

SCIENCE @UJ

NEWSLETTER OF THE
FACULTY OF SCIENCE
UNIVERSITY OF JOHANNESBURG
LEADING SCIENTISTS, INNOVATIVE TECHNOLOGISTS



**FACULTY OF
SCIENCE**

A message from the Executive Dean



We are bringing out our 1st newsletter of the year, and it's been an eventful first half of the year. There is much information to share. Still, we don't want to turn the newsletter into a study guide, so we keep the content concise, and some information is provided on the faculty- and in some cases, departmental- or center websites. The newsletter, as usual, celebrates student and staff achievements, includes information on events/activities, and highlights selected research. Faculty staff and students participated in various seminars, trainings, and engagements during the first semester across the globe.

*Don't miss out on the very inspirational stories of **Dr. Siphokazi Gatyeni** and **Dr. Jairus Lamola**; both demonstrate what comes out of perseverance and hard work. At the end of the newsletter, we share photos of the Transformation Champions Committee Outing as a reward to the committee for a very successful **Ubuntu kindness braai in 2022**. We hope to receive the same level of engagement at the 2023 Heritage Day event.*

We are happy to announce that the Faculty exceeded our publications output target for 2022, with 604 units. The 2023 target is 546, which I am confident we will once more exceed.

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STAFF AWARDS & ACHIEVEMENTS

Prof Makhubela (Chemical Sciences) is an official Thieme Chemistry Journals Award 2023 recipient. The Thieme Chemistry Journals Award, established in 1999 to encourage young scientists, is granted to prospective chemists who have been recognized as high-potential researchers in synthetic organic chemistry by the editorial board members of Synthesis, Synlett, And Synfacts.

Prof Van der Haar (ACSSE) received the prestigious **Fulbright-Emory Distinguished Chair** scholarship and was the first author of an article entitled “**An Alzheimer’s Disease category progression sub-grouping analysis using manifold learning on ADNI**” in **Scientific Reports**.

Dr. Langerman (GEMES) has been promoted to **Associated Professor**.

Prof Fawole (Botany and Plant Biotechnology) was honoured with two significant achievements. Firstly, he won the bid to host **the IV International Symposium on Beverage Crops in South Africa** in 2026 under the auspices of the **International Society for Horticultural Sciences**. Secondly, he was appointed **Editor in Chief of the International Journal of Postharvest Technology and Innovation (IJPTI)** <https://www.inderscience.com/jhome.php?jcode=ijpti>.

Prof Vadapalli (ACSSE) received an **NRF C-rating**.

Mr. Kganyago (GEMES) has completed his Ph.D. Dr. Kganyago’s thesis focuses on enhancing the use, understanding, development, and implementation of new remote-sensing technologies and robust machine-learning models to aid agroecological systems research and application development.

Mr. Thulane Paepae (DMAM) has completed his Ph.D.

Prof Mpekoa (ACSSE) has been accepted to be part of **UJ’s Women in Leadership**.

Prof Razzaque (Physics-CAPP) has been awarded **R1.205 million BRICS STI grant** by the **NRF**.

In a cross-faculty collaboration, **Prof Langerman** from **(CBE)** and **Prof Leung (ACSSE)** have a journal article published in the **Journal of Information Teaching Cases**.

SEMINARS, TRAINING & ENGAGEMENTS

A special thank you goes to the following invited speakers who shared their knowledge of working in the field of Physics: **Dr. Sthabile Kolwa** (Lecturer at the Department of Physics, **University of Johannesburg**); **Dr. Elizabeth Hays** (Project Scientist **Fermi Gamma-Ray Space Telescope at NASA Goddard Space Flight Center**); **Dr. Gopolang Mohlabeng** (Assistant Professor at the Department of Physics, **Simon Fraser University, Canada**). To learn more about what the invited speakers had to say, click [here](#).

