



SSAG

SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

SSAG NEWS 2023/24

SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

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FOREWORD

It is quite a relief that life in South Africa is largely back to normal after a challenging three years in the higher education sector (among many others) adapting to the ever-changing COVID-19 regulations. This year we look forward to seeing many more of you in person at the 2024 SSAG conference in Potchefstroom in September, as we are no longer constrained by limits on numbers of people within closed spaces. The organizing team, led by Prof Dirk Cilliers, is lining up an exciting conference under the theme “30 Years of Change and Beyond: Geography, Democracy, Development, and Future Pathways”. The call for abstracts is open until 26th April, so if you haven’t yet submitted yours, there is still time.

Over the past few years, council has sent out a report to the society following each of their biannual meetings, to keep membership apprised of the decisions that are being made, and the deliberations under discussion. These forewords therefore need to serve less of a role in updating the society on key developments, and instead provide the space to reflect on the contents of the newsletter and the successes of all members of the society. Over the last two years, we have recognised that there is an important cohort of our membership who are either not affiliated with academic institutions, or who are not part of geography departments. These members often went unreported in the newsletters. For the last two issues we have included a section for those members and encourage any other members who fall into this category to submit their news in forthcoming years.

President: Prof J M Fitchett, Wits University,
School of Geography, Archaeology &
Environmental Studies, South Africa
Web site: <http://www.ssag.co.za/>



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The SAGJ continues to be successfully led by the two editors-in-chief Prof David Hedding and Prof Ashley Gunter, responsible for physical and human geography submissions, respectively. The acceptance rate for the journal is currently sitting at 23%, and the impact factor is now 1.7. Through 2023 the editors-in-chief, with the guidance of the council of the SSAG, completed a process of updating the editorial board of the journal, and clarifying the roles of members of the editorial board. This includes holding membership of the society for the duration of their tenure on the board. It is wonderful to see publications in the SAGJ throughout the newsletter, and we continue to encourage members of the society to submit their research to the journal, and to remain actively involved in the journal through the reviewing of manuscripts.

Dr Adrian Nel and Prof Onesimo Mutanga will be running another writing workshop, scheduled to align with the 2024 SSAG conference. This will be held as an in-person or hybrid workshop as experience from recent years has indicated that entirely online workshops are not as effective. In particular, we encourage participation from physical geographers, who have been relatively under-represented over the past few years.



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A number of members of council are coming to the end of their terms of office this year, and a call for nominations will be distributed shortly. We strongly encourage members to consider joining the council of the society. We will continue to advertise specifically for under-represented regions, to ensure that we have a decision-making council of the society that is as representative of the country as a whole as is possible. If you are considering joining council and would like to find out more about the responsibilities of council members, or to be nominated, please reach out to any of the members of council.

Finally, a reminder that the SSAG is on social media. Dr Julia Giddy has been running the Facebook and X (formerly Twitter) pages for the Society. If you are active on either or both of these platforms, please do follow the SSAG, and if you have any upcoming workshops, seminars, conferences or any other activities that you would like to promote to the society you can post these directly on the Facebook Group, and/or ask Dr Giddy to post or repost these on X.

I am looking forward to catching up with many of you in Potchefstroom later this year. I hope that you enjoy the 2024 newsletter.

Jennifer Fitchett



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STELLENBOSCH UNIVERSITY

The Department of Geography and Environmental Studies in the oldest Department to teach and conduct research in Geography in sub-Saharan Africa. The history of South African geography is the history of Geography at Stellenbosch. Taught as a school subject since 1839, geography evolved into an independent university subject in 1914. The curricular foundation was matured by Dutch Professor Piet Serton upon his 1920 appointment as the first Professor of Geography at Stellenbosch and indeed in South Africa. Serton was chairman until his retirement in 1958 and led the discipline through its 'foundational phase'. From 1920 to 1963, geography was a Bachelor of Arts subject only, since the discipline was initially placed within the Arts Faculty. However, instruction in geography also formed part of natural and economic sciences degrees.

In 1959, Serton was succeeded by Andries Nel, who spearheaded a fundamental, research-driven transformation of the discipline. In 1963, geography became a fully-fledged Bachelor of Science and, in 1970, a Bachelor of Economics subject. With increasing numbers, the staff contingent reached a total of nine in 1982 during this 'research development phase'. A series of books, atlases and a notable volume of research articles led to five South African Academy of Science and Arts awards to departmental staff over the years – the most to any single geography department in South Africa. The Department published its own academic journal (South African Journal of Geography) and established its research arm in the Institute for Cartography (later Centre for Geographical Analysis) in 1975; that was the forerunner of the present expertise in geographical information technology (GIT).

The department was initially housed in the Old Main Building, but expanding student and staff numbers necessitated a move to the Natural Sciences building in 1963. From the 1970s the Department invested in and became the South African seat of expertise and infrastructure in cartography, geographical information systems (GIS) and satellite remote sensing.

Since the 1990s trends in the tertiary education sector combined to alter the structure of the geography department fundamentally, during what can be called its 'geographical technology phase'. In 1995 the department altered its name to Geography and Environmental Studies, an independent GIS laboratory was established, and the Institute was transformed into a virtual entity – the Centre for Geographical Analysis – with substantial investment, from its own funds, in GIT infrastructure.

The Departmental library was amalgamated with the central library in 2003 and, in 2007, the department was amalgamated with the then Department of Geology to form a 'cross-cutting entity' sited in the Chamber of Mines Building. This brief interlude failed to deliver the academic synergies envisaged and the independent Department of Geography and Environmental Studies was reinstated in the same building from 2010.



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The rejuvenated department underwent major expansion during 2009 through two initiatives: a university Overarching Strategic Plan (OSP) award allowing the addition of three academic staff in its GIT division and the incorporation of a new and externally funded Centre for Urban and Regional Innovation and Statistical Exploration (CRUISE) to swell the staff ranks to 17 academic and three support staff.

During its 104 year history as an independent department Geography was led by a remarkably small contingent of professors who achieved considerable prominence in South African Geography. Its influence as a research generator and doctorate incubator extends widely. Geography and Environmental Studies continues its tradition of academic excellence in its newly expanded format. These current staff member take forward this ambition.

***N**ame of department:*

- Department of Geography and Environmental Studies

***H**ead of department:*

- **Professor Gustav Visser**; Urban geography; tourism geography. gvisser@sun.ac.za 021 808 3103

***I**nformation about the Geographers and their area of specialisation in the department:*

- Prof Ronnie Donaldson; Urban social geography and tourism studies, SA city structure and changes, Tourism landscapes in the countryside, Residential desegregation in SA cities. rdonaldson@sun.ac.za 021 808 2395
- Prof Manfred Spocter; Associate Professor - Small-town geographies; Suburban geographies; Geographies of naming; Public space geographies. mspocter@sun.ac.za 021 808 3095.
- Dr Samantha Williams; Lecturer - Natural Resources, Livelihoods and Governance. samanthawilliams@sun.ac.za 021 808 4975.
- Dr Suzanne Grenfell; Senior Lecturer - Processes of sediment transport in rivers and wetland; Processes of wetland formation Quaternary sedimentology of wetlands; Impact of climatic variability and climate change on geomorphic processes; Geomorphology of estuaries and coastal wetlands. sgrenfell@sun.ac.za 021 808 3105

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Geographers continued:

- Dr Jan De Waal; Lecturer - Climate change; Flooding risk assessment; hydrology; ecosystem services; water management. janniedw@sun.ac.za 021 808 3108
- Prof Adriaan Van Niekerk; Professor and Director of CGA - GIT, Spatial decision support systems. avn@sun.ac.za 021 808 3101
- Dr Eric Mashimbye ; Lecturer - Remote Sensing, Geoinformatics, Agronomy. ericm@sun.ac.za 021 808 9702
- Dr Jaco Kemp; Senior Lecturer - Earth Observation, Synthetic Aperture Radar, Photogrammetry. jkemp@sun.ac.za 021 808 9147.
- Mr Kyle Loggenberg ; Lecturer - high-dimensional data in precision agriculture, crop water stress detection, and proximal remote sensing. kyleloggenberg@sun.ac.za 021 808 3218.
- Mr Curtis Bailey; Lecturer - spatial/statistical modelling of geographic, climatic, ecological and social phenomena. cbailey@sun.ac.za 021 808 3218.
- Dr Danie Du Plessis; CRUISE Director Urban & Regional Planner/Senior Lecturer - Urban planning systems, Urban transformation, Spatial analysis and Modelling of cities and urban systems. ddp@sun.ac.za 021 808 3126
- Dr Herman Geyer; CRUISE - Town & Regional Planner/ Lecturer - Complexity theory; Urban systems; Economic geography. hsgeyerjr@sun.ac.za 021 808 3107.
- Ms Lodene Willemse ; CRUISE Lecturer - Urban and Human Geographer. lodene@sun.ac.za 021 808 9103.
- Dr Anele Horn; CRUISE - Town and Regional Planner/ Senior Lecturer - Urban & regional planning; Development frameworks; Urban growth management / monitoring. anelehorn@sun.ac.za 021 808 9181.
- Mr Garth Stephenson; CGA-Manager, GIS & EO analyst - Mapping irrigated areas from earth observation imagery, geographic object-based image analysis, automated land cover / use classification, expert-system, ruleset classification. garth@sun.ac.za 021 808 4935.
- Mr Theo Pauw ; CGA Technical officer, GIS & EO analyst - Remote Sensing: GEOBIA, classification, automation, radar, photogrammetry, pre-processing, GIS: Web-based GIS, cartography. theopauw@sun.ac.za 021 808 3112.
- Ms Jessica Eichhoff ; CGA short course manager, GIS operator & Social media coordinator - Cartography; Digital elevation modelling. eichhoffj@sun.ac.za 021 808 3112.

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Geographers continued:

- Prof Helen De Klerk; Associate Prof - GIS, Spatial analysis, biogeography, species modelling, fire ecology.
hdeklerk@sun.ac.za 021 808 9322
- Dr Zahn Munch; Senior Lecturer - GIS; Spatial decision making.
zmunch@sun.ac.za 021 808 9101
- Mr Juan du Plessis; CGA GIS & EO operator - Machine learning assisted projects Water dynamics Digital soil mapping. juandup@sun.ac.za 021 808 3112.
- Mr James Kapp; CGA GIS & EO operator - Programming and scripting Web & App development Climate Modelling.
jkapp@sun.ac.za 021 808 3112.
- Ms Caley Higgs; CGA GIS & EO operator - Machine learning Remote sensing GIS.
chiggs@sun.ac.za 021 808 3112.
- Ms Rebecca Light; Junior Project Facilitator – Project coordination, Disaster Risk, Human Geography, Urban Geography. rlight@sun.ac.za 0218083112.
- Mr Bradley Davids; CGA GIS & EO DATA Processor, Technical support specialist – Machine learning Remote sensing GIS. bradleybd@sun.ac.za 0218083112

Exciting departmental news:

The Department had many highlights during 2023. Here are a few of them.

The Department awards three prizes at the Honours level to top achievers.

- Best BA Honours student in 2023 – Erin Cameron
- Best BSc Honours student in 2023 – Michaela Nortje
- Best overall Honours Research Project (WA Nieman Prize) in 2023 - Julia Ploughman
- Dr Suzanne Grenfell was appointed as a council member for the Southern African Association of Geomorphologists (SAAG), a Voluntary Association (VA) accredited by the South African Council for Natural Scientific Professions (SACNASP). Suzanne also received the esteemed Wetland Science and Research award from the South African Wetland Society in acknowledgment of her valuable contributions to the field.

A number of researchers and friends of the Department visited during 2023. These include:

1. Professor Anthony Robinson - Pennsylvania State University
2. Professor Arzu Çöltekin - University of Applied Sciences of Switzerland

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Departmental news continued:

3. Professor Heather Smith - University of North Carolina
4. Professor Schalk van der Merwe – Stellenbosch University
5. Dr Amy Griffin - RMIT University
6. Dr Oscar Koopman – Stellenbosch University
7. Dr Delia Ah Goo – North West University
8. Dr Eduardo Sánchez García - University of Alicante
9. Dr Javier Martinez Falco - University of Alicante
10. Dr Jennifer Houghton - Durban University of Technology

The Department also holds monthly Coffee Talks, an informal discussion with fellow staff members and research students concerning their latest research followed by coffee and eats. A number of these events took place and can be followed on our Facebook page.

The Department has an active social media footprint with loads of additional news and photos and many other events throughout the year. Follow us at [Department of Geography & Environmental Studies, Stellenbosch University | Stellenbosch | Facebook](#)

The Department houses the **Centre for Geographical Analysis (CGA)** that provides a range of consulting services to both Stellenbosch University, the general public and State institutions. Recent commissioned work includes the National Water Use Quantification of Indigenous Forests Project.

South Africa (SA) is classified as a water-scarce country, with an estimated 21% of SA considered arid and 44% regarded as semi-arid. The competition for water resources among land uses is high, with the chief competitors being urban settlements, agriculture, and forestry. In an ongoing WRC project (K5/2966//4), Earth observation (EO) methods are being used to quantify the water use of different commercial forest genera, as well as among different plantation ages, species and regions (see Plantation forest and water use). Such information is not only critical for water resource management, but also for forestry as it will inform stream-flow reduction activities (SFRA). But SFRA decisions cannot be made unless the water use of other vegetation, such as indigenous forestry, is considered. As our research on commercial forest water use calculation from EO data, this project aims to use evapotranspiration (ET) data generated using EO methods to assess water use of indigenous forests. This will enable water use comparisons of variations among forest types, regions, landforms, soils, and seasons. In addition, it will allow for direct comparison with water use estimations of commercial forest plantations and other land uses (e.g., agriculture), which will be critical for informing future stream-flow reduction activities and decisions.

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2 2023 List of publications:

Departmental news continued:

The Department, through the CGA, also acts as a commercial business incubator for various entities focused on spatial data creation and analysis. TerraClim is the latest product (spin-off company) of this endeavour.

The TerraClim project, originally funded by Winetech and now established as a commercial entity, integrates high-resolution climatic and topographic spatial datasets at a vineyard scale and disseminates these datasets via an online spatial decision support system. The aim of TerraClim is to aid farmers and industry in long-term (e.g. establishment of new vineyards) and seasonal decision-making (e.g. compliment phenology, canopy growth, ripening, yield development monitoring). The back end of the project includes identifying areas suitable for new weather stations placement to improve climate modelling; automated data weather station data ingestion, cleaning, gap filling and rescaling of data dating back 60 years from multiple sources; spatial interpolation of climate surfaces covering key agricultural areas in the Western Cape over seven seasons. More information can be found at

www.terraclim.co.za.

Journal Articles (subsidised)

ALONSO-VARGAS M, CRESPO M, MARTINEZ-AZORIN M, MUCINA L. *Spergularia hanoverensis* (Caryophyllaceae): Validation and Recircumscription of a Misinterpreted Species from South Africa. *Plants* 2023; 12:1-19.

CINTAS J, FRANCH B, VAN TRICHT K, BOOGAARD H, DEGERICKX J, BECKER-RESHEF I, MOLETTA-LOBOSI, MOLLA-BONONAD B, SOBRINO J, GILLIAMS S, SZANTOI S. TRANCO: Thermo radiometric normalization of crop observations. *International Journal of Applied Earth Observation and Geoinformation* 2023; 118:1-19.

CLANCY M, RUFFING B, JARMAIN C, BYRNE K. A novel method incorporating large rock fragments for improved soil bulk density and carbon stock estimation. *SOIL SCIENCE SOCIETY OF AMERICA JOURNAL* 2023; 87:1029-1041.

CRESPO M, ALONSO-VARGAS M, MARTINEZ-AZORIN M, VILLAR JL, MUCINA L. What Is Wrong with *Frankenia nodiflora* Lam. (Frankeniaceae)? New Insights into the South African Sea-Heaths. *Plants* 2023; 12:1-29.

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- HUCHZERMEYER N, VAN DER WAAL B, GRENFELL SE, SCHLEGEL P K. Selecting and refining suitable methods of developing digital elevation models to represent geomorphic features and characteristics of smaller wetlands in data-scarce environments. *Wetlands Ecology and Management* 2023; 31:539-550.
- JACOBS C, BARENDSE ZE, MALGAS RR, BAILEY LT, WILLIAMS S. Exploring academic identities through collage making: A collaborative autoethnographic project. *Agenda* 2023; 37(2):44-56.
- JARMAIN C, CUMMINS T, JOVANI-SANCHO AJ, NAIRN T, PREMROV A, REIDY B, RENO-WILSON F, TOBIN B, WALZ K, WILSON D, BYRNE K. Soil organic carbon stocks by soil group for afforested soils in Ireland. *Geoderma* 2023; 32:1-19.
- KAPP J, KEMP JN. Temporal Autocorrelation of Sentinel-1 SAR Imagery for Detecting Settlement Expansion. *Geomatics* 2023; 3(3):427-446.
- KAVHU B, MASHIMBYE ZE, LUVUNO LB. Predicting priority management areas for land use/cover change in the transboundary Okavango basin based on machine learning. *Heliyon* 2023; 9:1-12.
- KUIPER T, NGWENYA N, KAVHU B, MANDISODZA-CHIKEREMA R, MILNER-GULLAND E. Making adaptive management more user friendly to encourage manager buy-in. *People and Nature* 2023; 5:684-698.
- MARTINEZ-AZORIN M, CRESPO M, ALONSO-VARGAS M, PINTER M, CROUCH NR, DOLD AP, MUCINA L, PFOSSER M, WETSCHNIG W. A generic monograph of the Hyacinthaceae subfamily Urgineoideae. *Phytotaxa* 2023;610(1):1-143.
- MARTINEZ-AZORIN M, CRESPO M, ALONSO-VARGAS M, PINTER M, CROUCH NR, DOLD AP, MUCINA L, PFOSSER M, WETSCHNIG W. Molecular phylogenetics of subfamily Urgineoideae (Hyacinthaceae): Toward a coherent generic circumscription informed by molecular, morphological, and distributional data. *Journal of Systematics and Evolution* 2023; 61(1):42-63.
- MARTINEZ-FALCO J, MARTINEZ-FALCO JAVIER, MARCO-LAJARA B, SANCHEZ-GARCIA E, VISSER GE. Aligning the Sustainable Development Goals in the Wine Industry: A Bibliometric Analysis. *Sustainability* 2023; 15:1-16.
- MASHIMBYE ZE, LOGGENBERG K. A Scoping Review of Landform Classification Using Geospatial Methods. *Geomatics* 2023; 3:93-115.
- MASILELA N, HOOGENDOORN G, VISSER GE. Cultural Tourism in South Africa: A Case Study of the Experiences of Employees. *African Journal of Hospitality, Tourism and Leisure* 2023; 12(1):326-338.

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Publications continued:

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MUCINA L, MUMMENHOFF K, WINTER P, VAN NIEKERK A. Drought and life-history strategies in *Heliophila* (Brassicaceae). *New Phytologist* 2023; 2(2):532-534.

NAIK NR, SPOCTER MA. The geography of commercial activities in business parks in Cape Town. *South African Geographical Journal* 2023; 0:1-20.

RUNCIMAN C, RULE SP. Providing Evidence and a voice During the COVID-19 Pandemic Using Online Rapid

Runciman, C., Rule, S., Bekker, M., Roberts, B., Orkin, M., Davids, Y.D., Bohler-Muller, N. & Alexander, K. Response Surveys: Lessons from the UJ/HSRC COVID-19 Democracy Survey. *South African Review of Sociology (Society in Transition)* 2023; 51(3-4):188-208.

SEE L, GILLIAMS S, CONCHEDDA G, DEGERICKX J, VAN TRICHT K, FRITZ S, LESIV M, BAYAS JCL, ROSERO J, TUBIELLO FN, SZANTOI S. Dynamic global-scale crop and irrigation monitoring. *Nature Food* 2023; 4:736-737.

