs, learnerships and internships. This will also be a platform for the biotechnology students in Gauteng to enlarge their networks to potential employers.



Prof John Ledger



Spotlight on Departments

GEOGRAPHY, ENVIRONMENTAL MANAGEMENT AND ENERGY STUDIES



Prof Susan Parnell from the Department of Environmental and Geographical Science at the University of Cape Town who presented the Ron Davies memorial keynote address. Her topic was, *Hanging ideas and practices for making cities fair*; Prof Bhekile Mamba, the Dean of the Faculty of Sciences at UJ who welcomed the delegates; Prof Céline Rozenblat, chair of the IGU Urban Commission from the University of Lausanne, Switzerland and Prof Nico Kotze from UJ GEMES Department, who organised and hosted the Johannesburg leg of the meeting.

Annual Conference of the IGU Urban Commission

The first social meeting of the IGU Urban Commission annual Conference in South Africa was hosted by the Department of Geography, Environmental Management and Energy Studies of the University of Johannesburg and the Department of Geography Environmental Studies of the University of Stellenbosch.

At the conference in Johannesburg and Stellenbosch seventy two papers were presented. Forty eight delegates attended the Johannesburg part of the conference. They were from Canada, Mexico, Brazil, France, Switzerland, Poland, Spain, Italy, Germany, UK, Lebanon, Turkey, Japan, Zimbabwe and South Africa.

The Urban Commission of IGU is designed to encourage geographical research on the new Urban Challenges emerging in an increasingly complex world, and to further the exchange of findings among urban geographers from many countries.



Ntombi Ntuli

Special Recognition within the BMBF Young Researchers' Award

Ntombi Ntuli, one of our recent GEMES MSc graduates, has been given special recognition by the German BMBF Young Researcher's Award. This is part of the final Sustainable Megacities Programme Conference held in Hamburg, Germany.

Research Fellow

Prof Etienne Nel, research fellow with UJ, will be visiting South Africa during his sabbatical in 2014 to explore more collaborative research. He is a professor in the Geography Department of the University of Otago in Dunedin, New Zealand. His interest is Southern African research on small towns, local economic development and urban agriculture. On the photo is Dr Jayne Rogerson from the Department of Geography, Environmental Management and Energy Studies, UJ during her visit to Prof Nel.



PHYSICS



Professor Azwinndini Muronga

Prof Azwinndini Muronga was elected unopposed to the position of chairperson of the Univen Gauteng Alumni Chapter during the Univen Gauteng Alumni general meeting

ZOOLOGY



Prof Bettine Jansen van Vuuren

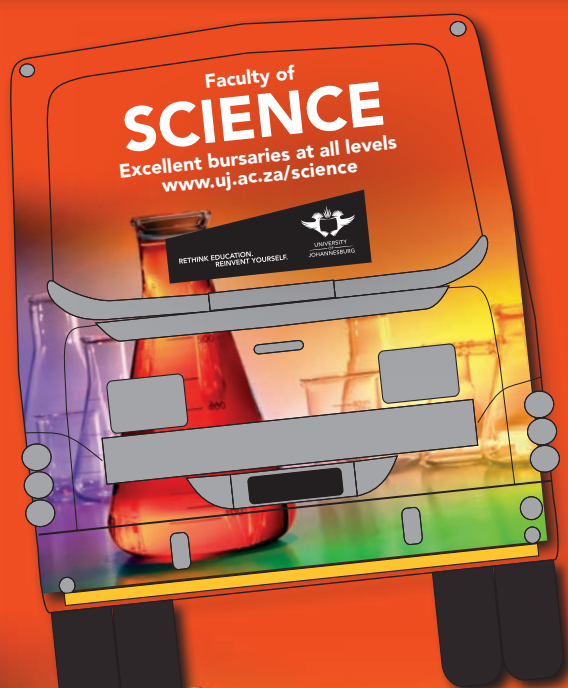
Prof Bettine Jansen van Vuuren was nominated to serve on the Fundamental Biodiversity Information Programme (FBIP) steering panel. The FBIP is funded through the DST and managed by the NRF. This programme essentially replaces NRF programmes that are being phased out including the South African Biosystematics Initiative (SABI) and aims to link biodiversity research with other initiatives such as the Biodiversity Information Facility, the Barcode of Life and Encyclopaedia of Life programmes. She has also been elected as the President of the Zoological Society of Southern Africa (2013- 2015).

MORE ON ZOOLOGY

Dr Peter Teske joined the Department as Senior Lecturer from Flinders University, Adelaide, Australia

Byron Bester, an MSc student of Prof Ina Wagenaar, won the second prize for students posters at the Southern African Society of Aquatic Scientists (SASAqS) Conference

TM Ansara-Ross , V Wepener , PJ van den Brink & MJ Ross (2012): *Pesticides in South African fresh waters*, *African Journal of Aquatic Science*, 37:1, 1-16 is amongst the Aquatics Top 10 of 2013



ALL UJ SCIENCE STAFF & STUDENTS: Spot the UJ Science bus

Take a photo & stand a chance to win R500, R300 or R200. Please send the photo, your contact details and staff or student number to skritzinger@uj.ac.za.

Closing date: 1 October 2013