Prof Mabuba (Chemical Sciences) was invited by **Kagoshima University in Japan**, Faculty of Agriculture, for teaching, learning, and research purposes, where she interacted with Honours students in Chemistry.



The University of KwaZulu-Natal and the Cape Peninsula University of Technology invited Prof Leung to present on the use of ChatGPT in Teaching and Learning. **Prof Leung** was invited by Future of Knowledge (IFK) to take part in their public lecture entitled “The Implications of AI Tools in Teaching and Learning: A Case of ChatGPT” and was part of the organising committee that successfully hosted the second TAU (**Teaching Advancement at Universities**) session for the fourth cohort of participants in Cape Town.

Dr. Makhubela (Geology) visited the **German Research Centre for Geosciences** (GFZ Potsdam, Germany) for a 2-month research stay for cosmogenic nuclide sample processing and preparation of “spike” materials used for isotope dilution measurements. During this trip, Dr. Makhubela also visited the **Ion Beam Centre** at the Helmholtz-Zentrum Dresden-Rossendorf, Germany, where his samples were measured using an accelerator mass spectrometer (AMS) and the **University of Bern**, Switzerland, to meet collaborators.

Dr. Dixit (Postdoctoral Research Fellow-Physics) attended [the 'Quantum Information Theory in Quantum Field Theory and Cosmology 2023'](#) conference at the Banff International Research Station in Banff, Canada. Dr. Dixit presented a contributed talk titled ['Quantum Spread Complexity in Neutrino Oscillations.](#)

Prof Dubery (Biochemistry) attended the **2nd International Molecular Plant Protection Congress**, in Orhangazi, Turkije where he presented an invited keynote lecture.

Prof Fawole (Botany and Plant Biotechnology) and two of his two MSc students from the Postharvest and Agroprocessing Research Centre showcased their research at the **III International Symposium on Beverage Crops** in Murcia, Spain. <https://www.ishs.org/symposium/677>

Prof Yessoufou (GEMES) visited the **University of Lagos**, Nigeria. He gave two seminars on evolutionary history and conservation of cycads and human population growth, pandemic, and biodiversity.

Prof Winkler (Physics) gave a talk at the international conference on **Active Galactic Nuclei Variability** in Naples, Italy.



Dr. Seopela and **Dr. Fotsing** attended the **Department of Basic Education Quality Learning And Teaching Campaign (Qltc)** Interprovincial Meeting in Durban, KwaZulu-Natal. **The Department of Chemical Sciences** presented the UJ-DBE community engagement collaborative project, “Making Chemistry experiments accessible,” to all DBE Structures nationally. This meeting aimed to strengthen, advance, redirect, review, refocus, and re-evaluate the QLTC mandate towards building a new National Social Compact for Education in the 21st Century, emphasising collaboration, coordination, support, and monitoring across all stakeholders.



Prof Razzaque (Physics-CAPP) attended the ['PPC 2023: XVI International Conference on Interactions between Particle Physics and Cosmology'](#) in Daejeon, South Korea and presented a contributed talk titled ['Possible origins of > 10 TeV photons detected from GRB 221009A'](#).

Prof Coulter (ACSSE) gave a virtual presentation at Society for Product Design Science (SPDS) and presented at the National Science and Technology Forum: 'Pitfalls of Artificial Intelligence Discussion.

Prof Wagner (Geology) was invited to facilitate a Fireside Chat on Critical and Strategic Minerals in the African Context at the **DMRE Northern Cape Mining and Investment Conference** held in Kimberley.

Staff and students from the **Centre for Astro-Particle Physics (CAPP)** attended the '**67th Annual Conference of the South African Institute of Physics**' at the **University of Zululand**, Richards Bay Campus. The following staff and students contributed: **Prof Razzaque; Ms. Maheso; Mr. Nyadzani; Ms. Mothogoane; Mr. Msiza.**



Prof Mabuba (Chemical Sciences) was invited by the Research Office at **Sol Plaatje University** to facilitate a proposal writing workshop for postgraduates.