SAMBOU M, ALBERGEL J, VISSIN EW, LIERSCH S, KOCH H, SZANTOI S, BABA W, SANE ML, TOURE I. Prediction of land use and land cover change in two watersheds in the Senegal River basin (West Africa) using the Multilayer Perceptron and Markov chain model. *European Journal of Remote Sensing* 2023; 56(1):1-19.

SAVELLI E, RUSCA M, CLOKE H, FLUGEL T, KASSIEM A, BALDASSARE G. All dried up: The materiality of drought in Ladismith, South Africa. *Environment and Planning E-Nature and Space* 2023; 0:1-28.

SEPP S, VASAR M, DAVISON J, OJA J, ANSLAN S, AL-QURAI SHY S, BAHRAM M, BUENO C, CANTERO JJ, FABIANO E, DECOCQ G, DRENKHAN R, FRASER L, GARIBAY-ORIEL R, HIIESALU I, KOOREM K, KOLJALG U, MOORA M, MUCINA L, ET AL ET AL. Global diversity and distribution of nitrogen-fixing bacteria in the soil. *Frontiers in Plant Science* 2023; 11:1-9.

SHEBURAH ESSIEN R, SPOCTER MA. Overcoming Obstacles to the Integration of Informal Actors in Accra? Open-Air Marketplaces. *Urban Forum* 2023; 34:79-97.

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Publications continued:

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TSAKALOS J, SMITH M, LUEBERT F, MUCINA L. climenv: Download, extract and visualise climatic and elevation data. *Journal of Vegetation Science* 2023; 34(6):1-7.

VAN TRICHT K, DEGERICKX J, GILLIAMS S, ZANAGA D, BATTUDE M, GROSU A, BROMBACHER J, LESIVM, BAYAS JCL, KARANAM S, FRITZ S, BECKER-RESHEF I, FRANCH B, MOLLA-BONONAD B, BOOGAARD H, PRATIHAAS A, KOETZ B, SZANTOI S. World Cereal: a dynamic open-source system for global-scale, seasonal, and reproducible crop and irrigation mapping. *Earth System Science Data* 2023; 15:5491-5515.

VAN WESEMAEL B, CHABRILLAT S, DIAS A, BERGER M, SZANTOI S. Remote Sensing for Soil Organic Carbon Mapping and Monitoring. *Remote Sensing* 2023; 15:1-3.

VASAR M, DAVISON J, MOORA M, SEPP S, ANSLAN S, AL-QURAIISHY S, BAHRAM M, BUENO C, CANTERO JJ, FABIANO E, DECOCQ G, DRENKHAN R, FRASER L, OJA J, GARIBAY-ORIEL R, HIIESALU I, KOOREM K, MUCINA L Metabarcoding of soil environmental DNA to estimate plant diversity globally. *Frontiers in Plant Science* 2023; 14:1-9.

VISSER GE. Moving Beyond the Gay Metropolises: Lessons Learned from Stellenbosch. *Urban Forum* 2023; 34(2):179-189

WILLEMSE L. The dynamics and uniqueness of semigration to Hermanus from across South Africa. *GeoJournal* 2023;88:5129-5151.

Articles (Non-subsidised)

DONALDSON SE, IIRMDU TO, VAN DER SPUY P. Residents and Stakeholder Opinions on Township Tourism in Langa, Cape Town, South Africa. *Geographies* 2023; 3:728-742. *Proceedings International*.

MOSOMTAI G, KASIITI JL, MURITHI RM, SANDSTROM P, LANDMANN T, LWANDE OA, HASSAN OA, AHLM C, SANG R, EVANDER M, SZANTOI S, OTTAVIANELLI G. CHARACTERIZING MOVEMENT PATTERNS OF NOMADIC PASTORALISTS AND THEIR EXPOSURE TO RIFT VALLEY FEVER IN KENYA. In: Altan O, Sunar F (eds.) 39th International Symposium on Remote Sensing of Environment (ISRSE-39) From Human Needs to SDGs, United Kingdom, Springer 2023: 211-216. *Proceedings National*

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Publications continued:

BAILEY CJ, LOGGENBERG K. Mapping the spatial profile and susceptibility of illegal land occupation: A case study of the Cape Town Metropolitan area, South Africa. In: Coetzee S (ed.) 31st International Cartographic Conference (ICC2023), Germany, Copernicus 2023: 1-3.

Chapters in Books

MEISSNER R, RULE SP. South-Africa. In: Hellberg S, Soderbaum f, Swain A, Ojendal J (eds.) Routledge Handbook of Water and Development, Routledge, 2023: 1

MUCINA L. Biomes of the Southern Hemisphere: Introduction and Approach. In: MUCINA L (ed.) Biomes of the Southern Hemisphere, Springer, Switzerland, 2023: 1-19.

NDIMANDE NP. Complex Town-Gown Relationships and the Paradoxes of Studentification in the South African Traditional Authority Lands. In: DONALDSON SE (ed.) Socio-Spatial Small Town Dynamics in South Africa, Springer, 2023: 169-191.

RULE SP. From UN-mandated territory to independent Namibia. In: Brunn SD (ed.) Stamps, Nationalism and Political Transition, Routledge, London, 2022: 1-2.

RULE SP. Local Government Election 2021 Trends in Small Towns. In: DONALDSON SE (ed.) Socio-Spatial Small Town Dynamics in South Africa, Springer, 2023: 193-223.

SPOCTER MA. Neglect of Municipal Infrastructure in Phalaborwa. In: SPOCTER MA (ed.) Socio-Spatial Small Town Dynamics in South Africa, Springer, 2023: 47-78.

SPOCTER MA. Transitions in postage stamp iconography from apartheid to democracy in South Africa. In: Brunn SD (ed.) Stamps, Nationalism and Political Transition, Routledge, New York, USA, 2023: 159-172.

VISSER GE. The Spatial Mismatch between Cities and Heritage Tourism Sites in Africa. In: Timothy DJ (ed.) Cultural Heritage and Tourism in Africa, Routledge, 2023: 104-115.

WILLIAMS S. Surviving the Tides: A Study of Small-Scale Fisheries and Community Livelihoods in Selected Coastal Towns of the Western Cape, South Africa. In: DONALDSON SE (ed.) Socio-Spatial Small Town Dynamics in South Africa, Springer, 2023: 107-125.

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Publications continued:

Research Reports;

HU T, MALLICK K, HITZELBERGER P, DIDRY Y, BOULET G, SZANTOI S. Evaluating European ECOSTRESS Hub Evapotranspiration Products Across a Range of Soil-Atmospheric Aridity and Biomes Over Europe. 2023: 20 pp.

RABUS B, ENGELBRECHT J, CLAGUE J, DONATI D, FRANCONI M. Response of a large deep-seated gravitational slope deformation to meteorological, seismic, and deglaciation drivers as measured by InSAR. 2023: 25 pp.

VAN NIEKERK A, JARMAIN C, STEPHENSON GR, DU PLESSIS J, HIGGS CJ, NDYAFI VC. The application of national scale remotely sensed evapotranspiration (ET) estimates to quantity water use and differences between plantations and commercial forestry regions of South Africa. 155 pp.

Doctoral completed;

DE WAAL JH. Adverse impacts of agricultural expansion on hydrological and nutrient dynamics in a renosterveld landscape. Can natural vegetation offer solutions? PhD, 2023. 246 pp. Promotor: VAN NIEKERK A.

KAVHU B. Investigating the impact and drivers of land use/cover change on surface water resources in the Okavango basin using remote sensing and modelling. PhD, 2023. 339 pp. Promotor: MASHIMBYE ZE. Medepromotor: Luvuno L.

NCUBE TRL. Modelling the clusters and boundaries of sub-Saharan plant assemblages in future environments. PhD, 2023. 376 pp. Promotor: DE KLERK HM. Medepromotor: HUI C, Lovett JC.

NDIMANDE NP. University in the rural and rural in the university: examining the heterotopia and production of spaces at the University of Zululand. PhD, 2023. 305 pp. Promotor: DONALDSON SE.

Masters completed;

ASKEW SM. Potential resilience of carbon and phosphorus sequestration to a changing climate in the Nuwejaars River Floodplain, Cape Agulhas, South Africa. MSc, 2023. 221 pp. Studieleier: GRENFELL SE.

MOSTERT C. The nature and extent of pigeon racing in South Africa. MA, 2023. 310 pp. Studieleier: DONALDSON

SE.VANDAYAR M. Geomorphic process rates and ecosystem service provision in the Olifants River floodplain within a changing climate. MSc, 2023. 203 pp. St udieleier: GRENFELL SE.

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

STELLENBOSCH UNIVERSITY

MSc and PhD graduations and supervisors:

Mostert, Cecelia; MA Geography
Environmental Studies. Supervisor: Prof R
Donaldson.

Komane, Rebhone; Master of Urban and
Regional Planning. Supervisor: Dr D Du
Plessis.

Marais, Willis; Master of Urban and
Regional Planning. Supervisor: Dr Anele
Horne.

Teessen, Minette; MPhil Urban and Regional
Science. Supervisor: Ms L Willemse & Dr H
Geyer.

Askew, Stephanie; MSc Geography
Environmental Studies. Supervisor: Dr S
Grenfell

Vandayar, Mahima; MSc Geography
Environmental Studies. Supervisor: Dr S
Grenfell.

Kavhu, Blessing; PhD Geo informatics.
Supervisor: Dr E Mashimbye.

Ncube, Thinabakho; PhD Geo-informatics.
Supervisor: Prof H de Klerk.

Ndimande, Bongsi; PhD Geography
Environmental Studies. Supervisor: Prof R
Donaldson.

Changes to their curriculum or course offerings:

A new BSc Honours Physical Geography
programme will commence in 2025. Applications
for this course of study are now open. (Contact Dr
Suzanne Grenfell at sgrenfell@sun.ac.za)

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

STELLENBOSCH UNIVERSITY

***L**ink to departmental
webpage:*

www.sun.ac.za/geography

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF THE FREE STATE

Name of department:

- Department of Geography

Head of department:

- Prof Samuel Adelabu

Information about the Geographers and their area of specialisation in the department:

- **Dr Pululu Mahasa** (Lecturer) – Water demand management, medical waste management and aeolian geomorphology.
- **Dr Melissa Hansen** (Lecturer) – Political ecology, environmental politics, conservation, spatial development, development studies, sustainability science, society and environment and environmental governance.
- **Dr Jay le Roux** (Senior Lecturer) – Land degradation assessment, mapping and monitoring, specifically in spatial modelling of soil erosion risk. Sediment transport and hydrological connectivity, using hydrological models, such as soil and water assessment tool, GIS and remote sensing techniques from catchment to national scale.
- **Dr Rajab Matamanda** (Senior Lecturer) – Climate change adaptation and planning, environmental planning, applied systems analysis, human settlements planning and management.
- **Dr Katlego Mashiane** (Lecturer) – Rangeland management, conservation ecology, biodiversity, geospatial science.
- **Prof Samuel Adelabu** (Professor) – Remote sensing and GIS applications to vegetation, urban development, water analysis, land use and land cover changes, ecological assessment, climate change, disaster risk analysis, agricultural production, semi-arid and mountain environments etc.
- **Prof Geoffrey Mukwada** (Professor) – Climate change and mountain environments, rural livelihoods as well as natural resource management and conservation.
- **Dr Marike Stander** (Lecturer) – Sediment provenance, sediment geochemistry, environmental management and monitoring

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF THE FREE STATE

Geographers continued:

- **Dr Adriaan van der Walt** (Senior Lecturer) – Biometeorology and climatology, specifically the influence and impact of climate variability on the human and animal population, as well as extreme temperature event impacts and drivers thereof. Geographic information systems, including the mapping and geospatial application on climate variability and influences thereof.
- **Dr Elizabeth Rudolph** (Lecturer) – Process geomorphology and fieldwork techniques in data collection. Geomorphological mapping and landscape analysis. Dating techniques in earth surfaces processes and denudation rates (e.g. cosmogenic nuclide exposure). Glacial and peri-glacial geomorphology in particular sub-Antarctic Antarctic and high mountain environments. Education and communication in Geography, including the use of Virtual Reality technology.
- **Ms Eldalize Kruger** (Lecturer) – Environmental management and monitoring, environmental awareness and education.
- **Ms Kholeka Sikhosana** (Lecturer) – Urban and spatial transformation, urban ecology and urban sustainability, climate adaptation and climate resilience within urban spaces, social cohesion in relation to spatial planning and fragmentation, quality of life assessments within urban spaces

- **Ms Tobeka Mehlomakhulu** (Lecturer) – Township development studies, land issues and sustainable rural livelihoods.
- **Ms Ntebohiseng Sekhele** (Lecturer) – Climate change, montane rural communities and conservation conflicts.
- **Mr Solomon Zonde** (Lecturer) - Vegetation ecology, mountain environment, climate change, natural resource management, rangeland science and landscape ecology

Exciting

departmental news:

Prof Samuel Adelabu was appointed as Vice-Dean for Research and Postgraduate Studies in the Faculty. His portfolio includes promoting impactful research and postgraduate initiatives in line with the University's Vision 130, with a special focus on visibility, renewal, and reimagination. Prof Adelabu's leadership is anticipated to foster a thriving research culture and enrich the postgraduate experience at the UFS.

Dr Katlego Mashiane was awarded his doctorate during the April graduation, whilst Dr Marike Stander graduated in December 2023.

Dr Abraham Matamanda's book titled, "Housing and technology: A special focus on Zimbabwe", was nominated for the UFS book prize award.

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UNIVERSITY OF THE FREE STATE

Departmental news continued:

During the XXI INQUA Congress in Rome, Dr Elizabeth Rudolph was nominated to be the early career researcher (ECR) representative for southern Africa on a steering committee for a research group investigating Quaternary warm intervals in the Southern Hemisphere. During the Southern African Association of Geomorphologists (SAAG) biennial conference in Hogsback in October 2023, she took up her role as President of the association and Dr Marike Stander was elected as the new President-Elect for the 2023 to 2025 term.

In 2023, Dr Melissa Hansen was selected for the Emerging Scholar Accelerator Programme (ESAP) at the University. Her fellowship of the programme runs from January 2023 until December 2024.

Ms Tobeka Mehlomakhulu chaired the Human Geography session at the Society for South African Geographers (SSAG) student conference that was held on Qwaqwa Campus from 02 – 04 October 2023.

Ms Eldalize Kruger was elected as chair of the IAIAsa Free State Branch. She successfully re-established the branch after it disbanded in 2019.

Student Moleboheng Pherane won the award for the best Master's presentation at the Annual Student Conference of the Society of the South African Geographers (SSAG), held on UFS Qwaqwa Campus from 02 - 04 October 2023. At this conference, Sherylyn Mashabale won the first prize for best Honours presentation, whilst Motselisi Mohanoe won third place

2023/2024 List of publications:

Adams L.D., Giovannoni D., **Clark V.R.**, Steenhuisen S. & Martin G.D. 2023 Reproductive Ecology of the Invasive Alien Shrub *Pyracantha angustifolia* in the Grassland Biome, South Africa. *Plants*, 12: 1308.

Anderson, R.L., **Le Roux, J.J.**, van der Waal, B., Rowntree, K.M. & Hedding, D.W. 2023. Assessing the short-term inter-annual growth of the largest documented gully network in South Africa using UAV and SfM methodology. *Physical Geography*, <https://doi.org/10.1080/02723646.2023.2234178>.

Bhanye, J., Shayamunda RH, Mpahlo RI, **Matamanda, A.R.**, Kachena L (2023). *Land Use Policy*, 135. <https://doi.org/10.1016/j.landusepol.2023.106945>

Clark V.R., Hickman A., Szarzynski J., Lombard C., & Hill T. 2023. Guest Editorial for the Special Issue: Southern African mountains – their value and vulnerabilities. *Transactions of the Royal Society of South Africa*, 78 (1–2): 1–4.

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF THE FREE STATE

Publications continued :

Gwate O., Canavan K., Martin G. D., Richardson D. M., & **Clark V.R.** 2023. Assessing habitat suitability for selected woody range-expanding plant species in African mountains under climate change. *Transactions of the Royal Society of South Africa*, 78: 101–116.

Hořák D., **Clark V.R.**, Njabo K.Y., & Fjeldså J. 2023. Biodiversity across Afrotropical environments. *Frontiers in Ecology and Evolution*, 10: 1080119.

Kotzé J., Van Tol J. & **Clark V.R.** 2023. Africa's First Alpine and Transboundary Long-Term Socioecological Research Platform. *Mountain Research & Development*, 43: 1–5.

Lebotso-Khetsi L, Mangara F, Dunn M, Manana K, **Matamanda, A.R.**, Chirisa I. (2023) Off-campus student housing supply and utilization: perspectives of landlords and students in Chinhoyi, Zimbabwe. *South African Geographical Journal*.
<https://doi.org/10.1080/03736245.2023.2227150>.

Loader, N., Roffe, S. & **van der Walt, A.J.** 2023. Spatiotemporal analysis of heavy summer rainfall events across the Free State Province, South Africa: 1981–2022. *South African Geographical Journal*. DOI: 10.1080/03736245.2023.2272894.

Manyuchi, T., Taru, P. & **Mukwada, G.** 2023. The Role of Spatial Data Infrastructure in Disaster Management: A Review. Available at SSRN 4608792.

Mashiane, K.K., Romoelo A., Adelabu, S.A. & Daemane, E. 2023. Assessing environmental factors contributing to plant species richness in mountainous mesic grasslands. *Koedoe - African Protected Area Conservation and Science*, 65(1): 1-7.

Mashiane, K.K., Adelabu, S.A. & Ramoelo, A. 2023. Comparative Analysis of Single Bands, Vegetation Indices, and Their Combination in Predicting Grass Species Nitrogen in a Protected Mountainous Area. *Applied Sciences*, 13: 7960.

Mashiane, K.K., Ramoelo, A., Adelabu, S.A. & Daemane, E. 2023. Estimating mountainous plant species richness and diversity for monitoring global change in a protected grassland park. *African Journal of Ecology*, 61(3): 636-644.

Matamanda, A.R., Kalaoane RC, Chakwizira J. (2023) “Leave us alone”: ‘Right to the city’ of street vendors along Main North 1 Road, Maseru, Lesotho. *GeoJournal* 88: 4473-4491.
<https://doi.org/10.1007/s10708-023-10881-y>

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF THE FREE STATE

Publications continued :

- Mishra, H., Pandey, B.W., **Mukwada, G.**, De Los Rios, P., Nigam, N. & Sahu, N. 2023. Trapped within nature: climatic variability and its impact on traditional livelihood of Gaddi transhumance of Indian Himalayas. *Local Environment*, 28(5): 547-563.
- Moloi, S.D., **Matamanda, A.R.** & Bhanye, J.I. (2023) Traditional ecological knowledge and practices for conservation and management of Savanna ecosystem services in Capricorn District, Limpopo, South Africa. *International Journal of Sustainable Development and World Ecology*. Doi: <https://doi.org/10.1080/13504509.2023.2249856>.
- Mosikidi, T., Le Maitre, N., Steenhuisen, S., **Clark, V.R.**, Lloyd, K.S. & Le Roux, A. 2023. Passive acoustic monitoring detects new records of globally threatened birds in a high-elevation wetland (Free State, South Africa). *Bird Conservation International*, 33, e80, 1–8.
- Nel, W., Hedding, D. W. & **Rudolph, E.M.** 2023. The sub-Antarctic islands are increasingly warming in the 21st Century. *Antarctic Science*, 35(2), 124–126. DOI: 10.1017/S0954102023000056
- Nyama, V. & **Mukwada, G.** 2023. Role of Local Authorities and Public Officials in Encouraging Citizen Participation in Development Planning in Murewa District. *International Journal of Social Science Research and Review*, 6(7): 168-181
- Nyama, V. & **Mukwada, G.** 2023. Role of citizen participation in local development planning in Murewa district. *South African Geographical Journal*, 105(3): 329-345.
- Nyama, V. & **Mukwada, G.** 2023. Factors Affecting Citizen Participation in Local Development Planning in Murewa District, Zimbabwe. *Journal of Asian and African Studies*, 58(3): 421-437.
- Payne, S., Alexander, J.M., Bjorkman, A.D., **Clark, V.R.**, Gwate, O., Huntsaar, M., Iseli, E., Lenoir, J., Mann, H.M.R., Steenhuisen, S. & Høye, T.T. 2023. Deep learning to extract the meteorological by-catch of wildlife cameras. *Global Change Biology*, 30, e17078.
- Roffe, S., **Van der Walt, A.J.** & Fitchett, J. (2023). Spatiotemporal characteristics of human thermal comfort across southern Africa: an analysis of the Universal Thermal Climate Index (UTCI) for 1971-2021. *International Journal of Climatology*, 1-23. DOI: 10.1002/joc.8009.
- Roffe, S. & **Van der Walt, A.J.** (2023). Representation and evaluation of southern Africa's seasonal mean and extreme temperatures in the ERA5-based reanalysis products. *Atmospheric Research*, 284, 106591. DOI: 10.1016/j.atmosres.2022.106591.

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UNIVERSITY OF THE FREE STATE

Publications continued :

Sibanda, W., Hansen, M. & Mukwada, G. 2023. Grappling with Gendered Crises: Women's Access and Participation in Water, Sanitation and Hygiene Activities at Tongogara Refugee Camp, Zimbabwe. *International Journal of Social Science Research and Review* 6(7): 212-228. <https://doi.org/10.47814/ijssrr.v6i7.1462>

Van der Walt, A.J., Kruger, J.A & Roffe, S.J. 2023 High-resolution analysis of heatwave trends in the Maloti-Drakensberg region, southern Africa: 1979-2021. *Transactions of the Royal Society of South Africa*. DOI: 10.1080/0035919X.2023.2175075.

Vilakazi, B.S. & Mukwada, G. 2023. Curbing land degradation and mitigating climate change in mountainous regions: a systemic review. *Environmental Monitoring and Assessment*, 195(2): 275.

Books/Chapters in Books

Dzvimbo, M.A., Matamanda, A.R., Adelabu, S., Van der Walt, A.J. & Mawonde, A. 2023. Understanding the Politics of Climate Change in Zimbabwe. In: Leal Filho, W., Kovaleva, M., Alves, F., Abubakar, I.R. (eds) *Climate Change Strategies: Handling the Challenges of Adapting to a Changing Climate*. Climate Change Management. Springer, Cham.

Mukwada, G. & Mutana, S. 2023. Surviving the Limits Imposed by a Changing Climate: The Case of Urban Drought and Water Supply Sustainability in Phuthaditjhaba. In *Sustainable Futures in Southern Africa's Mountains: Multiple Perspectives on an Emerging City* (pp. 75-89). Cham: Springer International Publishing.

Mutana, S. & Mukwada, G. 2023. SDGs as Indicators of Holistic Small Town Tourism Development. A Case for Phuthaditjhaba South Africa. In *Sustainable Futures in Southern Africa's Mountains: Multiple Perspectives on an Emerging City* (pp. 141-152). Cham: Springer International Publishing.

Sekhele, N. & Otomo, P.V. 2023. Afromontane community's dependence on the water and climate change nexus of the Maloti-Drakensberg mountain range: The case of Phuthaditjhaba. In, A Membretti et al. (eds), *Sustainable Futures in Southern Africa's Mountains*, Sustainable Development Goals Series, <https://doi.org/10.1007/978-3-031-15773-8>

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF THE FREE STATE

*M*Sc and PhD graduations and supervisors:

MSc Graduates

Lefulebe, BE; MSc Geoinformatics.

Mofokeng, L; MSc Geography.

Tavener, JM; MSc Geography.

Theunissen, JM ; MSc Geography.

PhD Graduates

Collins, Nacelle Berne; Main supervisor: Prof S Adelabu

Daemane, Ernest; Main supervisor: Prof S Adelabu

Hadebe, Patronella Emah; Main supervisor: Prof S Adelabu

Mararakanye, Ndifelani; Main supervisor: Dr J le Roux

Mashiane, Katlego; Main supervisor: Prof S Adelabu

Nhlapho, Mveli Stephen; Main supervisor: Prof G Mukwada

Stander, Marike; Main supervisor: Dr J le Roux

Changes to their curriculum or course offerings:

The Department implemented a brand new first years' course, called 'Essential Skills or Geographers'. The course aims to introduce first year students to the essential skills needed by Geography students in Physical -, Human - and Environmental Geography as well as Geospatial Science. The first offering of the course in 2023 proved particularly useful in training students who did not take Geography as a subject in High School

Link to departmental webpage:

www.ufs.ac.za/geography

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

SOL PLAATJE UNIVERSITY

Name of department:

- Physical and Earth Sciences
(Geography Unit)

Head of department:

(Acting HOD) (Dr M. Manjoro is the Academic Unit Leader of the Geography Unit)

Information about the Geographers and their area of specialisation in the department:

Academics

- Prof. Mohamed A. M. Abd Elbasit (BSc, DipIT, MSc, PhD), Associate Professor- Geospatial Sciences and Physical Geography
- Vacant: Senior Lecturer-Geospatial Sciences and Applied Human Geography

- Dr M. Manjoro (PhD, MSc, BSc Hons, BScEd), Senior Lecturer, Geomorphology and Environmental Sciences
- Dr T. Mafame (PhD, MDP, Mphil.BA.Hons, BA), Lecturer-Human and Urban Geography
- Mr J. Hlatywayo (PhD, MSc; MCom, BSc Hons, Dip Ed), Lecturer-Physical Geography and Environmental Sciences

Technical staff

- Mr A. Masana (BSc, BSc.Hons), Laboratory Technician -. Interests in geospatial and environmental science research
- Mr Zwane (MSc, BScHons, BSc), Laboratory Technician - Applications of remote sensing, hydrological, climate and weather data.



**SOL PLAATJE
UNIVERSITY**

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SOL PLAATJE UNIVERSITY

Exciting departmental news:

Prof Mohamed A. M. Abd Elbasit has started a new project titled “Temporal Three-Dimensional Land Surface Reconstruction to Quantify Soil Erosion and Land Degradation”, National Research Foundation -Competitive Programme for Rated Researchers. 2024 – 2026 (ZAR 1, 606, 700). The project in collaboration with Agricultural Research Council, University of Limpopo and North West A&F University, China.

Prof Mohamed A. M Abd Elbasit will lead a Five years Memorandum of Understanding relationship between Sol Plaatje University (SPU) and Water Research Commission (WRC) from the SPU side to promote research on arid land hydrology and water resources at SPU.

Dr M. Manjoro was appointed to the Council of Higher Education Reference Group of Environmental Assessment Practice Qualification Standards.

2023/2024 List of publications:

Ayisi, K.K., Munjonji, L., Mashao, F., Addo-Bediako, A., Bopape-Mabapa, M.P., Letsoalo, J., Mathebula, N., Kephe, N.P., Mashala, M., **Zwane, P.S.M.** and Mabitsela, K.E., 2023. Earth observation and the in-situ-based assessment of the impacts of land use and land cover changes on water quality and quantity in key water resources of Limpopo and the Eastern Cape, South Africa. WRC Report No. 3064/1/23 ISBN 978-0-6392-0386-7.

Jombo, Simbarashe, **Mohamed A. M. Abd Elbasit**, Anesu D. Gumbo, and Nthaduleni S. Nethengwe. 2023. "Remote Sensing Application in Mountainous Environments: A Bibliographic Analysis" International Journal of Environmental Research and Public Health 20, no. 4: 3538.

<https://doi.org/10.3390/ijerph20043538>

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

SOL PLAATJE UNIVERSITY

Publications Continued:

Masindi, F. and **Manjoro, M.**, 2024. A survey of water quality at two rural water treatment plants and various points-of-use in Vhembe District Municipality, South Africa. *South African Geographical Journal*, pp.1-14.

<https://doi.org/10.1080/03736245.2024.2308924>

Miao, Shuangxi, Yixuan Zhao, Jianxi Huang, Xuecao Li, Ruohan Wu, Wei Su, Yelu Zeng, Haixiang Guan, **Mohamed A. M. Abd Elbasit**, and Junxiao Zhang. 2023. "A Comprehensive Evaluation of Flooding's Effect on Crops Using Satellite Time Series Data". *Remote Sensing* 15, no. 5: 1305.

<https://doi.org/10.3390/rs15051305>

Moritani, S., Nanjo, H., Itou, A. Pyone Win. and **Mohamed A. M. Abd Elbasit**. 2023. Heating and cooling methods for the subirrigation of strawberry plants using air and geothermal heat pumps. *Environment, Development and Sustainability*, 2023, 1573-2975. <https://doi.org/10.1007/s10668-023-03006-5>

Munjonji, L., Ntuli Innocentia, H., Ayisi, K.K., Dlamini, P., Mabitsela, K.E., Lehutjo, C.M. and **Zwane, P.S.M**, 2024. Seasonal dynamics of soil CO₂ emissions from different semi-arid land-use systems. *Acta Agriculturae Scandinavica, Section B—Soil & Plant Science*, 74(1), p.2312934.

<https://doi.org/10.1080/09064710.2024.2312934>

Phathutshedzo Eugene Ratshiedana, **Mohamed A. M. Abd Elbasit**, Elhadi Adam, George Chirima, Gang Liu, Eric Economon. 2023. Determination of Soil Electrical Conductivity and Moisture on Different Soil Layers Using Electromagnetic Techniques in Irrigated Arid Environments in South Africa. *Water*, 5, no. 10: 1911.

<https://doi.org/10.3390/w15101911>.

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

SOL PLAATJE UNIVERSITY

Changes to their curriculum or course offerings:

A new stream in the BSc (Physical Sciences) with specialization in Geography started offering in 2024. This is the first time students can choose Geography as a specialization at SPU.

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF PRETORIA

Name of department:

- Geography, Geoinformatics and Meteorology

Head of department:

Professor Serena Coetzee. Geoinformatics
serena.coetzee@up.ac.za

Information about the Geographers and their area of specialisation in the department:

- Dr Adeleke Adedayo; Lecturer- Geoinformatics (Geodesy, Surveying)
adedayo.adeleke@up.ac.za 0124203536
- Prof Archer Emma; Professor-Sustainable agriculture/managed ecosystems and climate in Africa
emma.archer@up.ac.za 012 420 2881
- Prof Beckedahl Heinz; Extraordinary Lecturer-Geomorphology, wetland studies
hbeckedahl@gmail.com +268 (0) 2518 8859
- Dr Beraki Asmerom; Extraordinary Lecturer- Meteorology
aberaki@csir.co.za
- Dr Botai Joel; Extraordinary Lecturer - Atmospheric modelling, remote sensing
Joel.botai@weathersa.co.za 012 423 9096

- Prof Breetzke Gregory; Associate Professor- Geography of crime (GIS)
greg.breetzke@up.ac.za 012 420 4318
- Dr Chirima George; Extraordinary Lecturer – Geoinformatics
ChirimaJ@arc.agric.za 012 310 2672
- Prof Dougil Andy; Extraordinary Professor – Environmental Science
A.J.Dougill@leeds.ac.uk
- Prof Coetzee Serena; Professor, Director: CGIS, HoD- Geoinformatics (spatial data infrastructures)
serena.coetzee@up.ac.za 012 420 3823
- Prof Combrinck Ludwig; Extraordinary Professor- Geodesy
ludwig@hartrao.ac.za 012 301 3224
- Dr Cooper Antony; Extraordinary Lecturer- Geographical Information Science (GISc) theory and applications
acooper@csir.co.za 012 841 4121
- Prof Davis Nerhene; Ass Prof- Human geography (land reform)
Nerhene.Davis@up.ac.za 012 420 2882
- Dr Sibolla Bolelang; Senior lecturer- Geoinformatics
bolelang.sibolla@up.ac.za



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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF PRETORIA

Geographers Continued:

- Prof. Dyson Liesl; Associate Professor- Meteorology Liesl.dyson@up.ac.za 012 420 2469
- Dr Engelbrecht Christine; Extraordinary Lecturer- Meteorology Christien.Engelbrecht@weathersa.co.za
- Dr Feig Gregor; Extraordinary Lecturer- Environmental science gregor@saeon.ac.za
- Dr Gregory JJ; Lecturer- Urban Geography (urban and neighbourhood change) jj.Gregory@up.ac.za 012 420 2016
- Prof. Garland Rebecca Associate Professor - Air quality, atmospheric composition, and impacts rebecca.garland@up.ac.za 012 420 4127
- Dr Hansen Christel; Lecturer- Geomorphology, applied GIS christel.hansen@up.ac.za 012 420 4215
- Prof. Haussmann Natalie; Associate Professor - Bio-geomorphology Natalie.haussmann@up.ac.za 012 420 4049
- Dr Bopape Mary-Jane; Extraordinary Lecturer- Meteorology mm.bopape@saeon.nrf.ac.za
- Dr Jordan Winifred; Extraordinary Lecturer- Meteorology Winifred.Jordaan@weathersa.co.za
- Mr. Katumba Samy; Lecturer- Geoinformatics Samy.katumba@up.ac.za 012 420 4943
- Mr. Kruger Andries; Extraordinary Lecturer- Meteorology Andries.kruger@weathersa.co.za 012 367 6016
- Prof. Landman Willem; Professor- Meteorology Willem.landman@up.ac.za 012 420 3713
- Dr Loubser Michael; Lecturer- Geomorphology michael.loubser@up.ac.za 083 328 5754
- Prof. Ndarana Thando; Senior Lecturer- Meteorology thando.ndarana@up.ac.za 012 420 5164
- Mrs. Pretorius Erika; Senior technical assistant- Geoinformatics Erika.pretorius@up.ac.za 012 420 3737
- Prof. Romoelo Abel; Director: Centre for Environmental Studies Geo-information Science (remote sensing), earth observation abel.ramoelo@up.ac.za 012 420 2017
- Dr Rautenbach Victoria; Extraordinary Lecturer- Cartography, Geoinformatics (GIS), Databases, Human-computer Interaction victoria.rautenbach@up.ac.za

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF PRETORIA

Geographers Continued:

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Exciting departmental news:

A comprehensive list of news items is available on our website at <https://www.up.ac.za/geography-geoinformatics-and-meteorology/news/>

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UNIVERSITY OF PRETORIA

2023 List of publications:

Journal Article

Adeleke Adedayo, Okolie Chukwuma, Mills Jon, Smit Julian and Maduako Ikechukwu. *"The explainability of gradient-boosted decision trees for digital elevation model (DEM) error prediction"*. The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences. 2023. (DOAJ) Vol. XLVIII

Archer Emma Archer, Ngcobo S I, Hill T R and Jewitt G. *"A yield gap analysis to assess vulnerability of commercial sugarcane to climatic extremes in southern Africa"*. Journal of Agriculture and Food Research. 2023. (Scopus) Vol. 14 (100734).

Archer Emma Archer, Theron S N, Engelbrecht Christina, Midgley S and Walker S. *"Using SPI and SPEI for baseline probabilities and seasonal drought prediction in two agricultural regions of the Western Cape, South Africa"*. WATER SA. 2023. (WoS) Vol. 49 (2).

Archer Emma Archer, Theron Simone Norah, Midgley S, Hochrainer-Stigler Stefan, Tramberand Sylvia and Walker S. *"Agricultural resilience and adaptive capacity during severe drought in the Western Cape, South Africa"*. REGIONAL ENVIRONMENTAL CHANGE. 2023. (WoS) Vol. 23 (3).

Bennett Nigel, Haussmann Natalie, Blomsterberg Reyneke Simone Elena, le Roux Peter and McIntyre Trevor. *"Multi-species visits to an aardvark burrow - whose turn is it next?"*. AFRICAN JOURNAL OF WILDLIFE RESEARCH. 2023. (WoS) Vol. 53.

Botha Jacques and Haussmann Natalie. *"Comparing bird sightings between grassland and marsh habitats at a rehabilitated wetland in Gauteng Province, South Africa"*. Biodiversitas. 2023. (Scopus) Vol. 24 (6)

Breetzke Gregory, Mosesi Nthabiseng Sharon and Bester Pieter. *"The 'contestation of crime': Using a spatial theory of crime to examine livestock theft among small-scale farmers in Swartruggens, North West province"*. SOUTH AFRICAN GEOGRAPHICAL JOURNAL. 2023. (WoS) Vol. 105 (2)

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Publications continued:

Butow Kurt, Wright Caradee, Kapwata Thandi, Wernecke Bianca, Malherbe Helen, Naidoo Natasha, Garland Rebecca, De Lange Anzel and Murray Gareth E.. *"The Risk of Orofacial Cleft Lip/Palate Due to Maternal Ambient Air Pollution Exposure: A Call for Further Research in South Africa"*. ANNALS OF GLOBAL HEALTH. 2023. (WoS) Vol. 89

Chirima Johannes George, Maake Reneilwe, Mutanga Onesimo and Sibanda Mbulisi. *"Quantifying Aboveground Grass Biomass Using Space-Borne Sensors: A Meta-Analysis and Systematic Review"*. Geomatics. 2023. (DOAJ) Vol. 3 (4)

Chirima Johannes George, Ratshiedana Phathutshedzo Eugene, Abd Elbasit Mohamed A M, Adam Elhadi, Liu Gang and Economon Eric Benjamin. *"Determination of Soil Electrical Conductivity and Moisture on Different Soil Layers Using Electromagnetic Techniques in Irrigated Arid Environments in South Africa"*. WATER. 2023. (WoS) Vol. 15 (10)

Chirwa Wanangwa, Chia Eugene Loh and Nsubuga Francis. *"Assessing the Enabling Conditions for Translating Restoration Commitments to Restoration Actions: Case of Cameroon"*. Journal of Sustainable Development. 2023. (Non Accredited Journals) Vol. 16 (1)

Chirwa Wanangwa, Chia Eugene Loh and Nsubuga Francis. *"Learning from the past to guide the future: a SWOT-AHP analysis of tree-based land restoration endeavours in the Northern Sahel region of Cameroon"*. INTERNATIONAL FORESTRY REVIEW. 2023. (WoS) Vol. 25 (1)

Cho Matilda Azong, Ramoelo Abel and Sibanda Lindiwe. *"Exploring the Integration of the Land, Water, and Energy Nexus in Sustainable Food Systems Research through a Socio-Economic Lens: A Systematic Literature Review"*. SUSTAINABILITY. 2023. (WoS) Vol. 15 (23)

Coetzee Serena, Schaab Gertrud, Davis Nerhene and Karanja Faith N. *"Developing teaching/learning materials on 'Sense of Place' with students in an international university cooperation: overall approach and first phase outcomes at Karlsruhe University of Applied Sciences"*. International Journal of Cartography. 2023. (Scopus) Vol. 9 (3)

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Darkey Daniel, Johnston Matt and Ibsen Hilde. *"Environmental justice and dissent for postcolonial urban sustainability transitions"*. INTERNATIONAL JOURNAL OF URBAN AND REGIONAL RESEARCH. 2023. (WoS) Vol.47 (4)

Davis Nerhene, Munthali Maggie G, Kindu Mengistie, Adeola Abiodun, Botai Joel O and Solomon Negasi.

"Variations of ecosystem service values as a response to landuse and land cover dynamics in central Malawi".

ENVIRONMENT DEVELOPMENT AND SUSTAINABILITY. 2023. (WoS) Vol. 25 (9)

de Villiers Colette, Munghemezulu Cilence, Mashaba-Munghemezulu Zinhle, Chirima Johannes George and Tesfamichael Solomon G. *"Weed Detection in Rainfed Maize Crops Using UAV and PlanetScope Imagery"*.