Dr. Moroeng (Geology) undertook a research visit to China to enhance an existing collaboration and included invited talks at the **China University of Mining and Technology** in Beijing and Xuzhou and sample collection in Hailar (Inner Mongolia).

Prof van der Haar (ACSSE) was the co-chair of the **SAYAS Annual Young Scientist Conference** hosted at the University of Venda and the chair of the review panel for the **UNISA Hons in Computing degree** review.

The Department of Physics hosted a Physics Bootcamp for thirty Grade 11 learners from the **Soweto Science Centre**. The bootcamp was sponsored by the **Centre for Astro-Particle Physics, the Soweto Science Centre, and the Department of Physics**. It provided Grade 11 revision lessons and valuable insight into exam preparation, conducted by **Prof. Sondezi, Mr. Molefe, Mr. Khwanda, Mr. Nyadzani, Mr. Ewuola**, and many postgraduate students who volunteered as demonstrators.



Prof Simelane (Biochemistry) presented a paper at the **1st International Conference on Community Engagement And Service**, titled: "A Review of operating models of Facilities for indigenous knowledge systems projects set-up as Tools for community engagement." The conference was held at Umfolozi Casino Empangeni. He also presented a paper at the **71st International Congress and Annual Meeting of the Society for Medicinal Plant and Natural Product Research (GA)**, held at Trinity College, Dublin. In addition, the feasibility of the **Manguzi indigenous knowledge innovation centre (MIKIC)**.

Prof Leung (ACSSE) presented at an online Masterclass organised by the Division for Teaching Excellence, discussing how to use Generative AI (such as ChatGPT) in the classrooms. **Prof Leung** was then invited to present how institutions can embrace Generative AI in their Learning and Teaching at the University of KwaZulu-Natal and Cape Peninsula University of Technology.

Prof Adebo (Biotechnology & Food Technology) hosted **Dr. Elisabeth Koussissi** from the Department of Wine, Vine and Beverage Sciences, University of West Attica, Athens, Greece. **Prof Adebo** hosted **Dr. Adilia Lemos**, **Prof Graeme Walker**, and **Prof Alberto Fiore**, all from the Division of Engineering and Food Science at Abertay University.

Dr. Seopela and **Ms. Maletle** (Chemical Sciences) attended the Launch of the **Department of Basic Education and Buhle Farm Academy Farming Program Launch** in Delmas at Delpark Primary School. The project will be used to train and supply food (eggs) to 10 000 learners in and around the surrounding schools while also creating employment and skills for unemployed youth in farming, poultry, and entrepreneurship.



Prof Von Solms (ACSSE) was a co-author of three reviewed papers at the **2023 European Conference on Cyberwarfare and Security** held in Greece, he was also a co-author of a reviewed paper presented at the **SAI Computer Conference** in London, UK. Furthermore, **Prof Von Solms** was a co-author of a reviewed paper at the **IFIP HAISA** Conference at the University of Kent in the UK and was invited Keynote paper at the **IFIP TC 8 Dewald Roode Workshop** outside Glasgow in Scotland. **Prof Von Solms** visited the **Cyber Quarter of the University of Abertay** in Dundee, Scotland, where two research talks were given to the academic staff. He visited the **Global Cybersecurity Capacity Centrum** of the University of Oxford.



Prof Van Wyk, (Botany and Biotechnology- DST/NRF SARCHI Research Chair in Indigenous Plant Use), was an invited Keynote Speaker at the joint **Conference of the Society for Economic Botany and The Society for Ethnobiology**, Atlanta, Georgia, USA.

Prof van Wyk's keynote lecture titled “**The ancient origins of traditional medicine and implications for ethnopharmacology**” was delivered on the first day of the Conference and was warmly received and referenced by other Speakers throughout the weeklong event, as it centred on the

Conference Theme of Human and Planetary Health: Everything is Connected. Research presented at this joint conference explored themes of sustainability and conservation, resilience in human-environmental systems, ethical engagement with indigenous communities, and the impact of natural products on human health and therapeutic development.