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Dyson Liesl, Viljoen Elizabeth and Moyo Ishmael. *"Africânes in southern Africa: attributes and contribution to rainfall of a continental tropical low"*. CLIMATE DYNAMICS. 2023. (WoS) Vol. 60

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Feig Gregor, Mogonong Buster, van der Merwe H, Ramaswiela Tshililo and Maluleke Amukelani. *"Vegetation description around the savanna flux measurement site at Benfontein Nature Reserve, South Africa"*. SOUTH

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Garland Rebecca, Belelie Monray D, Havenga Henno, Klopper Danitza, Language Brigitte, Formenti Paola, Namwoonde Andreas, Burger Roelof P and Piketh Stuart J. *"Variability of ambient particulate matter loading at Henties Bay, Namibia"*. Clean Air Journal. 2023. (WoS) Vol. 33 (2)

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Garland Rebecca, Esterhuizen Nanike, Berman Dilys M, Neumann Frank H, Ajikah Linus, Quick Lynne J, Hilmer Erin, Van Aardt Andri, John Juanette and Hill T R. *"The South African Pollen Monitoring Network: Insights from 2 years of national aerospora sampling (2019-2021)"*. CLINICAL AND TRANSLATIONAL ALLERGY. 2023. (WoS) Vol. 13 (11)

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Publications Continued:

Garland Rebecca, Gharbi Dorra, Vanker A and Peter Jonny. *"The intersection between air quality aerobiology and asthma in South Africa - could green spaces help?"*. Current Allergy and Clinical Immunology. 2023. (Scopus) Vol. 36 (3)

Garland Rebecca, Rai Masna, Stafoggia Massimo, de'Donato Francesca, Scortichini Matteo, Zafeiratou Sofia, Fernandez Liliana Vazquez, Zhang Siqi, Katsouyanni Klea and Samoli Evangelia. *"Heat-related cardiorespiratory mortality: Effect modification by air pollution across 482 cities from 24 countries"*. ENVIRONMENT INTERNATIONAL. 2023. (WoS) Vol. 174 (107825)

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Hansen Christel, Hrbacek Filip, Oliva Marc, Balks Megan, O'Neill Tanya Ann, de Pablo Miguel Angel, Ponti Stefano, Ramos Miguel, Vieira Gonçalo and Abramov Andrey. *"Active layer and permafrost thermal regimes in the ice-free areas of Antarctica"*. EARTH-SCIENCE REVIEWS. 2023. (WoS) Vol. 242 (104458)

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Publications Continued:

- Maisha Thizwilondi Robert, Ndarana Thando, Engelbrecht Francois A, Thatcher Marcus, Bopape Mary-Jane, Van der Merwe Jacobus, Padayachi Yerdashin and Masemola Cecelia. *"Simulation of the eThekweni Heat Island in South Africa"*. JOURNAL OF APPLIED METEOROLOGY AND CLIMATOLOGY. 2023. (WoS) Vol. 62 (5)
- Makunyane Malebo, Rautenbach Cornelis, Sweijd Neville, Botai Ondego Joel and Wichmann Janine. *"Health Risks of Temperature Variability on Hospital Admissions in Cape Town, 2011–2016"*. INTERNATIONAL JOURNAL OF ENVIRONMENTAL RESEARCH AND PUBLIC HEALTH. 2023. (WoS) Vol. 20
- Ndarana Thando, Lekoloane Lesetja E, Rammopo Tsholanang, Reason Chris J C, Bopape Mary-Jane M, Chikoore Hector and Engelbrecht Francois A. *"Downstream development during ridging South Atlantic Ocean anticyclones"*. CLIMATE DYNAMICS. 2023. (WoS) Vol. 61 (5-6)
- Ndarana Thando, Mbokodo Innocent L, Bopape Mary-Jane M, Mbatha Sifiso M S, Muofhe Tshimbiluni P, Singo Mukovhe V, Xulu Nkosinathi G, Mohomi Tumelo, Ayisi Kingsley K and Chikoore Hector. *"Heatwave Variability and Structure in South Africa during Summer Drought"*. Climate. 2023. (Scopus) Vol. 11 (2)
- Ndarana Thando, Singo Mukovhe V, Chikoore Hector, Engelbrecht Francois A, Muofhe Tshimbiluni P, Mbokodo Innocent L, Murungweni Florence M and Bopape Mary-Jane M. *"Projections of future fire risk under climate change over the South African savanna"*. STOCHASTIC ENVIRONMENTAL RESEARCH AND RISK ASSESSMENT. 2023. (WoS) Vol. 37 (7)
- Ndarana Thando, Xulu Nkosinathi G, Chikoore Hector, Bopape Mary-Jane M, Muofhe Tshimbiluni P, Mbokodo Innocent L, Munyai Rendani B, Singo Mukovhe V, Mohomi Tumelo and Mbatha Sifiso M S. *"Cut-Off Lows over South Africa: A Review"*. Climate. 2023. (Scopus) Vol. 11 (3)
- Nduku Lwandile, Munghemezulu Cilence, Mashaba-Munghemezulu Zinhle, Kalumba Ahmed Mukalazi, Chirima Johannes George, Masiza Wonga and de Villiers Colette. *"Global Research Trends for Unmanned Aerial Vehicle Remote Sensing Application in Wheat Crop Monitoring"*. Geomatics. 2023. (DOAJ) Vol. 3 (1)
- Ramoelo Abel, Dondofema Farai, Nethengwe Nthaduleni and Taylor Peter. *"Comparison of Satellite Platform for Mapping the Distribution of Mauritius Thorn (Caesalpinia decapetala) and River Red Gum (Eucalyptus camaldulensis) in the Vhembe Biosphere Reserve"*. REMOTE SENSING. 2023. (WoS) Vol. 15 (11)

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Publications Continued:

Ramoelo Abel, Kgaphola Motsoko Juniet, Odindi John, Kahinda Jean-Marc Mwenge and Seetal Ashwin. *"Apportioning Human-Induced and Climate-Induced Land Degradation: A Case of the Greater Sekhukhune District Municipality"*. APPLIED SCIENCES-BASEL. 2023. (WoS) Vol. 13 (6)

Ramoelo Abel, Kgaphola Motsoko Juniet, Odindi John, Kahinda Jean-Marc Mwenge, Seetal Ashwin and Musvoto Constansia. *"Social-Ecological System Understanding of Land Degradation in Response to Land Use and Cover Changes in the Greater Sekhukhune District Municipality"*. SUSTAINABILITY. 2023. (WoS) Vol. 15 (4)

Ramoelo Abel, Kgaphola Motsoko Juniet, Odindi John, Mwenge Kahinda J-M, Seetal A R and Musvoto Constansia. *"Impact of land use and land cover change on land degradation in rural semi-arid South Africa: case of the Greater Sekhukhune District Municipality"*. ENVIRONMENTAL MONITORING AND ASSESSMENT. 2023. (WoS) Vol. 195 (6)

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Ramoelo Abel, Mashiane Katlego K, Adelebu Samuel and Daemane Ernest. *"Assessing environmental factors contributing to plant species richness in mountainous mesic grasslands"*. Koedoe: African Protected Area Conservation & Science. 2023. (WoS) Vol. 65 (1)

Ramoelo Abel, Munyai Nthabe, Adelabu S and Bezuidenhout Hugo. *"The influence of fire presence and absence on grass species composition and species richness at Mountain Zebra National Park"*. Koedoe: African Protected Area Conservation & Science. 2023. (WoS) Vol. 65 (1)

Ramoelo Abel, Munyai Nthabeliseni, Adelabu S, Bezuidenhout Hugo and Sadiq Hassan. *"Effects of Environmental Factors on Plant Productivity in the Mountain Grassland of the Mountain Zebra National Park, Eastern Cape, South Africa"*. Ecologies. 2023. (DOAJ) Vol. 4 (4)

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UNIVERSITY OF PRETORIA

Publications Continued:

Ramoelo Abel, Qabaqaba Mcebisi, Naidoo L, Tsele Philemon and Cho Moses. *"Integrating random forest and synthetic aperture radar improves the estimation and monitoring of woody cover in indigenous forests of South Africa"*. Applied Geomatics. 2023. (Scopus) Vol. 15 (1)

Ramoelo Abel, Rapiya Monde and Truter Wayne. *"Seasonal evaluation and mapping of aboveground biomass in natural rangelands using Sentinel-1 and Sentinel-2 data"*. ENVIRONMENTAL MONITORING AND ASSESSMENT. 2023. (WoS) Vol. 195 (1544)

Ramoelo Abel, Sengani David and Archer Emma Archer. *"A review of fusion framework using optical sensors and Synthetic Aperture Radar imagery to detect and map land degradation and sustainable land management in the semi-arid regions"*. GEOCATO INTERNATIONAL. 2023. (WoS) Vol. 38 (1)

Ramoelo Abel, Shamaoma Hastings, Chirwa Wanangwa, Zekeng Jules C, Hudak Andrew T, Handavu Ferdinand and Syampungani Stephen. *"Use of Multi-Date and Multi-Spectral UAS Imagery to Classify Dominant Tree Species in the Wet Miombo Woodlands of Zambia"*. SENSORS. 2023. (WoS) Vol. 23 (4)

Reyers Belinda, Biggs R, Blanchard Ryan, Clements Hayley S, Cockburn Jessica, Cumming Graeme S., Cundill Georgina, de Vos Alta, Dziba Luthando and Esler Karen. *"The Southern African Program on Ecosystem Change and Society: an emergent community of practice"*. Ecosystems and People. 2023. (Scopus) Vol. 19 (1)

Theron Kayla, Breetzke Gregory, Snyman Lourens and Edelstein Ian. *"A street segment analysis of crime in a township: evidence from South Africa"*. Police Practice and Research. 2023. (Scopus) Vol. 24 (5)

Tsele Philemon, Combrinck Ludwig, Botha R and Ngcobo Bongani. *"Analysis of thermally-induced displacements of the HartRAO Lunar Laser Ranger optical tube: its impact on pointing"*. South African Journal of Geomatics (formelrly South African Journal of Surveying and Geo-Information). 2023. (DHET SA) Vol. 12 (2)

Tsele Philemon, Ramoelo Abel and Qabaqaba Mcebisi. *"Development of the grass LAI and CCC remote sensing-based models and their transferability using sentinel-2 data in heterogeneous grasslands"*. INTERNATIONAL JOURNAL OF REMOTE SENSING. 2023. (WoS) Vol. 44 (8)

van Deventer Heidi, Petersen Chantel R, Smith-Adao Lindie B and Nel Jeanne L. *"Incorporating free-flowing rivers into global biodiversity targets: Prioritization and targeted interventions to maintain ecological integrity"*. AQUATIC CONSERVATION-MARINE AND FRESHWATER ECOSYSTEMS. 2023. (WoS) Vol. 33 (1)

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Publications Continued:

van Gils Hein, Wang Haoning, Guo Hong, Xu Yanchun, Yu Shaopeng and Wang XiaoLong. *"The evolutionary dynamics history of canine distemper virus through analysis of the hemagglutinin gene during 1930-2020"*.

EUROPEAN JOURNAL OF WILDLIFE RESEARCH. 2023. (WoS) Vol. 69 (3)

Wright Caradee, Benyon Matthew, Mahlangeni Nomfundo, Kapwata Thandi, Laban Tracey and Garland Rebecca. *"Data gaps will leave scientists 'in the dark': How load shedding is obscuring our understanding of air quality"*. SOUTH AFRICAN JOURNAL OF SCIENCE. 2023. (WoS) Vol. 119 (9-10)

Wright Caradee, Bühler Jacqueline Lisa, Shrikhande Shreya, Kapwata Thandi, Cissé Guéladio, Liang Yajun, Pedder Hugo, Kwiatkowski Marek, Kunene Zamantimande and Mathee Angela. *"The Association between Apparent Temperature and Hospital Admissions for Cardiovascular Disease in Limpopo Province, South Africa"*. INTERNATIONAL JOURNAL OF ENVIRONMENTAL RESEARCH AND PUBLIC HEALTH. 2023. (WoS) Vol. 20 (1)

Wright Caradee, Kapwata Thandi and Albers Patricia N. *"Melanoma crude incidence rates among white South Africans climbing as in other countries: An urgent call for targeted skin cancer prevention and awareness campaigns"*. SAMJ SOUTH AFRICAN MEDICAL JOURNAL. 2023. (WoS) Vol. 113 (3)

Wright Caradee, Kapwata Thandi, Cook Caylee, Howard Steven J, Makaula Hleliwe, Merkley Rebecca, Mshudulu Mbulelo, Tshetu Nosibusiso, Naidoo Natasha and Scerif Gaia. *"Inadequate Access to Potable Water Impacts Early Childhood Development in Low-Income Areas in Cape Town, South Africa"*. ANNALS OF GLOBAL HEALTH. 2023. (WoS) Vol. 89 (1)

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Wright Caradee, Manyuchi Albert Edgar and Vogel Coleen. *"The missing links in climate services for health and heat-health services: Examining climate-heat services in peri-urban districts in South Africa"*. CLIMATE SERVICES. 2023. (WoS) Vol. 32 (100413)

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Wright Caradee, Rother Hanna-Andrea, Dove C. MacKenzie, Cornforth Rosalind, Petty Celia, Euripidou Rico, Irlam James, Gikungu David, Chivese Tawanda and Kutane Waltaji. *"Q-Storming' to identify challenges and opportunities for integrating health and climate adaptation measures in Africa"*. Journal of Climate Change and Health. 2023. (Scopus) Vol. 12 (100254)

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Journal Articles (Others):

Biggs R, Reyers B, Blanchard R, Clements H, Cockburn J, Cumming G, Cundill G, de Vos A, Dziba L, Esler K (2023). The Southern African Program on Ecosystem Change and Society: an emergent community of practice. *Ecosystems and People*, 19 (1), pp. 1 - 10.

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Wright CY, Benyon M, Mahlangeni N, Kapwata T, Laban T, Garland R (2023). Data gaps will leave scientists 'in the dark': How load shedding is obscuring our understanding of air quality. *SOUTH AFRICAN JOURNAL OF SCIENCE*, 119 (9-10), pp. 1 - 5.

Wright CY, Kapwata T, Albers P (2023). Melanoma crude incidence rates among white South Africans climbing as in other countries: An urgent call for targeted skin cancer prevention and awareness campaigns. *SAMJ SOUTH AFRICAN MEDICAL JOURNAL*, 113 (3), pp. 110 - 112.

Conference Papers:

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Publications Continued:

Simelane S, Langerman K, Garland R (2023). A systematic literature review of factors affecting particulate matter concentrations in Gauteng. 54th Annual Conference of the National Association for Clean Air: Collaborating for clean air: Confronting climate change and air quality together (NACA 2023), 06-Sep-2023 - 08-Sep-2023.

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Cheruiyot K, Katumba KS (2023). Mapping the intensity of ward-level barriers to youth's participation in local development planning in Gauteng province, South Africa. 31st International Cartographic Conference: Smart cartography for sustainable development (ICC 2023), 13-Aug-2023 - 18-Aug-2023.

*M*Sc and PhD graduations and supervisors:

A comprehensive list of all postgraduate students and a link to the UP dissertation and this repository is available at:

<https://www.up.ac.za/geography-geoinformatics-and-meteorology/article/2753845/postgraduate-students>

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Masters 2023

Blomsterberg-Reyneke, S.E. Dissertation The relationship between wildlife and livestock associated with aardvark (*Orycteropus afer*) burrows in pasturelands. MSc (Environmental Management) coursework. Supervisor; Hausmann, N.S. Co-supervisor Roux, P.C.

Netherlands, J.I. Dissertation Variation in aardvark (*Orycteropus afer*) burrow use between natural and agricultural sites in the Bronkhorstspuit-Middelburg region, South Africa. MSc (Environmental Ecology) coursework. Supervisor; Hausmann, N.S. Co-supervisor; Bastos, A.D.S.

Ngebe, S. Dissertation Assessment of seasonal variations of teal carbon in palustrine wetlands of the Grassland Biome: A case study of Chrissiesmeer, Mpumalanga Lakes District, Mpumalanga Province, South Africa. MSc Geoinformatics. Supervisor: van Deventer, H. Co-supervisor Naidoo, L. & Tsele, P.

Rachamose, M.I. Dissertation The effect of fire disturbances on woody plant encroachment at Loskop Farm, South Africa. MSc (Environmental Management) Supervisor; Ramoelo, A. Co-supervisor; Tsele, P.

Savy, J.D. Dissertation Using free resources for the creation of digital elevation and geographic data: the case study of Rodrigues Island. MSc (Geoinformatics). Supervisor; Hansen, C.D. Co-supervisor; Munghemezulu, C.

Smith, L. Dissertation Turbulence forecasting over South Africa using diagnostics from the convective scale ensemble prediction system of the Unified Model: a pilot study. MSc (Meteorology) Supervisor; Dyson, L.L.

Doctorate 2023

Nickola, M. Thesis Hartebeesthoek Radio Astronomy Observatory (HartRAO) antenna parameters and local ties for improved reference frames. PhD (Geoinformatics) Supervisor; Combrinck, W.L. Co-supervisor de Witt, A (Hartebeesthoek Radio Astronomy Observatory)

Van der Merwe, B.J. Classifying barchan outlines into morphological classes using convolutional neural networks: a proof of concept. PhD (Geography) Supervisor; Coetzee, S.M.

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF PRETORIA

C *hanges to the curriculum*

or course offerings:

For some of our undergraduate degree programme we changed the period of presentation of some quarter modules to semester modules, with adjusted contact times.

For the BScHons (Geography) Geography and Environmental Science, BSocSciHons (Geography) Geography and Environmental Science, BScHons (Meteorology) curricula amended to create two new research methods modules.

L *ink to departmental*

webpage:

<https://www.up.ac.za/geography-geoinformatics-and-meteorology> or
www.up.ac.za/ggm

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF THE WITWATERSRAND

Name of department:

Geography, Archaeology and Environmental Studies

Head of department:

- **Professor Paida Mhangara**

Information about the Geographers and their area of specialisation in the department:

- **Sarita Pillay Gonzalez**

Critical and urban geography, including the relationship between state and real estate and how this shapes cities, and the political economy of post-apartheid and Global South cities.

- **Dr Serge Kubanza**

Environmental management and sustainability, with a specific focus on sustainable solid waste management in Sub-Saharan African cities, with an emphasis on South African and Congolese cities

- **Dr Simoné Dahmns-Verster**

Ecotoxicology, environmental science, water pollution, freshwater ecology, zoology, water science, land contamination.

- **Dr Cletah Shoko**

Geospatial sciences

- **Dr Iqra Atif**

The applications of advanced GIS and Remote Sensing for geospatial and numerical modelling of geohazards, climate change and its impact on natural resources for sustainable development and management.

- **Dr Raesa Moolla**

Hotspot monitoring and modelling of urban-scale air pollution and its impacts on human health.

- **Prof Mary Evans**

Optically Stimulated Luminescence Dating, 4IR technology and the circular economy, climatology and atmospheric processes, science education, water and sanitation

- **Dr Alex Wafer**

Urban informality; infrastructure and citizenship; science and society; knowledge co-production in an era of global crisis

UNIVERSITY OF THE
WITWATERSRAND,
JOHANNESBURG



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UNIVERSITY OF THE WITWATERSRAND

Geographers continued:

• **Prof Elhadi Adam**

Use of remote sensing techniques and machine learning algorithms in monitoring vegetation.

• **Prof Jennifer Fitchett**

Biometeorology: climatology, tourism and climate change, phenology, climate and health, and palaeoclimatology.

• **Prof Mulala Simatele**

Environmental management, governance and sustainability, environmental impacts assessments and environmental monitoring systems, coastal and marine resource management and sustainability, climate change adaptation.

• **Prof Jasper Knight**

Climate and environmental change, geomorphology, landscape resources.

• **Prof Stefan Grab**

Historical climatology, climate change, environmental change, geo-hazards, geomorphology, mountain environments

• **Prof Craig Sheridan**

Utilising the toolboxes available to solve water problems in South Africa, including sewage, grey water, industrial and mine water treatment and the provision of potable water for society.

• **Prof Francois Engelbrecht**

Director of the Global Change Institute. Climatology, climate modelling and climate futures

• **Dr Tumelo Mathe**

GIS and remote sensing applications

• **Wendy Phillips**

Cartographer

• **Natanya Alexander**

Senior Administrative Officer

• **Sindiswa Tilane**

Postgraduate Administrator

• **Khanyo Ngubo**

Finance Officer

• **Mpho Thobejane**

Procurement Officer

• **Thandizwe Nsimbi**

Senior Technician

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UNIVERSITY OF THE WITWATERSRAND

Exciting **departmental news:**

Prof Craig Sheridan was awarded the Vice Chancellor's Award for Innovation and Social Impact in 2023. He also presented the plenary address at the International Institute of Environmental Studies Conference in Santiago, Chile in December 2023; hosted a one-day conference on Circular economy in the water sector in April 2023; and hosted the DWS for an information sharing workshop in January 2024.

Dr Simoné Dahms-Verster chaired the organising for the Network for Industrially Contaminated Land in Africa (NICOLA) annual conference in Skukuza, Kruger National Park in October 2023, and chaired the annual training workshop on Land Contamination 101 presented by NICOLA in 2023.

Dr Sarita Pillay-Gonzalez was awarded the Urban Studies Foundation (USF) International Fellowship to Institute for Housing and Urban Research at Uppsala University.

In September 2024, Prof Jennifer Fitchett was awarded the Meiring Naude Medal for exceptional researchers under the age of 35 by the Royal Society of South Africa.

Dr Raeesa Moolla received a fully funded International Engagement Grant from the Future Professors Program to attend a collaborative visit to Austria and Germany for three months starting in April 2024

Dr Iqra Atif conducted a workshop entitled Digital Frontiers: Navigating Big Data with advanced Geo-Database skills.

Prof Mary Evans received the Wits Chancellor's Female Academic Leaders Fellowship (FALF) Grant, and won the FALF Team Spirit Award 2023.

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UNIVERSITY OF THE WITWATERSRAND

2022/2023 List of publications.

Adam, E., Masupha, N.E. and Xulu, S., 2023. Spatial Assessment and Prediction of Urbanization in Maseru Using Earth Observation Data. *Applied Sciences*, 13(10), p.5854.

Adom, R.K. and **Simatele, M.D.**, 2022, November. The role of stakeholder engagement in sustainable water resource management in South Africa. In *Natural Resources Forum*(Vol. 46, No. 4, pp. 410-427). Oxford, UK: Blackwell Publishing Ltd.

Adom, R.K., **Simatele, M.D.** and Reid, M., 2022. Addressing the challenges of water-energy-food nexus programme in the context of sustainable development and climate change in South Africa. *Journal of Water and Climate Change*, 13(7), pp.2761-2779.

Adom, R.K., **Simatele, M.D.**, Das, D.K., Mukalazi, K.A., Sonwabo, M., Mudau, L., Sithole, M., Kubanza, S., Vogel, C. and Zhou, L., 2023. Enhancing climate change adaptation governance through transforming institutions in Kwa-Zulu Natal Province, South Africa. *International Journal of Climate Change Strategies and Management*.

Altoom, M.B., **Adam, E.** and Ali, K.A., 2023. Mapping and Monitoring Spatio-Temporal Patterns of Rainfed Agriculture Lands of North Darfur State, Sudan, Using Earth Observation Data. *Land*, 12(2), p.307.

Andreoli, M.A.G., **Knight, J.**, Durrheim, R.J. and **Evans, M.**, 2023. The geomorphology and neotectonics of the Vaalputs Radioactive Waste Disposal Facility site, Namaqualand, South Africa: Palaeoseismological and geodynamic implications. *South African Journal of Geology*, 126(4), pp.485-514.

Bangelesa, F., Abel, D., Pollinger, F., Rai, P., Ziegler, K., Ebengo, D., Tshimanga, R.M., Ali, M.M., **Knight, J.** and Paeth, H., 2023. Projected changes in rainfall amount and distribution in the Democratic Republic of Congo—Evidence from an ensemble of high-resolution climate simulations. *Weather and Climate Extremes*, 42, p.100620.

Bhaga, T.D., Dube, T., Shekede, M.D. and **Shoko, C.**, 2023. Investigating the effectiveness of Landsat-8 OLI and Sentinel-2 MSI satellite data in monitoring the effects of drought on surface water resources in the Western Cape Province, South Africa. *Remote Sensing Applications: Society and Environment*, 32, p.101037.

Bhagwan, N. and **Evans, M.**, 2023. A review of industry 4.0 technologies used in the production of energy in China, Germany, and South Africa. *Renewable and Sustainable Energy Reviews*, 173, p.113075.

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF THE WITWATERSRAND

Publications continued:

Boateng, L. and **Mhangara, P.**, 2023. A Comparative Assessment of Annual Solar Irradiance Trends between Mpumalanga and Northern Cape Province in South Africa Using PVGIS. *Energies*, 16(18), p.6665.

Brugnara, Y., Brönnimann, S., **Grab, S.**, Steinkopf, J., Burgdorf, A.M., Wilkinson, C. and Allan, R., 2023. South African extreme weather during the 1877–1878 El Niño. *Weather*, 78(10), pp.286-293.

Chabalala, Y., **Adam, E.** and Ali, K.A., 2023. Exploring the Effect of Balanced and Imbalanced Multi-Class Distribution Data and Sampling Techniques on Fruit-Tree Crop Classification Using Different Machine Learning Classifiers. *Geomatics*, 3(1), pp.70-92.

Chabalala, Y., **Adam, E.** and Kganyago, M., 2023. Mapping fruit tree dynamics using phenological metrics from optimal Sentinel-2 data and Deep Neural Network. *CABI Agriculture and Bioscience*, 4(1), p.51.

Chiloane, C., Dube, T. and **Shoko, C.**, 2023. Multispectral remote sensing of potential groundwater dependent vegetation in the greater Floristic region of the Western Cape, South Africa. *South African Geographical Journal*, pp.1-19.

Dahms-Verster, S., Nel, A., Van Vuren, JHJ, Greenfield, R. 2023. Mortality and malformation effects of acute vanadium (V) exposure on the African clawed frog (*Xenopus laevis*) embryos. *Environmental Science and Pollution Research*, 30, pp. 55730-557411

Dube, T., Seaton, D., **Shoko, C.** and Mbow, C., 2023. Advancements in Earth Observation for Water Resources Monitoring and Management in Africa: A Comprehensive Review. *Journal of Hydrology*, p.129738.

Dube, T., Seaton, D., **Shoko, C.** and Mbow, C., 2023. Advancements in Earth Observation for Water Resources Monitoring and Management in Africa: A Comprehensive Review. *Journal of Hydrology*, p.129738.

Fitchett, J.M. and Meyer, C.A., 2023. The applicability and suitability of the Camping Climate Index for South Africa. *Journal of Outdoor Recreation and Tourism*, 42, p. 100619.

Fitchett, J.M. and Sheridan, C.M., 2023. Identifying and correcting for bias in students' evaluations of teaching: The use of measurable bench-marking questions. *Journal of Geography Education in Africa*, 6, pp. 32-52.

Gidey, E., Dikinya, O., Sebege, R., Segosebe, E., Zenebe, A., Mussa, S., **Mhangara, P.** and Birhane, E., 2023. Land Use and Land Cover Change Determinants in Raya Valley, Tigray, Northern Ethiopian Highlands. *Agriculture*, 13(2), p.507.

Gidey, E., Gitet, S., **Mhangara, P.**, Dikinya, O., Hishe, S., Girma, A., Gebremeskel, G., Lottering, R., Zenebe, A. and Birhane, E., 2023. Impact of urban and peri-urban growth on arable land (1976–2029) in a medium sized city of Shire Indaselassie, North Western Tigray, Ethiopia. *SN Applied Sciences*, 5(4), p.102.

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF THE WITWATERSRAND

Publications continued:

- Gidey, E., **Mhangara, P.**, Gebregergs, T., Zeweld, W., Gebretsadik, H., Dikinya, O., Mussa, S., Zenebe, A., Girma, A., Fisseha, G. and Addisu, A., 2023. Analysis of drought coping strategies in northern Ethiopian highlands. *SN Applied Sciences*, 5(7), p.195.
- Grab, S.**, 2023. "The sun has become intolerably hot": local views and memories about Lesotho's weather—present and past. *Transactions of the Royal Society of South Africa*, pp.1-15.
- Grab, S.**, 2023. A 19th century hydroclimate chronology for the semi-arid Karoo, South Africa: Droughts and dry periods in perspective. *Journal of Arid Environments*, 219, p.105081.
- Grab, S.W.** and Nash, D.J., 2023. A new flood chronology for KwaZulu-Natal (1836–2022): The April 2022 Durban floods in historical context. *South African Geographical Journal*, pp.1-22.
- Hishe, S., Gidey, E., Zenebe, A., Bewket, W., Lyimo, J., **Knight, J.** and Gebretekle, T., 2023. The impacts of armed conflict on vegetation cover degradation in Tigray, northern Ethiopia. *International Soil and Water Conservation Research*.
- Holmes, J. and **Fitchett, J.M.**, 2023. Construction and testing of a low-cost device for the collection of rainfall samples destined for stable isotope analysis. *South African Journal of Science*, 119(7-8), pp. 1-5.
- Ilo, O.P., Mkhize, N.M. and **Simatele, M.D.**, 2023. The Contribution of Pyrolysis of Water Hyacinth to South Africa's Low-carbon and Climate Resilient Economy Transition: A Mini Review. *Environmental and Climate Technologies*, 27(1), pp.103-116.
- Ilo, O.P., Nkomo, S.P.L., Mkhize, N.M., Mutanga, O. and **Simatele, M.D.**, 2023. Optimisation of process parameters using response surface methodology to improve the liquid fraction yield from pyrolysis of water hyacinth. *Environmental Science and Pollution Research*, 30(3), pp.6681-6704.
- Jackson, C.M., **Adam, E.**, **Atif, I.** and Mahboob, M.A., 2023. Feature Extraction and Classification of Canopy Gaps Using GLCM-and MLBP-Based Rotation-Invariant Feature Descriptors Derived from WorldView-3 Imagery. *Geomatics*, 3(1), pp.250-265.
- Jaison, C., Reid, M. and **Simatele, M.D.**, 2023. Asset Portfolios in Climate Change Adaptation and Food Security: Lessons From Gokwe South District, Zimbabwe. *Journal of Asian and African Studies*, p.00219096231158340.
- Kganyago, M., Ovakoglou, G., **Mhangara, P.**, Adjorlolo, C., Alexandridis, T., Laneve, G. and Beltran, J.S., 2023. Evaluating the contribution of Sentinel-2 view and illumination geometry to the accuracy of retrieving essential crop parameters. *GIScience & Remote Sensing*, 60(1), p.2163046.

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UNIVERSITY OF THE WITWATERSRAND

Publications continued:

- Knight, J.** and Harrison, S., 2023. The sensitivity and evolutionary trajectory of the mountain cryosphere: Implications for mountain geomorphic systems and hazards. *Land Degradation & Development*, 34(9), pp.2464-2482.
- Knight, J.**, 2023. Evaluating the Impacts of a Research Ethics Training Course on University Researchers. *Social Sciences*, 12(3), p.182.
- Knight, J.**, 2023. The last glaciers in Africa and their environmental implications. *Journal of African Earth Sciences*, 200, p.104863.
- Knight, J.**, Burningham, H., Griffiths, D. and Yao, Y., 2023. Coastal boulder movement on a rocky shoreline in northwest Ireland from repeat UAV surveys using Structure from Motion Photogrammetry. *Geomorphology*, 440, p.108883.
- Knight, J.**, Flack-Davison, E., Engelbrecht, S., Visagie, R.G., Beukes, W. and Mwale, M., 2023. Compliance with the Nagoya protocol in the Southern African Development Community. *South African Journal of Botany*, 159, pp.302-318.
- Lembani, R. and **Knight, J.**, 2023. Factors Controlling Soil Organic Matter Stock: A Baseline Study for Evaluating Carbon Storage Initiatives in Miombo Woodlands, Zambia. *Communications in Soil Science and Plant Analysis*, pp.1-16.
- Lourenco, M., **Fitchett, J.M.** and Woodborne, S., 2023. Peat definitions: a critical review. *Progress in Physical Geography*, 47(4), pp. 506-520.
- Lourenco, M., Woodborne, S. and **Fitchett, J.M.**, 2023. Drought history and vegetation response in the Angolan Highlands. *Theoretical and Applied Climatology*, 151, pp. 115-131.
- Lourenco, M., Woodborne, S. and **Fitchett, J.M.**, 2023. Fire regime of peatlands in Angolan Highlands. *Environmental Monitoring and Assessment*, 195, p. 78.
- Mahan, S.A., Rittenour, T.M., Nelson, M.S., Atae, N., Brown, N., DeWitt, R., Durcan, J., **Evans, M.**, Feathers, J., Frouin, M. and Guérin, G., 2023. Guide for interpreting and reporting luminescence dating results. *Bulletin*, 135(5-6), pp.1480-1502.
- Mangoro, N. and **Kubanza, N.S.**, 2023. Community perceptions on the impacts of Solid Waste Management on Human Health and the Environment in Sub-Saharan African Cities: A study of Diepsloot, Johannesburg, South Africa. *Development Southern Africa*, pp.1-20.
- Mangoro, N. and **Kubanza, N.S.**, 2023. Community perceptions on the impacts of Solid Waste Management on Human Health and the Environment in Sub-Saharan African Cities: A study of Diepsloot, Johannesburg, South Africa. *Development Southern Africa*, pp.1-20.

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF THE WITWATERSRAND

Publications continued:

Mathe, T. and Hamandawana, H., 2023. Assessing the Chlorophyll-a Retrieval Capabilities of Sentinel 3A OLCI Images for the Monitoring of Coastal Waters in Algoa and Francis Bays, South Africa. *Sustainability*, 15(17), p.12699.

Matyukira, C. and **Mhangara, P.**, 2023. Advancement in the Application of Geospatial Technology in Archaeology and Cultural Heritage in South Africa: A Scientometric Review. *Remote Sensing*, 15(19), p.4781.

Matyukira, C. and **Mhangara, P.**, 2023. Land Cover and Landscape Structural Changes Using Extreme Gradient Boosting Random Forest and Fragmentation Analysis. *Remote Sensing*, 15(23), p.5520.

Mohamed, M.K., **Adam, E.** and Jackson, C.M., 2023. Policy Review and Regulatory Challenges and Strategies for the Sustainable Mangrove Management in Zanzibar. *Sustainability*, 15(2), p.1557.

Mohamed, M.K., **Adam, E.** and Jackson, C.M., 2023. The spatial and temporal distribution of mangrove forest cover from 1973 to 2020 in Chwaka Bay and Menai Bay, Zanzibar. *Applied Sciences*, 13(13), p.7962.

Mohleli, M.G., **Adam, E.** and **Schoeman, M.H.**, 2023. The potential for Lidar using support vector machine (SYM) to detect archaeological stone-walled structures in Khutwaneng, Bokoni. *South African Archaeological Bulletin*, 78(218), pp.33-42.

Mokgoja, B., **Mhangara, P.** and Shikwambana, L., 2023. Assessing the Impacts of COVID-19 on SO₂, NO₂, and CO Trends in Durban Using TROPOMI, AIRS, OMI, and MERRA-2 Data. *Atmosphere*, 14(8), p.1304.

Motlogeloa, O. and **Fitchett, J.M.**, 2023. Climate and human health: a review of publication trends in the International Journal of Biometeorology. *International Journal of Biometeorology*, 67: 933-955.

Motlogeloa, O., **Fitchett, J.M.** and Sweijd, N., 2023. Defining the South African Acute Respiratory Infectious Disease Season. *International Journal of Environmental Research and Public Health*, 20(2), 1074.

Mudau, N. and **Mhangara, P.**, 2023. Assessment of Spatial Patterns of Backyard Shacks Using Landscape Metrics. *Drones*, 7(9), p.561.

Mudau, N. and **Mhangara, P.**, 2023. Assessment of the Ecological Condition of Informal Settlements Using the Settlement Surface Ecological Index. *Land*, 12(8), p.1622.

Mudau, N. and **Mhangara, P.**, 2023. Mapping and Assessment of Housing Informality Using Object-Based Image Analysis: A Review. *Urban Science*, 7(3), p.98.

Murray, J., **Adam, E.**, Woodborne, S., Miller, D., Xulu, S. and **Evans, M.**, 2023. Monitoring shoreline changes along the southwestern coast of South Africa from 1937 to 2020 using varied remote sensing data and approaches. *Remote Sensing*, 15(2), p.317.

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF THE WITWATERSRAND

Publications continued:

Ndlovu, H. and **Shoko, C.**, 2023. Assessing Lantana camara spatial distribution in response to rainfall and temperature variations in Inkomati catchment in Mpumalanga. *Physics and Chemistry of the Earth, Parts A/B/C*, 132, p.103470.

Newete, S.W., Mayonde, S., Kekana, T. and **Adam, E.**, 2023. A rapid and accurate method of mapping invasive Tamarix genotypes using Sentinel-2 images. *PeerJ*, 11.

Nyide, S., **Simatele, M.D., Grab, S.** and Adom, R.K., 2023. Assessment of the Dynamics towards Effective and Efficient Post-Flood Disaster Adaptive Capacity and Resilience in South Africa. *Sustainability*, 15(17), p.12719.

Obaid, A., **Adam, E.** and Ali, K.A., 2023. Land Use and Land Cover Change in the Vaal Dam Catchment, South Africa: A Study Based on Remote Sensing and Time Series Analysis. *Geomatics*, 3(1), pp.205-220.

Olatoyan, J.O., Neumann, F.H., Orijemie, E.A., **Sievers, C., Evans, M., Hattingh, T.** and **Schoeman, M.H.**, 2023. Modern pollen- and phytolith-vegetation relationships at a wetland in northeastern South Africa. *South African Journal of Botany*, 161, pp.780-796.

Patel, J., **Grab, S.** and De Maayer, P., 2023. Distinct microbial communities across a climatically versatile summit in the Lesotho highlands. *Ecology and Evolution*, 13(3), p.e9891.

Prinsloo, A.S. and **Fitchett, J.M.**, 2023. A nexus between airbnb and inequalities in water use and access *Environmental Development*, 47, p. 100879.

Ratshiedana, P.E., Abd Elbasit, M.A., **Adam, E.**, Chirima, J.G., Liu, G. and Economon, E.B., 2023. Determination of Soil Electrical Conductivity and Moisture on Different Soil Layers Using Electromagnetic Techniques in Irrigated Arid Environments in South Africa. *Water*, 15(10), p.1911.

Roffe, S.J., van der Walt, A.J. and **Fitchett, J.M.**, 2023. Spatiotemporal characteristics of human thermal comfort across southern Africa: An analysis of the Universal Thermal Climate Index for 1971-2021. *International Journal of Climatology*, 43, pp. 2930-2952.

Roshan, G., Ghanghermeh, A. and **Grab, S.W.**, 2023. Spatio-temporal changes in sunshine duration over Iran: impact of physical geographic components. *Meteorology and Atmospheric Physics*, 135(3), pp.1-19.

Scholes, R.J., Coetzer, K.L., Matsika, R., Coetzee, B.W., Ernst, Y., Etale, A., Kubanza, N.S., Moyo, K., Nkrumah, B., **Engelbrecht, F.A.** and **Simatele, M.D.**, 2023. A Delphi assessment of climate change risks in southern Africa in the 21st century. *Climate risk management*, 42, p.100566.

Shandu, I.D. and **Atif, I.**, 2023. An Integration of Geospatial Modelling and Machine Learning Techniques for Mapping Groundwater Potential Zones in Nelson Mandela Bay, South Africa. *Water*, 15(19), p.3447.