True to his teaching philosophy, and specifically his strategy for post-graduate supervision, **Prof van Wyk** accompanied seven Ph.D. students and one senior postdoctoral research fellow to SEB, stating, “*I have always afforded the senior post-graduate students at least one opportunity to be exposed to an international scientific audience and their international peer group. Over the years, these opportunities have had a tremendous impact of the students, their motivation, and ultimate success as researchers and scientists.*” Remarkably, the eight student papers covered four of the six conference themes, all offering cross-systems insight into planetary and human health, namely Phytochemistry: Reading the Language of Nature; Psychedelics: From Indigenous Knowledge to Applications in Medicine; Traditional Medicine and Ethnopharmacology; Urban Ethnobiology; Community Based Conservation and Land Management and Agroecology and the Future of Food.

Mr. Sizwe Cawe presented a paper titled “The Ethnobotany of the Eastern Cape” (Theme: **Community Based Conservation and Land Management**). In the session themed Traditional Medicine and Ethnopharmacology, five papers were presented: **Ms. Marlette Compion-Venter** (“A review of the role of African traditional medicinal plants in primary health care in South Africa”), **Ms. Ancia Cornelius** (“Diversity and dynamics of southern African medicinal plant use”), **Mr. Sizwe Mbanjwa** (“An updated inventory of medicinal plants in South Africa”), **Mr. Ryan Rattray** (“Exploring the medicinal and aromatic properties of southern African Lamiaceae”) and **Ms. Eunezia Siteo** (“Medicinal ethnobotany of the Vatsonga cultural group in South Africa”). **Mr. Lloyd Mhlongo’s** paper was titled: “Zulu craft plants recorded in the Amandawe area, KwaZulu-Natal, South Africa” and he presented in the Urban Ethnobiology themed session and lastly, **Dr. Nicholas Sadgrove** (“African ayahuasca “afriahuasca” and the “tree of life” – The search for DMT and β -carboline alkaloids”) presented in the session themed Psychedelics: From Indigenous Knowledge to Applications in Medicine.

Mr. Sithungu (ACSSE) gave a presentation about his Ph.D. research and was a part of the panel at the **State Security Agency (SSA)** seminar. The talk was on Biologically Inspired AI and the Optimisation of Complex Processing. **Mr Sithungu** presented a paper at the **ECCWS 2023** conference in Athens, Greece.

MEDIA ENGAGEMENTS

Prof Leung (ACSSE) frequently contributed to **ChaiFM** by discussing various information technology matters, ChatGPT, passwordless security, and cyber security awareness.

Dr. Makhubela (Geology) was interviewed by several media in SA (**Daily Maverick, Times Live**) and Internationally (**New York Times, National Geographic**) following the publication of a highly debated preprint he co-authored on the evidence of burial of and by Homo naledi.

Prof Winkler (Physics) has given 58 TV or radio interviews on electricity crisis-related matters, including **BBC, Al Jazeera, SABC, eNCA, Newzroom Afrika, Cape Talk, and 702**.

Prof Von Solms (ACSSE) had a TV interview during the launch of the **Afriforum Cyberbully Guide**, to which UJ contributed.

Prof van der Haar (ACSSE) was featured on radio stations such as **SAFM** and **UNIVEN radio**.

NOTEWORTHY STORIES

Dr. Siphokazi Gatyeni is UJ's first SA black female Ph.D. graduate in Applied Mathematics.

"I am the **firstborn** and only daughter of a family that is comprised of three children, who grew up in the **Eastern Cape**, in a village in a small town called **Lady Frere**, in **eMachubeni**.

On a rather sad note, I lost my dad when I was eight years and being raised by a single parent who was employed as a domestic worker was no child's play. Having to survive on little or almost nothing daily was a huge predicament. Financially, we were struggling to survive. For University, I had to rely on NSFAS for my undergraduate studies and bursaries for my postgraduate studies.