Shikwambana, L., Xongo, K., Mashalane, M. and **Mhangara, P.**, 2023. Climatic and Vegetation Response Patterns over South Africa during the 2010/2011 and 2015/2016 Strong ENSO Phases. *Atmosphere*, 14(2), p.416.

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF THE WITWATERSRAND

Publications continued:

Sibiya, N.P., Das, D.K., Vogel, C., Mazinyo, S.P., Zhou, L., Kalumba, M.A., Sithole, M., Adom, R.K. and **Simatele, M.D.**, 2023. Overcoming bureaucratic resistance: an analysis of barriers to climate change adaptation in South Africa. *Climate*, 11(7), p.145.

Simatele, M.D., Tantoh, H.B. and Donkor, F.K., 2023. Climate change, land, energy and food security: perspectives from Sub-Saharan Africa. *Frontiers in Sustainable Food Systems*, 7, p.1164917.

Thabeng, O.L., **Adam, E.** and Merlo, S., 2023. Evaluating the Performance of Geographic Object-Based Image Analysis in Mapping Archaeological Landscapes Previously Occupied by Farming Communities: A Case of Shashi–Limpopo Confluence Area. *Remote Sensing*, 15(23), p.5491.

Thomas, G., **Sheridan, C.** and Holm, P.E., 2023. Arsenic contamination and rare earth element composition of acid mine drainage impacted soils from South Africa. *Minerals Engineering*, 203, p.108288.

Yao, Y., Burningham, H., **Knight, J.** and Griffiths, D., 2023. Monitoring of Coastal Boulder Movements by Storms and Calculating Volumetric Parameters Using the Volume Differential Method Based on Point Cloud Difference. *Remote Sensing*, 15(6), p.1526.

MSc and PhD graduations and supervisors:

Alisha Rielly. MSc Aquatic Health (UJ). Biomarker responses in *Danio rerio* following an acute exposure (96-hr) to e-waste leachate. (supervised by Dr S Dahms-Verster and Prof R Greenfield (UJ))

Bongani Majeke, MSc GIS and Remote Sensing (Wits): Development of GIS Based Composite Drought Monitoring Model For Spatio-Temporal Drought Vulnerability Assessment At Intsika Yethu, South Africa (supervised by Dr I Atif and Prof E Adam).

Chidzungu, Thandiwe PhD (Wits) “Social Impact Assessment in Skills Development Needs and Community Sustainability in the Just Energy Transition in South Africa (supervised by Dr A Wafer).

Claudio Dengo, MSc GIS and Remote Sensing (Wits): Mapping and Monitoring Land Transformation Of Boane District, Mozambique (1980 – 2020), Using Remote Sensing (supervised by Dr I Atif and Prof E Adam).

Hlanganani Ndlovu. Msc in GIS and Remote Sensing (Wits). Assessing lantana camara spatial distribution in response to rainfall and temperature variations in Inkomati catchment in Mpumalanga. (supervised by Dr C Shoko).

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UNIVERSITY OF THE WITWATERSRAND

MSc and PhD graduations and supervisors continued:

Irvin Shandu. MSc GIS and Remote Sensing (Wits, with distinction): An Integration of Geospatial Modelling and Machine Learning Techniques for Mapping Groundwater Potential Zones in Nelson Mandela Bay, South Africa (supervised by Dr I Atif).

Jerry Olatoyan PhD (Wits), Palaeoenvironmental Reconstruction of the last 2000 Years of Farming Landscapes in Mpumalanga, Northeastern South Africa. (supervised by Prof M Evans, Prof A Schoeman, Prof F Neumann, Dr Ce Sievers and E Orijemie)

Julia Pahl, MSc Geography (Wits) . Are our Head Teachers okay? Decision-making processes of Head Teachers in COVID-19 times: Implications for Head Teachers of independent schools in South Africa. (supervised by Prof M Evans).

Keegan Fraser, MSc Geography (Wits, with distinction): The development of a liveability index for Johannesburg and Pretoria to inform insurance practises (supervised by Prof J Fitchett)

Kganyago, Mahlatse PhD (Wits) Remote sensing of crop biophysical and biochemical parameters using sentinel-2 and machine learning algorithms (supervised by Prof P Mhangara and Dr C Adjorlolo)

Khanyisile Tshabalala - MSc Environmental Science (Wits) Characterisation of Drought Using Hydrological and Meteorological Indices: A Case Study of Bethlehem, South Africa (supervised by Prof M Evans, cosupervised by K Masindi).

Khorommbi, Phumudzo MSc Environmental Science (Wits) Employee sentiments regarding workplace greening (supervised by Dr R Moolla)

Lefa Ramawela. MSc (Wits). Optimization of a water treatment process with respect to coagulation and sedimentation process of a conventional water treatment plant (supervised by Prof C Sheridan).

Loate, Lesego PhD (Wits) Water-rights and the post-apartheid state (supervised by Dr A Wafer)

Manyama, Michael MSc GIS and Remote Sensing (Wits). Using remote sensing and geographic information systems to monitor, analyze, and map land use and land cover changes in the City of Johannesburg between the years 1994 and 2020 (supervised by Prof P Mhangara)

Mauro Lourenco, PhD Geography (Wits): Reconstruction of carbon sequestration in the peatlands of the Angolan Highlands (supervised by Prof J Fitchett and Prof S Woodborne).

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MSc and PhD graduations and supervisors continued:

Megan Welff, MSc Geography (Wits): Analysing past climate trends across Botswana and South Africa over the past 300 years and the effects on the movement of people (supervised by Prof J Fitchett and Prof A Esterhuysen).

Michael Wilkie, MSc (Wits). Microbiology of an urban slum CW. (Supervised by Prof C Sheridan, co-supervised by Uwe Kappelmeyer, Helmholtz UFZ, Leipzig, Germany).

Mokgoja, Boitumelo MSc GIS and Remote Sensing (Wits). Assessing the impacts of Covid-19 on SO₂, NO₂, and CO trends in Durban using TROPOMI, AIRS, OMI, & MERRA-2 Data (supervised by Prof P Mhangara and Dr L Shikwambana).

Moore, Wendell PhD (Wits). The Political Economy of Hemp in South Africa” (supervised by Dr A Wafer)

Netsianda, Andisani MSc GIS and Remote Sensing (Wits) Monitoring of vegetation dynamics using Sentinel-2 satellite imagery and support vector machine learning algorithm (supervised by Prof P Mhangara)

Noluthando Sawuka – MSc Environmental Science (Wits) Assessing the effectiveness of wetlands in the Krugersdorp Game Reserve in attenuating pollution from mines on the West Rand, South Africa. (supervised by Prof M Evans and K Masindi)

Nyide, Sindisiwe PhD (Wits) The role of institutional arrangements in post-flood disaster management in South Africa, focusing on Kwa-Zulu Natal Province, Mphela township and Ncakubana communities (supervised by Profs S Grab and M Simatele)

Ogundiwin, Babtunde PhD (Wits). Cartographic History, the Post-Colonial Landscape and the Agricultural Settlement Scheme: A Case Study of Citizen-Based Mapping in Northeastern Ibadan Rural Hinterland (supervised by Dr A Wafer)

Olamide John Oladele, MSc Geography (Wits): Policy analysis of Climate Smart Agricultural strategies in South Africa. A case study of Ngaka Modiri Molema District Municipality of Northwest Province, South Africa (supervised by Dr S Kubanza)

Rohini Reddy, MSc Geography (Wits): Mapping Jacaranda tree distribution in Johannesburg, South Africa: A citizen science and GIS approach (supervised by Prof J Fitchett).

Sheena Caroline Marange, MSc Geography (Wits): Analysing challenges of solid waste management in low-income communities in South Africa: a case study of Alexandra, Johannesburg, (supervised by Dr S Kubanza)

Sithole, Enoch, Climate change in the media (supervised by Prof S Grab)

Tamlyn Naidu. PhD (Wits). Developing a pilot plant for AMD remediation. (supervised by Prof C Sheridan, Co-supervised by Lizelle van Dyk)

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MSc and PhD graduations and supervisors continued:

Thabisile Ntleko, MSc Environmental Science CWRR (Wits, with distinction): Trends in extreme rainfall events over KwaZulu-Natal (Supervised by Prof J Fitchett and Dr A van der Walt)

Tshivhase, Funani MSc GIS and Remote Sensing (Wits) Monitoring and evaluating urban land use land cover change using machine learning classification techniques: a case study of Polokwane municipality (supervised by Prof P Mhangara)

Vuyelwa Emmaculate Mtyobila. MSc GIS and Remote Sensing (Wits) Modelling the spatial distribution of Lantana Camara in the Inkomati catchment in Mpumalanga, South Africa. (supervised by Dr C Shoko).

Webster Magowo. PhD (Wits) The use of Fischer-Tropsch Waste Water to treat acid mine drainage. (supervised by Prof C Sheridan)

Changes to their curriculum or course offerings:

In 2023, we launched our BSc Hons Environmental Studies, BSc Hons Geospatial Science and our MSc Environmental Science.

Link to departmental webpage:

<https://www.wits.ac.za/gaes/>

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Name of department:

- Geography and Environmental Science

- Dr MJ Mokgoebo; Senior Lecturer- Biogeography map work, quantitative and qualitative research methods.
matjutla.mokgoebo@univen.ac.za
- Mr E Kori; Lecturer- Geomorphology
edmore.kori@univen.ac.za

Head of department:

- Professor N.S. Nethengwe and Dr. N.V. Mudau as Caretaker Head of the department.

- Ms KH Netshisaulu; Lecturer- Population and Demography
khathu.mathivha@univen.ac.za
- Mr F. Dondofema,; Chief Lab Technician. GIS and Remote Sensing, Ecology
farai.dondofema@univen.ac.za

Information about the Geographers and their area of specialisation in the department:

- Dr T Nelwamondo; Senior Lecturer - Eco-Tourism; Settlement Development and Urbanisation
tshililo.nelwamondo@univen.ac.za
- Dr NV Mudau; Senior Lecturer - Rural Geography
virginia.mudau@univen.ac.za

- Mr. AP Nekhavhambe; Part-time Lecturer Human/Environmental Geography
Ailwei.nekhavhambe@univen.ac.za
- Ms N. Dlamini; Part-time Lecturer – Climatology.
Nohlahlala.dlamini5@gmail.com
- Dr. F. Murungweni; Lecturer - Applications of modern technologies (such as RS and GIS) to various societal issues
Florence.murungweni@univen.ac.za



University of Venda
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Geographers continued:

- Dr. E. Stam; Senior Lecturer Ecology.
Ed.stam@univen.ac.za
- Dr. L Mugwedi; Senior Lecturer - Restoration ecology; Ecosystem-based adaptation; ecosystem services; Invasive alien plant ecology and management
Lutendo.mugwedi@univen.ac.za
- Dr. R. Mudzielwana; Senior Lecturer - Environmental Chemistry
Rabelani.mudzielwana@univen.ac.za
- Dr. J. Steyn; Senior Lecturer - Agroecology and rangeland ecology and management
eunit@univen.ac.za
- Mr. R. Mulaudzi; Lecturer - Environmental Economics, Environmental Pollution and Ecotoxicology.
Ratshalingwa.mulaudzi@univen.ac.za
- Dr O. Malahlela; Senior Lecturer - Geospatial information sciences (Remote sensing and GIS) applications
Oupa.malahlela@univen.ac.za
- Dr. H Moyo; Senior Lecturer - Plant ecology, resource ecology, community-based natural resource management, and sustainability in savanna socio-ecological systems.
Hloniphani.Moyo@univen.ac.za
- Ms. M.G Maponya; nGAP Lecturer – Geoinformatics.
Grace.Maponya@univen.ac.za
- Dr. E. Mugari; SAF-ADAPT Postdoc Fellow - Climate Change Adaptation.
Mugarie@gmail.com
- Prof. J. Edokpayi; Associate Professor - Environmental Pollution Monitoring and Management, Environmental Engineering and Public Health.
Joshua.Edokpayi@univen.ac.za

Exciting departmental news

Two staff members were promoted from Senior lecturer to Professorship positions Prof. N. S. Nethengwe and Prof E. Stam. The Head of the department Prof. N.S Nethengwe occupied a new position as the deputy Dean in Academic division in the faculty of Science Engineering and Agriculture. While two staff members obtained a PhD, Doctor of Philosophy in Geography Dr E Kori 2023 and Dr. K Netshisaulu (2024) Doctor of Philosophy in Environmental Science and Management.

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Departmental news continued:

Collaboration on Climate & Earth System Science (ACCESS) Education and Training.

The university of had a privilege of hosting The Habitable Planet workshop (HPW)

The 40th HPW, the 2nd in 2023, was hosted in Limpopo Province, University of Venda. The main goal of the LOC was to bring the HPW physically to Limpopo, Thohoyandou. Limpopo is rich in biodiversity, and the LOC found Vhembe District Municipality to be a fit place to learn about earth system science. The LOC understood the responsibilities they had and lived up to them. From planning, organizing, finding suitable accommodation, lecture venues, and sponsorship. It was the LOCs priority to make this experience worthwhile for all the planetees (workshop participants) and ensure that their needs are met without compromising the HPW values. The local organizing committee of HPW40 consisted of 5 members, Mateletele Mukonazwothe, Ngkapele Tshegofatso, Tlou Granny, Ratsihli Thamathama and Tshidumo Mililicent, with the mentorship of three University of Venda staff members, Dr Mugwedi Lutendo, Dr Rabelani Mudzielwana and Dr Moyo Hloniphani. HPW 40 was hosted at the University of Venda, Thohoyandou, Limpopo Province, South Africa, from the 4th of July to the 14th of July 2023. The LOC organized accommodation for the planetees on campus in a student residence called F5 for females and DBSA for males.

This accommodation was proper, with good furniture and Wi-Fi. Lectures were attended at an extraordinary Research Centre for the first seven days, and we moved to a new lecture hall (Cad lab) in the last three days. Eight core lecturers and 29 planetees were in attendance, with the majority of them being from KwaZulu-Natal.

This is Planetees a 10-day earth science workshop that brings together students from all over South African universities, designed to expose third and fourth-year students to the developing discipline of Earth System Sciences and prepare them for a career in this field. This workshop aims to inspire more young black/ female South Africans to take up careers in science research, specifically focusing on the science of climate change and Earth Systems Science, as they are underprivileged and underrepresented in science. This workshop is best known for its 3Fs! "Free, food and fun". Students travel from their respective homes to where the workshop is being hosted free of charge. Most of them, if not all, even have their first flight experience from HPW. During the workshop, students are lectured by well-trained core lecturers who simply deliver science content to accommodate everyone on why the earth is the only habitable planet, with science-based field trips in between. HPW is hosted three times each year in various places.

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Departmental news continued:

South Africa-Flanders Climate (SAF-ADAPT) Project

The South Africa-Flanders Climate Adaptation Research and Training Partnership (SAF-ADAPT) Project is a 4.5-year (2020-2024) collaborative project between the University of Venda, University of Cape Town, University of Fort Hare, KLIMOS (a consortium of Belgian universities and research groups) and the South African Adaptation Network. The project aims to fill critical climate change adaptation and development research gaps and enhance the capacity of South African universities and individuals, especially early career researchers, to generate and communicate research evidence for impact and build the capacity of those tasked with climate change adaptation to deliver on their mandates.

At the University of Venda, the SAF-ADAPT Project, led by Prof. N.S. Nethengwe. The funds is distributed amongst one PhD student (Anesu Dion Gumbo), three MSc students (Hazel Shirinda, Lily Munzhedzi, and Pfarelo Nwanamidwa), and one Postdoctoral Fellow (Dr. Ephias Mugari), all of whom are winding up their research.

In the last quarter of 2023, the UniVen SAF-ADAPT team held a multi-stakeholder engagement and consultative workshop on flood management in Vhembe District.

The workshop was held at Masisi Village, Musina local municipality, in collaboration with the Vhembe District Disaster Management Centre, provided key insights and adaptation gaps that the SAF-ADAPT team is in the process of addressing through capacity-building and training workshops. One such is the upcoming workshop targeting Grade 8-11 Geography Teachers in the Vhembe district, whose aim is to equip educators, especially those from deep rural schools, with basic technological skills and awareness and expose them to various learning options and career choices on climate change issues.

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2023/2024 List of publications:

Munyai, L. F., **Mugwedi, L.**, Wasserman, R. J., **Dondofema, F.**, & Dalu, T. (2023). Assessing Fish and Macroinvertebrates Assemblages in Relation to Environmental Variables in Makuleke Floodplain Pans: Implications for Biodiversity Conservation. *Wetlands*, 43(7), 93.

Mungenge, C. P., Wasserman, R. J., Cuthbert, R. N., **Dondofema, F.**, & Dalu, T. (2023). Salinisation of arid temporary pools alters crustacean hatching success but not phenology dynamics. *Hydrobiologia*, 1-13.

Dalu, T., Dube, T., **Dondofema, F.**, & Cuthbert, R. N. (2023). Illegal mining impacts on freshwater Potamonautid crab in a subtropical Austral highland biosphere reserve. *Science of The Total Environment*, 165251.

Dalu, T., Themba, N. N., **Dondofema, F.**, & Cuthbert, R. N. (2023). Nowhere to go! Microplastic abundances in freshwater fishes living near wastewater plants. *Environmental Toxicology and Pharmacology*, 104210.

Rampheri, MB; Dube, T; **Dondofema, F;** Dalu, T; Progress in the remote sensing of groundwater-dependent ecosystems in semi-arid environments, "Physics and Chemistry of the Earth, Parts A/B/C", 103359,2023, Pergamon

Mungenge, CP; Wasserman, RJ; **Dondofema, F;** Keates, C; Masina, FM; Dalu, T; Assessing chlorophyll-a and water quality dynamics in arid-zone temporary pan systems along a disturbance gradient, *Science of The Total Environment*, 873, 162272,2023, Elsevier

Dalu, T; Ngomane, N; **Dondofema, F;** Cuthbert, RN; Water or sediment? Assessing seasonal microplastic accumulation from wastewater treatment works, *H2Open Journal*,6,2,88-104,2023, IWA Publishing
Masina, FM; Wasserman, RJ; Wu, N; Mungenge, CP; **Dondofema, F;** Keates, C; Shikwambana, P; Dalu, T; Macroinvertebrate diversity in relation to limnochemistry in an Austral semi-arid transboundary aquifer region pan system, *Science of The Total Environment*, 878,163161,2023, Elsevier

Mutshakwa, T; **Mugwedi, L;** Moyo, B; Madala, NE; Wasserman, RJ; **Dondofema, F;** Dalu, T; Assessing acetamiprid and chlorpyrifos pesticide concentrations in water and sediments across macadamia orchard and communal area small reservoirs, *Chemistry and Ecology*,39,4,393-403,2023, Taylor & Francis

Wasserman, RJ; **Dondofema, F;** Keates, C; Cuthbert, R; Dalu, T; Turtle-mediated dispersal of anostracan dormant eggs: Evidence for dominance hierarchy effects, *Ecology*, e4066,2023, "John Wiley & Sons, Inc. Hoboken, USA"

Mutshakwa, T; Munyai, LF; **Mugwedi, L;** Cuthbert, RN; **Dondofema, F;** Dalu, T; Seasonal occurrence of microplastics in sediment of two South African recreational reservoirs, *Water Biology and Security*, 100185,2023, Elsevier

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Publications continued:

Dondofema, F; Nethengwe, N; Taylor, P; Ramoelo, A; Comparison of Satellite Platform for Mapping the Distribution of Mauritius Thorn (*Caesalpinia decapetala*) and River Red Gum (*Eucalyptus camaldulensis*) in the Vhembe Biosphere Reserve, Remote Sensing,15,11,2753,2023, MDPI

Dalu, T; Themba, NN; **Dondofema, F;** Cuthbert, RN; Nowhere to go! Microplastic Abundances in Freshwater Fishes Living Near Wastewater Plants, Environmental Toxicology and Pharmacology,104210,2023, Elsevier

Dalu, T; Dube, T; **Dondofema, F;** Cuthbert, RN; Illegal mining impacts on freshwater Potamonautid crab in a subtropical Austral highland biosphere reserve, Science of The Total Environment, 165251,2023, Elsevier

MSc and PhD graduations and supervisors:

MSc 2023:

Mulaudzi Lusani, MSc, Assessment of groundwater quality and community's experience in relation to water quality and quality challenges in Lephalale municipality, Waterberg district, Limpopo in South Africa. Supervisor Prof. WM Gitari and Co-Supervisor Dr Rmudzielwana.

Ndlovu Stanely skhuna, _MSC, Water quality assessment and potential ecological risk of Trace Metals in Sediments of some selected wetlands across Limpopo province, South Africa. Supervisor: Prof. J. N. Edokpayi

Netshituni Takalani Vincent, _MSC Effects of ash from natives and alien plants on phytoplankton biomass and Mosquito abundances: A mesocosm experiment. Supervisor Dr.T Dalu Co-Supervisor Dr RN Cuthbert Co-Supervisor Mr Dondofema.

Sathekge Saphina Ntombikayise, MSC Assessment of co-occurrence of cyanotoxins, toxic metals and anionic surfactants in irrigation water, agricultural soils and food crops. Supervisor Prof. WM Gitari and Co-Co-Supervisor Dr R Mudzielwana Co-Supervisor Dr. V Nguere

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2023 MSc continued:

Singo Mukovhe Vele, MSc Climate change and fire regimes in Limpopo grasslands. Prof H Chikoore Co-Supervisor Dr, FM Murungweni Co-Supervisor Prof F A Engelbrecht.

Bongwe Vhungoho, MSc Comparison of spatial and spectral properties of Landsat-8 and Sentinel-2 data for mapping plant chlorophyll-a. Supervisor Dr. O. Malahlela.

Ramadolela Zwanga, MSc A comparative study of sediments characteristics of Sand river and Nzhelele river in Limpopo Province, South Africa. Prof BDO Odhiambo Co-Supervisor Dr E Kori.

Mapfumo Mulisa Norah, MSc Assessing the impact of small holder farming activities on wetland areas at Nzhelele Agricultural hub in Makhado local municipality Vhembe district in the Limpopo province, South Africa. Supervisor DR. F. Murungweni, Co-Supervisor Dr. O Malahlela.

Metwane Botete Carol, MSc Perspective on wetlands' cultural ecosystem services and wetland management practices in the Limpopo province, South Africa. Supervisor Dr. L Mugwedi, Co-Supervisor DR. F. Murungweni.

PhD 2023:

Ramaano Azwinndini Isaak, PhD Prospects of using the Tourism industry to advance community livelihoods in Musina Municipality, Limpopo Province, South Africa. Supervisor Dr. T. M. Nelwamondo, Co-Supervisor Prof BDO Odhiambo.

Kori Edmore, PhD Analysis of soil Erodibility and rainfall Erosity on the Soutpansberg Range, Limpopo Province South Africa. Supervisor Prof. BDO Odhiambo, Co-Supervisor Prof h Chikoore, Co-Supervisor Prof SC Van der Heever.

Pindihama Glynh Koziva, PhD Bioaccumulation of microcystins in terrestrial food plants and the development of novel sorbents to monitor their bioavailability in irrigation water. Supervisor Prof W.M Gitari, Co-Supervisor Msanagti Tam.

ADEEYO Rebecca Oyedooyin, PhD Modelling of air pollution and Evaluation of Human health Implications in Phalaborwa Mopani District, South Africa. Supervisor Prof J. N. Edokpayi, Co-Supervisor Prof R Makungo.

Mutshekwa Thendo, PhD Assessing the effects of MACADAMIA ORCHARDS pesticide inputs on recipient aquatic ecosystem. Supervisor Dr. T Dalu, Co-Supervisor Prof R J Wesserman

2023 Postgraduates:

Mkhonto Enny, MSc Analysis of land use and land cover change through medium to high-resolution satellite data: A case of Mokolo and Lephalala River Catchment in South Africa. Supervisor OE Malahlela, Co-supervisor FM Mathivha.

Ramotlou Moloko, MSc Characterizing the land use and land cover change within and around the historically disadvantaged institutions of higher learning in South Africa. Supervisor OE Malahlela, Co-supervisor MG Maponya.

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Postgraduates continued:

Munyai Frank, MSc Mapping of subtropical fruit trees species densities and distribution through remotely-sensed data: a case of Thulamela local municipality of South Africa. Supervisor OE Malahlela, Co-supervisor MG Maponya.

Munyai Frank, MSc Mapping of subtropical fruit trees species densities and distribution through remotely-sensed data: a case of Thulamela local municipality of South Africa. Supervisor OE Malahlela, Co-supervisor MG Maponya.

Mufamadi Ndivho Infosiar, MSc A multi-sensor approach for monitoring algal concentrations within Nandoni Dam reservoir of the Vhembe district, South Africa. Supervisor OE Malahlela, Co-supervisor L Mugwedi.

Rabohale Mokabolane Innocent, MSc Assessing the effects of sampling time on the accuracy of extracting water quality indicators through geospatial techniques: A case study of Rietvlei Dam. Supervisor OE Malahlela, Co-supervisor L Mugwedi.

Mavhina Murendeni Sharon, MSc Evaluating the biomass of palatable grass species in communal rangeland using the integration UAV data with high resolution satellite data.. Supervisor OE Malahlela, Co-supervisor FM Murungweni.

Nengudza Thendo, PhD Mapping of land use and land cover change and its potential impacts on the ecosystems services in the Vhembe Biosphere Reserve, South Africa. Supervisor OE Malahlela, Co-supervisor FM Murungweni.

Ramasunzi Ntanganedzeni, MSc Assessing indigenous knowledge systems for management of natural vegetation and water resources: A case study of Thulamela Local Municipality Communities. Supervisor MJ Mokgoebo, Co-supervisor NV Mudau.

Mashao Talifhani Brilliant, MSc Mapping roadkill in the Kruger National Park, South Africa. Supervisor EM Stam, Co-supervisor MJ Mokgoebo.

Msimango Vumboni Harry, MSc Population dynamics of the African four striped mouse, *Rhabdomys* sp. and other rodents in Lajuma nature reserve. Supervisor P Taylor, Co-supervisor G Ganem.

Phophi Lutendo, MSC Biological Control of *Chromolaena odorata*: Evaluating the Efficacy of a Biological Agent in Controlling Infestation in Piesanghoek, Limpopo province, South Africa. Supervisor EM Stam, Co-supervisor JN Steyn.

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2023 Postgraduates continued:

Ojelade Babatunde Solomon, PhD IMPACT OF SILVICULTURAL ACTIVITIES ON WATER QUALITY IN THATHE VONDO FOREST PLANTATION, LIMPOPO PROVINCE, SOUTH AFRICA. Supervisor P Adesoye, Co-supervisor O Durowoju.

Mudzanani Rainah Ntsemeni, MSc Assessing climatic and non-climatic impacts on smallholder maize production in Tshimapha Irrigation Scheme, Limpopo Province. Supervisor FM Murungweni, Co-supervisor H Chikoore.

Tshivhombela Tshilidzi Oscar, MSc Evaluating the impact of land-use change and natural hazards on wetlands deterioration, Northern Cape and Free State Provinces, South Africa. Supervisor FM Murungweni, Co-supervisor T Mutshekwa

Phadziri Dzivhulusani, MSc Abundance and distribution of alien invasive plant species along the riparian zones of a subtropical river system. Supervisor MJ Mokgoebo, Co-supervisor F Dondofema.

Mbulaheni Charlotte Vhutshilo, MSc Effects of seasonality on Luvuvhu River macroinvertebrates and water quality. Supervisor MJ Mokgoebo, Co-supervisor F Dondofema.

Phadziri Dzivhulusani, MSc Abundance and distribution of alien invasive plant species along the riparian zones of a subtropical river system. Siipervisor MJ Mokgoebo, Co-supervisor F Dondofema.

Nemalamangwa Ndishavhelafhi Emos, PhD Investigation of success and challenges of the Greater Giyani mega water supply project. Supervisor T Nelwamondo, Co-supervisor MJ Mokgoebo.

Mbulaheni Thinawanga, MSc An investigation into the challenges and benefits of invasive alien plant species, Guava (*Psidium guajava*) and prickly pear (*Opuntia ficus indica*) Molemole local municipality. Supervisor T Nelwamondo, Co-supervisor E. Ingwani.

Marakalala Emmanuel, PhD Synthesis of cellulose – zeolites Electrospun nanofibrous membranes for fluoride and pathogen removal from groundwater. Supervisor Dr R Mudzielwana, Co-supervisor Prof Gitari W. M.

Munzhelele Elisa Pandelani, PhD Synthesis of S-TiO₂ doped carbon nanotubes composites for Photocatalytic degradation of pharmaceutical contaminants in water. Supervisor Dr R Mudzielwana, Co-supervisor Prof Gitari W. M.

Tshotheli Happiness, MSc Synthesis of Zr/Ag metal oxides modified zeolite and its efficiency in fluoride and pathogens removal from water. Supervisor Dr Mudzielwana .

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2023 *Postgraduates*

continued:

Nemakanga Selby, MSc Synthesis of Zr/Ag metal oxides modified zeolite and its efficiency in fluoride and pathogens removal from water. Supervisor Dr R Mudzielwana, Co-supervisor Dr Ayinde W.B.

Novela Rirhandzu Jeaneth, PhD Air pollutants concentrations prediction using deep learning and cardiopulmonary disease prognosis in Highveld priority area, South Africa. Supervisor W.M.Gitari, Co-supervisor R Mudzielwana.

Ravele Vhutshilo, MSc Solid waste generation and collection for recycling: a case study of Thulamela Local Municipality, Thohoyandou. Supervisor Dr. N.V Mudau, Co-supervisor Mr. R Mulaudzi.

Dondofema Farai, PhD Modelling the Spatio-temporal distribution and productivity of Alien Plant Species using remote sensing and GIS techniques in the Vhembe Biosphere Reserve. **Supervisor** Prof NS Nethengwe, **Co-supervisor** Prof Taylor.

Magosha Tendani, PhD An evaluation of Public Participation Process in Environmental Impact Assessments of Selected Development Projects In The Vhembe District of South Africa. **Supervisor** Prof NS Nethengwe, **Co-supervisor** Dr NV Mudau.

Musumuvhi Ndamulelo, MSc Assessing Microbial Water Safety Risks in Five (5) Quaternary Catchments in Vhembe District Municipality: A GIS Approach. **Supervisor** Prof NS Nethengwe, **Co-supervisor** Mr F Dondofema.

Munzhedzi Lily, MSc An evaluation of the hydrological and farming infrastructure to withstand and adapt to flood projections in rural areas of Limpopo province. Supervisor Prof NS Nethengwe, Co-supervisor Dr E. Mugari.

Nwanamidwa Pfarelo, MSc Effectiveness of Flood Adaptation and Action Plans in Vhembe District Municipality. Supervisor Prof NS Nethengwe, Co-supervisor Dr E. Mugari.

Mashau Aluwani Shiridor, PhD The potential of three legumes (*Vigna unguiculata* L, *Cajanus cajan* and *Senegalia polyacantha*) in phytoextraction of metals in gold mine tailings and their implication for the phytomining of precious metals. Supervisor Prof W.M. Gitari, Co-supervisor Dr R. Mudzielwana.

Shumba Albert, PhD Development of an integrated acid mine drainage treatment process and recovery of beneficial products. Supervisor Prof W.M. Gitari, Co-supervisor Dr R. Mudzielwana.

Malema Mpho, MSc Assessment of Pharmaceutical waste management in Northern Region of South Africa. Supervisor Prof JN Edokpayi, Co-supervisor Dr Masindi V

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2023 Postgraduates continued:

Shiburi Winnie, MSc A comparative assessment of household flood vulnerability in Mbhokota and Waterval sections A and C in Makhado Local Municipality. Supervisor Prof NS Nethengwe, Co-supervisor Mr E Kori.

Mashamba _Muneiswa Quinton, MSc Application of hydroxyapatite nanoparticles obtained from eggshell waste for the removal of pollutants in poultry wastewater. Supervisor Dr R Mudzielwana, Co-supervisor GK Pindihama.

Mabidi Thinawanga Jennifer, MSc Synthesis of Acid Leached Diatomaceous Earth/ Amine-Functionalized Activated Carbon Composite and its Potential Application in Oily Wastewater Treatment. Supervisor Prof W.M. Gitari, Co-supervisor Dr R. Mudzielwana.

Mishasha Zwiito Osley, MSc Assessing an impact of solid waste disposal and waste management practices in rural area within Collins Chabane municipality. Supervisor NV Mudau, Co-supervisor R Mulaudzi.

Adeeyo Rebecca, PhD Modelling of Air Pollution and Evaluation of Human Health Implication in Mopani District, Limpopo Province South Africa. Supervisor Prof JN Edokpayi. Co-supervisor Prof Makungo

Njoku Prince, PhD Measurement of landfill gases, monitoring of the ambient air quality, and the implications of the managerial practices from rural landfills: A case study of Thohoyandou landfill, South Africa. Supervisor Prof JN Edokpayi, Co-supervisor Prof Makungo.

Aniyikaiye Tolulope, PhD ASSESSMENT OF PRIORITY AIR POLLUTANTS FROM BRICK MAKING INDUSTRY AND DEVELOPMENT OF MITIGATION STRATEGIES. Supervisor Prof JN Edokpayi, Co-supervisor Prof Stuart.

Enitan Ibronke PhD An Assessment of Air Quality with Respect to the Trend of Pollutants and Human Health Risks in Urban, Semi-urban and Rural Areas of Vhembe District, Limpopo Province, South Africa. Supervisor Prof JN Edokpayi, Co-supervisor Prof Stuart.

Manyatsha Khuthadzo, PhD Fuelwood species characterization and development of pollutants emission factors associated with fuelwood. Supervisor Prof JN Edokpayi, Co-supervisor Prof Stuart.

Matamba Aluwani MSc Quantification of air pollutant concentrations using the AERMOD model. Supervisor Prof JN Edokpayi, Co-supervisor Prof Stam.

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2023 Postgraduates

continued:

Ologundudu Oladipo, PhD Assessment of Endocrine Disrupting Compounds in Water Resources of The Vhembe Biosphere Reserve and Potential Remediation Strategies. Supervisor Prof JN Edokpayi, Co-supervisor Prof Msagati

Bassey_Odo Jones, PhD Impacts of Climate Variability on Cyanobacterial Proliferation and Cyanotoxins Bioaccumulation in Fish Species: Comparative Study of Aquaculture Fish Ponds In Nigeria and South Africa . Supervisor Prof JR Gumbo.

Makuya Asakundwi MSc Analysis of hydro-geomorphological hazards in Thulamela Municipality, Limpopo Province, South Africa. Supervisor Prof NS Nethengwe, Co-supervisor Dr E Kori.

Muzila Fulufhelo Marvelous MSc The influence of meteorological parameters on rainfall patterns and extreme weather events in Limpopo province. Supervisor Prof NS Nethengwe, CO-supervisor Dr E Kori.

Ramasunzi__Ntanganedzeni,__ MSc Assessing indigenous knowledge system for management of natural resources: A case study of Thulamela Local municipality communities. Supervisor MJ Mokgoebo, Co-supervisor NV Mudau.

Thovhogi Ntevheleni Justice, MSc The Impact of Nandoni Dam construction on Selected Indigenous plants species. Supervisor MJ Mokgoebo, Co-supervisor MH Ligavha-Mbelengwa.

Mudzielwana Humbelani, MSc Analysis of Geomorphological Hazards Associated with Soil and Gravel Extraction on Hillslopes of Thengwe village, Vhembe District, Limpopo, South Africa. Supervisor E. Kori, Co-supervisor MJ Mokgoebo.

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departmental
webpage:

<https://www.univen.ac.za/faculties/science-engineering-and-agriculture/geography-and-environmental-sciences/>

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Name of department:

- Geography Environmental Management and Energy Studies (GEMES)

Head of department:

- **Dr Schoeman DC** Lecturer; Waste management, recycling, e-waste & teachers training theas@uj.ac.za 011 559 3226

Information about the Geographers and their area of specialisation in the department:

- Prof. Curtis C; Professor- Biogeochemistry & Aquatic Science cjcurtis@uj.ac.za 011 559 4745
- Prof. Hoogendoorn G; Associate Professor- Tourism Geography ghoogendoorn@uj.ac.za 011 559 4628
- Prof. Kelso C; Associate Professor - Climate and Environmental History Rural livelihood vulnerability Impacts of climate change on rural livelihoods Environmental ethics and justice Historical climatology ckelso@uj.ac.za 011559 2432

- Dr Kganyago M; Lecturer - GIS & Remote Sensing mahlatsek@uj.ac.za 011 559 3645
- Prof Langerman K; Senior Lecturer- Energy Studies, Air Quality Management klangerman@uj.ac.za 011 559 2439
- Dr Modley L; Senior Lecturer- Environmental Monitoring and Management lee-annm@uj.ac.za 011 559 3928
- Prof. Musakwa W; Associate Professor wmusakwa@uj.ac.za 011 559 2428
- Dr Mushawemhuka WJ; Lecturer- Tourism and Climate change GIS & Remote sensing williamjm@uj.ac.za 011 559 3889
- Ms. Rabumbulu M; Lecturer- Geomorphology mrabumbulu@uj.ac.za 011 559 3302



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Geographers continued:

- Prof. Rampedi I; Associate Professor- Environmental Management isaacr@uj.ac.za 011 559 2429
- Prof. Sinthumule I; Senior Lecturer- Transfrontier Conservation, Environmental Conservation and Society Border Studies, Environmental Geography, Land Reform and Political Ecology & Traditional ecological knowledge isinthumule@uj.ac.za 011 559 3810
- Ms. Stockigt L; Lecturer- Human Geography lstockigt@uj.ac.za 011 559 4452
- Prof. Tesfamichael SG; Associate Professor- GIS & Remote Sensing sgtesfamichael@uj.ac.za 011 559 3927
- Prof. Yessoufou K; Associate Professor- Environmental Management kowiyouy@uj.ac.za 011 559 2434
- Mrs Salo-Prins I; Lecturer, Urban Studies inges@uj.ac.za 011 559 2173
- Ms. Hodgkinson S; Lecturer - Pro-environmental behaviour savannaleeh@uj.ac.za 011 559 4799
- Mr Phogole B; Lecturer - Environmental management, Ecosystem-based adaptation & Environmental epidemiology. bopakip@uj.ac.za 011559 4423

Exciting departmental news:

Prof C Curtis (GEMES) took over as Chair of the NRF-EFTEON Thematic Technical Committee on Biogeochemistry.

Prof C Curtis (GEMES) was interviewed and quoted in the Mail and Guardian on 14 December 2022 regarding the recent flooding in Johannesburg.

Dr T Schoeman (GEMES) hosted research partners, Dr Nora Bartolomé, Ms. DeaWherli and Mr Manuele Capelli, from Empa Switzerland during the 2nd week of January. The Swiss partners were in South Africa to familiarise themselves with the e-waste and lithium-ion battery recycling processes. Various visits to e-waste recycling companies were conducted as well as a field trip to the Cradle of Humankind.

Dr M Kganyago (GEMES) provided capacity building workshop on hyperspectral data collection and analysis, organized by the South African National Space Agency (SANSA) on 9 to 12 November 2022 at Loskop Dam in Limpopo and Mpumalanga.

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departmental news continued:

Dr Langerman (GEMES) was interviewed by Radio 702 and an editorial she contributed to, concerning Eskom's air quality and electricity crises was cited in an article in the Mail & Guardian.

Prof Curtis (GEMES) presented and his PhD student Mr Van Heyde presented at the NRF Global Change 5 Conference at the University of the Free State in January. Prof Curtis chaired the session "Minerals Carbonation" on the geosequestration of carbon dioxide in gold mine tailings.