I did my primary school at **Nokwazi Junior School**, after which I went to **Malmesbury in the Western Cape** to do my high school. I matriculated there in 2010 at **Ilingeletu Secondary School**.

Upon finishing high school, I studied for **National Diploma (ND) in Mathematical Technology at the Cape Peninsula University of Technology** from 2011 to 2013. In 2014 I went to **African Institute for Mathematical Sciences (AIMS)/ Stellenbosch University** to do BSc Hons in Mathematics, then I proceeded to study **MSc Mathematics** in 2015 at **Stellenbosch University**.



In February 2020, after working for five years in the IT industry and being the only breadwinner at home, I had to resign from my full-time job to be a full-time student studying my Ph.D. in **Applied Mathematics** as if that was not a big enough ordeal, immediately the whole country was put under lockdown, courtesy to COVID-19, it was not easy but with the help of my then Fiancé and now husband I made it to today.

There were times when I wanted to throw in the towel, but the thought and dread of being unable to have basic things is one of the things that fueled me the most to keep on. Also, being the firstborn at home, I wanted to make my mother proud. All thanks to my husband, **Ephraim Dube**, and my supervisors, **Prof Farai Nyabadza** and **Prof Faraimunashe Chirove**, for encouraging me not to give up. I can now firmly say nothing is impossible; if you believe it, you can make it! See it, believe it, and seize it!"

Dr. Jairus Lamola

Dr. Jairus Lamola's Ph.D. journey started in 2019 when he enrolled in a project in the catalysis field under the supervision of **Prof. CM Maumela** and co-supervision of **Emeritus Prof. CW Holzapfel** (late) and **Dr. PT Moshapo**. His research focused on the rational design and development of novel effective catalysts for applications in palladium-catalysed cross-coupling reactions. The outcome of the study showed that the performance of the newly developed catalysts was mostly comparable to that of commercial state-of-the-art catalysts and, in some instances, outperformed them. Following extensive theoretical and empirical studies, this study provided an in-depth understanding of the fundamental and key parameters of the catalysts that are influential on catalytic performance.



Part of this work was published in the **Royal Society of Chemistry Advances Journal** and was chosen as the winner (from over 900 nominations) of the Best Outstanding Student Paper Award in the catalysis category in 2021. Subsequently, Jairus Lamola was invited by the **Royal Society of Chemistry Advances** to present the work of the award-winning paper to the international chemistry community in November 2022. For more details, see <https://doi.org/10.1039/D2RA90082C>. The ground-breaking outputs of his Ph.D. studies include five papers published in prestigious international peer-reviewed journals. Jairus has also given presentations at both local and international conferences. This demonstrated the innovative thinking and strategic research training that Jairus Lamola received.

Despite these accomplishments, he faced challenges throughout his Ph.D. journey. At the beginning and one of the most critical stages of his Ph.D. studies, he experienced the heartfelt passing of his beloved mother, **NML Khumalo**. He dedicated his Ph.D. thesis and its achievements to his mother. While grieving, the national COVID-19 lockdown exacerbated the situation, which resulted in the university's closure and complete restriction to access laboratory facilities for six months. The passing of his co-supervisor, **Emeritus Prof. CW Holzapfel**, who was an inspiration and mentor to Jairus Lamola, also had an impact.

This journey was also intertwined with day-to-day research-related challenges such as key laboratory instrument breakdowns and long turnaround times for shipment of chemicals and consumables due to the COVID-19 pandemic. Despite all these challenges that could have derailed his Ph.D. studies, he demonstrated consistent resilience and perseverance and did not give up on his dream. Furthermore, during these difficult times, he received support from his supervisors, academic staff, and laboratory colleagues in the **Organic, Organometallic, Lanthanide, Meta-catalysis, and Analytical** chemistry research groups. During this period, Jairus Lamola also acquired new computational chemistry and crystallography skills. The Ph.D. work also involved collaborations with experts in various fields in other institutions. His personal and interpersonal skills developed during his Ph.D. journey proved valuable in his previous appointment as a part-time assistant lecturer in the **Chemical Sciences Department** (2021 – 2022) and his current employment as a **Scientist at Sasol's Research and Technology (R&T) Division**.

STUDENT AWARDS & ENGAGEMENTS

Ms. Ashlee Paige Nofal (bottom left), supervised by **Prof Oldewage and Dr. Dos Santos (Zoology)**, won the **2022 Chancellors' Medal for the most Meritorious Masters Study**.



Mr. Alexander Maartens (featured right) (**DMAM**) won the Faculty Prize for the **Most Prestigious Honours graduate for 2022**.



Ms. Dimakatso Machetele was awarded the Fellow of the Year by the **Black Women in Science NPC (BWIS)**. **Ms. Machetele** is a Ph.D. candidate in the **Department of GEMES** currently under the supervision of **Dr. Schoeman** and **Prof. Kelso**. Her Ph.D. research investigates waste pollution and management in rural villages in the Mopani District of Limpopo province. BWIS is an emerging researchers' program encouraging women to participate in STEM careers.

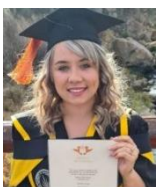


The **National DIRISA** team, mentored by **Prof Dustin van der Haar** and representing South Africa, competed at the data challenge in Coimbra, Portugal, and won the best presentation at **International Conference on Performance Engineering (ICPE)**.

Mr. van der Westhuizen's (ACSSE) 3rd-year team on making it to the **Finals of the Microsoft Imagine Cup**.

Ms. Zobabalo Mina, a Masters student under the supervision of **Prof Fawole (Botany and Plant Biotechnology)** and a student from the Postharvest and Agroprocessing Research Centre, received the **Young Minds Award** for the best oral presentation at the III International Symposium on Beverage Crops in Murcia, Spain.

Ms. Philadelphia Ramathavha (GEMES), Honours Student, won the **Mararas Foundation Award** for Best Student in Bachelors of Environmental Sciences and the **NTT Toyota Louis Trichardt Award** for the Best Overall Student in Bachelor of Environmental Sciences at her graduation on 17 May 2023 at University of Venda!



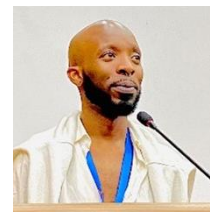
Ms. Chanel Pretorius (Biochemistry) won the "Junior Kaptein Scott-Gedenkmedalje." The award is given to the candidate with the best Masters research. Her research was entitled "Metabolomic analysis of oat (Avena sativa) Plants: A strategy for cultivar identification and for the characterisation of host responses to pathogen infection."

Mr. Thabo Msiza presented his poster 'Fitting NOVA and T2K data with the revamped $\$A_4$ symmetry model for the poorly constrained neutrino oscillation parameters at the **67th Annual Conference of the South African Institute of Physics (SAIP 2023)** in Richards Bay.

Ms. Tamador Aldowma (Ph.D. Student-Physics) and **Ms. Dimakatso Maheso** (Masters Student-Physics) attended the '[Fermi Summer School 2023](#)' at the **University of Delaware Conference Center in the United States**. **Ms. Aldowma** presented a talk titled 'Using machine learning to estimate Fermi GRB redshifts,' while **Ms. Maheso** presented a talk titled 'Pulse fitting of short gamma-ray bursts and the magnetar giant flare, GRB200415A, with the Norris function'.

Mr. Sekonya, supervised by **Mr. Sithungu (ACSSE)** presented a paper at the **ICCWS 2023** conference in Baltimore, USA.

Mr. Simanye Sam, Ph.D. student, supervised by **Prof Mabuba** and **Prof Malinga (Chemical Sciences)**, won the best oral presentation award (200\$) at the **3rd International Congress on Separative Techniques Facing the Challenges of Sustainable Development** in Morocco.



Ms. T. Sithole, a Ph.D. student of **Dr du Toit (ACSSE)**, has a paper accepted for the **ECCWS** conference in Greece.

Mr. Lutendo Nyadzani, a Ph.D. student supervised by **Prof Razzaque (Physics-CAPP)**, was awarded the 'Best Ph.D. Presentation in the Astrophysics Division' at the **67th Annual Conference of the South African Institute of Physics (SAIP 2023)** in Richards Bay.

Ms. Itumeleng Matlala, a Ph.D. candidate supervised by **Dr. Moroeng** and **Prof Wagner (Geology)**, was appointed to **The Society for Organic Petrology's (TSOP)** Student Affairs Committee; she will serve as the committee's Chairperson for the period September 2024 to August 2025.

Mr. Luyanda Mazwi, a Masters Student in the **Physics department**, attended the '**Second MaNiTou Summer School on Gravitational Waves: A new window to the Universe**' in Nice, France.

Ms. Sebotse Kgoale, **Ms. Mpho Maleke**, and **Mr. Yusuf Kewuyemi**, students from **Prof Adebo's** research group, **Dr. Molelekoa** and **Prof. Chinma** (a Visiting Professor to the **Department of Biotechnology & Food Technology**), went for a Research Visit to Abertay University in Scotland.

Ms. Maeko, a Ph.D. student of Prof Van der Haar (**ACSSE**), had a paper accepted at **ICICT** in Rayleigh, USA.

The **2023 MINSA Prize** has been awarded to **Ms. Fatima Zonke Chitlango (Geology)** for her dissertation titled "**Rare Earth Elements in South African Coals: Concentration and Mode of Occurrence in density fractionated samples from the Waterberg Coalfield.**"

CIMERA and the **Helmholtz Institute Freiberg for Resource Technology (HIF)** at Helmholtz Zentrum Dresden Rossendorf (HZDR) have consolidated their collaboration in a bi-lateral research school that focuses on joint research at the level of Ph.D. students. This research school will be focused on "exploration for predictive Geometallurgy" with the Acronym 'Exp4Pred'. The focus is researching and developing innovative and digital approaches for exploration, raw material characterization, extraction, beneficiation, and environmental assessments for the African and European minerals industry.

The Geo-informatics field is a technology-driven field, thus, changing rapidly in line with advances in data availability, software, and hardware capabilities. It is crucial that the students keep abreast with such developments and the extent to which organisations in the real world are adopting these rapid developments.

The Geo-informatics class of 2023 were exposed to different companies providing spatial information to inform planning, decision- and policymaking in various fields, such as urban planning, natural resources management, and agriculture, through their renowned project called “GIS-in-Action.” Moreover, they took an excursion to the **South African National Space Agency (SANSA)** led by their lecturer **Mr. Kganyago (GEMES)**, where they learned and experienced the applications of Earth observation technology and geographic information systems in atmospheric sciences and land applications, i.e., wildfire monitoring, water quality and volume assessments, flood damage, and risk assessment, among others. They were also given a tour by SANSA scientists, where they learned about the space agency’s history, its achievements to date, and the different antennae they operate. The student’s initial feedback indicates that the trip was fun and educational as they could connect with the theory content and practical exercises learned in class. They also indicated that they felt a sense of purpose after discovering that what they learned in class is applied in the real world and has several societal impacts.



The Department of Chemical Sciences Work Integrated Learning students, accompanied by **Ms. Mackechnie, Prof Zvinowanda, Dr. Tshabalala, and Dr. Seopela**, had an in-industry excursion to **Sasol (Secunda)** to gain insights into the operations of the company. Students attended lectures and Q and A sessions in the visitors center, followed by a complete tour of the plant.



EVENT HIGHLIGHTS

The Faculty Transformation Champions Committee Excursion



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