The Faculty was represented by Dr Modley (GEMES), Prof Nomngongo (Chemical Sciences) (in-person) and Prof Curtis and Prof Malinga (virtually) at UN-Water Conference in March 2023 in New York City, as the JRC-WEST center. The center which is a joint center between science, engineering and water was the only research center in the country who received accreditation to the conference. The event focused on research to policy implementation and talks were given by the Deputy Director of the Department of Water and Sanitation, the Regional director from the International water management institute, and various directors from the Water Research commission.

Dr. Schoeman (GEMES) served as a scientific committee member of the World Resource Forum 2023 Conference and attended the conference in Geneva, Switzerland from 3-7 September.

Geography Organized School Outreach Project is a new and registered community engagement project within GEMES. Amongst other goals, the project is geared towards enriching and supplementing geography knowledge held by both teachers and learners in the Makapanstad School Circuit. The project also seek to create awareness about the importance of geography in society, related study fields and career guidance. Schools included in the project are middle schools and high schools in the respective circuit in the Moretele Local Municipality of the Northwest Province. The first meeting in Makapanstad with a representative from the UJ Department of Geography took place on the 16th May 2023 and was attended by over 50 educators, together with Geography Subject Advisers and the participants represented about 20 different schools in the region. On the 23rd September 2023, 56 educators from the circuit will receive structured training and knowledge enhancements offered by lecturers in GEMES. The training and capacity building will focus specifically on the teaching of topics such as Mapwork and GIS; Climatology and Geomorphology.

Prof. Rampedi and Dr. Schoeman have secured research project funding offered jointly by UJ PEETS and the Gauteng Department of Agriculture and Rural Development (GDARD). Their research project entail, amongst other objectives.

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departmental news

continued:

An assessment of the effectiveness of waste management practices and recycling rates amongst small, medium, and micro enterprises (SMMEs) in Mamelodi, Kagiso, Daveyton, and Soweto in the Gauteng province. Amongst other role players, the project involves the participation of about 15 Geography(GGR3B) students. The students are supported logistically to conduct questionnaire-administered interviews in the selected townships. This is part of their research training and the results obtained will feature in their minor dissertations due in October 2023.

Ph.D. students Phetoho Rasebechele and Bopaki Phogole from the Department of GEMES were 2 of 10 students selected from 39 abstracts to present their research at the student track of the Gauteng Environmental Research Conference. They were then voted as 2 of the top 5 presentations and have been invited to present their research at the Fifth Annual Gauteng Environmental Research Symposium.

Savannalee Hodgkinson (GEMES) won the first prize for the masters oral presentation category at the Annual Research Conference of the University of Johannesburg's Postgraduate School. The conference is hosted by the Research Capacity Development division of the post-graduate school, for the post-graduate students and the post-doctoral research fellows.

Her presentation was derived from her masters research and was entitled "Environmental motivations for the adoption of plant-based diets: A study of Johannesburg, South Africa." Savannalee is currently completing her research in the Department of GEMES under the supervision of Prof. Kelso and with the external supervision of Prof. Wagner in the Department of Psychology at the University of Pretoria.

The Department of GEMES postgraduate students presented their research at the South African Society for Geographers Student Conference, which was held at the University of Free State, Qwaqwa campus. Two of their students, one Honours (Ms. Nthabiseng Tsimo) and one Masters (Mr. Ngcebo Masilela), both won 2nd prize in their respective sections, for top paper. The students were accompanied by Dr. Kganyago and Mrs. Block. Students received positive feedback and great compliments from the academics in attendance and fellow students from other universities. As part of the conference students also visited the Basotho village with the Golden gate Nature Reserve.

GEMES students took the top 3 places in the student track of the Gauteng Environmental Research Symposium. First place went to Tebogo Maleka, second place to Phetoho Rasebechele and third place to Bopaki Phogole.

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2023/2024 List of publications:

Lemanski, C., 2023. Broadening the landscape of post-network cities: a call to research the off-grid infrastructure transitions of the non-poor. *Landscape Research*, 48(2), pp.174-186.

Shaaban, G., Fourati, H., **Kibangou, A.** and Prieur, C., 2023. MARG Sensor-Based Attitude Estimation On SO (3) Under Unknown External Acceleration. *IEEE Control Systems Letters*.

KC, B., Baniya, R., Singh, H.B. and Chapagain, B., 2023. Human-wildlife conflicts in a Nepalese protected area: conservation challenges, mitigation strategies, and policy implications. *GeoJournal*, 88(6), pp.5997-6010.

Rapholo, M.T.D., **Rampedi, I.T.** and Sengani, F., 2023. Tracing and Determining the Duration of Illegal Sand Mining in Specific River Channels in the Limpopo Province. *Sustainability*, 15(18), p.13299.

Kelso, C. and Giddy, J., 2023. A Post-Pandemic Perspective of Domestic Nature-based Tourism in Mpumalanga, South Africa.

Koot, S., 2023. The responsibility to consume: Excessive “environmentourism” against rhinoceros extinction in South Africa. In *Anthropology and Responsibility* (pp. 37-56). Routledge.

Mokoena, B.T., **Musakwa, W.** and Makoni, E.N., 2023. Creating a Land Suitability Index for the New Priority Human Settlements & Housing Development Areas: a Focus on Ekurhuleni, South Africa. *The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, 48, pp.553-558.

Morole, M.S., **Yessoufou Rampedi, I.T.** and **Modley, L.S. , K.Y., Bufo, S.A.**, , 2023. The impact of informal settlements on the surface water quality: a baseline analysis of the Kaalspruit in Tembisa township, South Africa. *Urban Water Journal*, 20(10), pp.1756-1765.

Coe, M.A. and Gaoue, O.G., 2023. Increased clonal growth in heavily harvested ecosystems failed to rescue ayahuasca lianas from decline in the Peruvian Amazon rainforest. *Journal of Applied Ecology*, 60(10), pp.2105-2117.

Omo-Okoro, P., Curtis, C. and Emenike, C., 2023. Current Trends in Wood Preservation with Emphasis on Approaches for the Remediation of Soils Contaminated with Pentachlorophenol and Creosote. *Journal of Soil Science and Plant Nutrition*, 23(4), pp.4788-4804.

Omo-Okoro, P., Curtis, C. and Emenike, C., 2023. Current Trends in Wood Preservation with Emphasis on Approaches for the Remediation of Soils Contaminated with Pentachlorophenol and Creosote. *Journal of Soil Science and Plant Nutrition*, 23(4), pp.4788-4804.

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Publications continued:

Musavengane, R. and **Musakwa, W.**, 2023. Climate Change Impacts on Wildlife Protected Areas in Southern Africa: a Bibliometric Analysis. *Studia Periegetica*, 44(4), pp.73-90.

Favier, G. and **Kibangou, A.**, 2023. Tensor-Based Approaches for Nonlinear and Multilinear Systems Modeling and Identification. *Algorithms*, 16(9), p.443.

Chabalala, Y., Adam, E. and **Kganyago, M.**, 2023. Mapping fruit tree dynamics using phenological metrics from optimal Sentinel-2 data and Deep Neural Network. *CABI Agriculture and Bioscience*, 4(1), p.51.

Mpofu, E., Radinger-Peer, V., **Musakwa, W.**, Penker, M. and Gugerehl, K., 2023. Discourses on landscape governance and transfrontier conservation areas: converging, diverging and evolving discourses with geographic contextual nuances. *Biodiversity and Conservation*, 32(14), pp.4597-4626.

Leal Filho, W., Salvia, A.L., Balogun, A.L., Pereira, M.J.V., Mucova, S.A.R., Ajulo, O.M., Ng, A., Gwenzi, J., Mashonjowa, E., Aina, Y.A. and Li, C., 2023. Towards more sustainable responses to natural hazards and climate change challenges via transformative adaptation. *Cities*, 141, p.104525.

Mufungizi, A.A., **Musakwa, W.** and Chanza, N., 2023. Shifting ecosystems, past, current, and emerging trends: A bibliometric analysis and systematic review of literature. *Ecological Indicators*, 156, p.111175.

Ismail, S., **Hoogendoorn, G.** and Müller, D.K., 2023. Review of the research on second homes and the environment. *Transactions of the Royal Society of South Africa*, 78(3), pp.217-226.

Kalaoane, R.C., Gumbo, T., **Kibangou, A.Y.**, Musakwa, W. and Musonda, I., 2023. Creating safe spaces: Scaling up public transport infrastructure investments in the City of Johannesburg. In *Smart and Resilient Infrastructure For Emerging Economies: Perspectives on Building Better* (pp. 119-124). CRC Press.

Dlamini, V., Samson, M., **Curtis, C.** and O'Brien, G., 2022. Co-opting small-scale fishers' knowledge with scientific data to improve understanding of fish community structures in the Lower Komati River, South Africa. *Marine and Freshwater Research*, 74(2), pp.111-124.

Sigasa, M.N., **Yessoufou, K.**, Magadlela, A., Otang-Mbeng, W. and Suinyuy, T.N., 2023. Population Structure of an African Cycad: Fire May Stimulate the Coning Phenology of *Encephalartos lanatus* (Zamiaceae) and Also Predispose Its Cones to Damage. *Diversity*, 15(10), p.1075.

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Publications continued:

Kgomo, T.J. and Modley, L.A.S., 2023. Do younger generations care more about environmental issues? A comparison of perceptions between Gen Z and Gen X in Johannesburg, South Africa. *South African Geographical Journal*, 105(3), pp.402-421.

Phogole, B. and Yessoufou, K., 2023. Greener Neighbourhoods Show Resilience to the Spread but Not Severity of COVID-19 Infection in South Africa. *Sustainability*, 15(19), p.14508.

Mzimba, P.T., Langerman, K.E. and Calitz, J., 2023, January. The Cost Implications of Operating a Coal-Fired Power Plant in a Cycling Mode. In *2023 31st Southern African Universities Power Engineering Conference (SAUPEC)* (pp. 1-6). IEEE.

Mzimba, P.T., Langerman, K.E. and Calitz, J., 2023, January. The Cost Implications of Operating a Coal-Fired Power Plant in a Cycling Mode. In *2023 31st Southern African Universities Power Engineering Conference (SAUPEC)* (pp. 1-6). IEEE.

Birendra, K.C., 2023. From Pre-Pandemic to Post-Pandemic Struggles to Meet Sustainable Development Goals. *Indonesian Journal of Tourism and Leisure*, 4(1), pp.1-15.

Waheed, M., Haq, S.M., Arshad, F., Busmann, R.W., Pieroni, A., Mahmoud, E.A., Casini, R., Yessoufou, K. and Elansary, H.O., 2023. Traditional wild food plants gathered by ethnic groups living in semi-arid region of Punjab, Pakistan. *Biology*, 12(2), p.269.

Toso, T., Kibangou, A.Y. and Frasca, P., 2023. Impact on traffic of delayed information in navigation systems. *IEEE Control Systems Letters*.

Koot, S., Grant, J., //Khumûb, M., Fernando, K., Mushavanga, T., Dommerholt, T., Gressier, C., Pienaar, D., /Ui Kunta, S., Puckett, R.F. and Paksi, A., 2023. Research codes and contracts do not guarantee equitable research with Indigenous communities. *Nature Ecology & Evolution*, 7(10), pp.1543-1546.

Majola, C.M.D. and Langerman, K.E., 2023. Energy efficiency in the South African mining sector: A case study at a coal mine in Mpumalanga. *Journal of the Southern African Institute of Mining and Metallurgy*, 123(9), pp.451-462.

Lemanski, C. and Massey, R., 2023. Is the grid people or product? Relational infrastructure networks in Cape Town's energy-housing nexus. *Urban Geography*, 44(7), pp.1305-1329.

Shikwambana, L., Kganyago, M. and Xulu, S., 2022. Analysis of wildfires and associated emissions during the recent strong ENSO phases in Southern Africa using multi-source remotely-derived products. *Geocarto international*, 37(27), pp.16654-16670.

Yessoufou, K., 2023. The patterns of intraspecific variations in mass of nectar sugar along a phylogeny distinguish native from non-native plants in urban greenspaces in Southern England. *Plants*, 12(18), p.3270.

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Publications continued:

Thawabteh, A.M., Naseef, H.A., Karaman, D., **Bufo, S.A.**, Scrano, L. and Karaman, R., 2023. Understanding the risks of diffusion of cyanobacteria toxins in rivers, lakes, and potable water. *Toxins*, 15(9), p.582.

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Maruapula, K., **Yessoufou, K.Y.** and Modley, L.S., 2023. Community perceptions, participation, and satisfaction with existing Water Resource Management Plans: a case study of a polluted water system in South Africa. *AQUA—Water Infrastructure, Ecosystems and Society*, 72(8), pp.1373-1385.

Omo-Okoro, P.N., Adeiga, O.I., Velempini, T., Prabakaran, E., Curtis, C.J. and Pillay, K., 2023. Nickel ion removal from aqueous media using polyaniline–macadamia nutshells and its reuse for photodegradation of orange dye. *International Journal of Environmental Science and Technology*, 20(8), pp.8655-8672.

Tesfamichael, S.G., Shiferaw, Y.A. and Woldai, T., 2023. Forecasting monthly soil moisture at broad spatial scales in sub-Saharan Africa using three time-series models: evidence from four decades of remotely sensed data. *European Journal of Remote Sensing*, 56(1), p.2246638.

Aziz, A., Anwar, M.M., Majeed, M., Fatima, S., Mehdi, S.S., Mangrio, W.M., Elbouzidi, A., Abdullah, M., Shaukat, S., Zahid, N. and Mahmoud, E.A., 2023. Quantifying landscape and social amenities as ecosystem services in rapidly changing peri-urban landscape. *Land*, 12(2), p.477.

Marcińczak, S., Mooses, V., Strömgren, M. and Tammaru, T., 2023. A comparative study of immigrant-native segregation at multiple spatial scales in urban Europe. *Journal of Ethnic and Migration Studies*, 49(1), pp.43-65.

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Publications continued:

Marcinićzak, S., Mooses, V., Strömgren, M. and Tammaru, T., 2023. A comparative study of immigrant-native segregation at multiple spatial scales in urban Europe. *Journal of Ethnic and Migration Studies*, 49(1), pp.43-65.

Phillips, T., **Gaoue, O.G.**, Lenhart, S. and Strickland, W.C., 2023. Modeling the effects of size-dependent harvesting strategies on the population dynamics of tropical trees. *Mathematical Biosciences*, 355, p.108953.

Cardellicchio, F., **Bufo, S.A.**, Mang, S.M., Camele, I., Salvi, A.M. and Scrano, L., 2022. The bio-patina on a hypogeum wall of the matera-sassi rupestrian church "San Pietro Barisano" before and after Treatment with Glycoalkaloids. *Molecules*, 28(1), p.330.

Ochieng, A., Koh, N.S. and **Koot, S.**, 2023. Compatible with conviviality? Exploring African ecotourism and sport hunting for transformative conservation. *Conservation and Society*, 21(1), pp.38-47.

Moutouama, J.K. and **Gaoue, O.G.**, 2023. Effects of range and niche position on the population dynamics of a tropical plant. *Ecology*, 104(4), p.e3990.

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Publications continued:

Mathetsa, S.M., Simatele, M.D. and **Rampedi, I.T.**, 2023. Applying the participatory approach to assess the Water-Energy-Climate Change nexus in South Africa. *Development Southern Africa*, 40(3), pp.696-712.

Acquavia, M.A., Tesoro, C., Pascale, R., Ostuni, A., Matera, I., Bianco, G., Scrano, L., **Bufo, S.A.**, Ciriello, R., Di Capua, A. and Lelario, F., 2023. Legal Cannabis sativa L. Dried Inflorescences: Cannabinoids Content and Cytotoxic Activity against Human HepG2 Cell Line. *Applied Sciences*, 13(8), p.4960.

Thakholi, L. and **Koot, S.**, 2023. Black Belonging, White Belonging: Primitive Accumulation in South Africa's Private Nature Reserves. *Antipode*, 55(3), pp.935-957.

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Lemanski, C., 2023. Broadening the landscape of post-network cities: a call to research the off-grid infrastructure transitions of the non-poor. *Landscape Research*, 48(2), pp.174-186.

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Booyens, I., **Hoogendoorn, G.**, Langerman, K. and Rivett-Carnac, K., 2024. Path creation for an electricity transition in South African tourism. *Tourism Geographies*, 26(2), pp.194-213.

Sinthumule, N.I., 2024. An analysis of policy and legal framework on wetland conservation and management in South Africa. *Watershed Ecology and the Environment*.

Mbana, Z. and **Sinthumule, N.I.**, 2024. What is there to drink? Water (in) justice in the democratic South Africa. *Frontiers in Water*, 6, p.1354477.

Kganyago, M., Adjorlolo, C. and Mhangara, P. (2024) 'Optimizing Sentinel-2 feature space for improved crop biophysical and biochemical variables retrieval using the novel spectral triad feature selection algorithm', *Geocarto International*, 39(1). doi: 10.1080/10106049.2024.2309174.

Shaaban, G., Fourati, H., **Kibangou, A.** and Prieur, C., 2023, September. Gyro-free Kalman filter with unknown inputs for SO (3)-based attitude estimation. In *2023 13th International Conference on Indoor Positioning and Indoor Navigation (IPIN)* (pp. 1-6). IEEE.

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF JOHANNESBURG

***M**Sc & PhD Graduations*

and supervisors:

Masebinu, Roseline Oluremi (Energy Studies) **MSc** Assessing the potential for flexible demand side management in the steel industrial sector in South Africa. **Supervisor:** Dr N Kambule

Chamasula, Victoria (Geography) **MA** Reconciling indigenous and scientific knowledge to address the issue of land degradation: A case study of Balaka in Malawi, section D to be fixed conditionally if fixed. **Supervisor:** Ms M Rabumbulu

Dlepu, Sanelisiwe (Environmental Management) **MSc** The prevalence of environmental crimes: working towards effective environmental crime prevention in South Africa **Supervisor:** Prof K Yessoufou

Mahlangu, Promise Ntombifuthi (Geography) **MSc** Urban renewal and South African Townships: The case of Kliptown, Soweto **Supervisor:** Prof G Hoogendoorn **Co-Supervisor:** Prof G Visser (Stellenbosch University)

MSc

Nethavhani, Elelwani Constance (Environmental Management) **MSc** Seasonal variations and trends of nitrates and phosphates concentration along the Boesmanspruit River in Mpumalanga Province **Supervisor:** Prof I Rampedi **Co-Supervisor:** Dr F Sengani (University of Limpopo)

Sikhitha, Mulanga (Environmental Management) **MSc** Environmental and Social Impact Assessment of illegal sand mining in Matangari and Tshiombo villages in the Limpopo Province, South Africa **Supervisor:** Prof K Yessoufou.

Zwane, Mbali Innocentia (Environmental Management) **MSc** Training evaluation of Gauteng waste pickers in the repair of e-waste. **Supervisor:** Dr T Schoeman

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***Link to
departmental page***

<https://www.uj.ac.za/faculties/science/geography>

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UNIVERSITY OF WESTERN CAPE

Name of department:

- Geography and Environmental Studies & Tourism

Head of department:

- Associate Professor Bradley Rink

Information about the Geographers and their area of specialisation in the department:

- **Prof Bradley Rink**, Associate Professor (Department Chairperson 2022-2024)

Bradley is a human geographer, focusing his research and teaching on mobilities, urban place-making, identities, and tourism. His research foregrounds mundane and subaltern mobilities to make them visible in the everyday movements and circulations of African cities. Through his research, teaching and community engagement, he aims to better understand mobilities and the relationships they articulate between urban dwellers and the cities in which they live.

- **Prof Shirley Brooks**, Associate Professor
Shirley is a human geographer focusing on human-environment relationships, in particular postcolonial landscapes of conservation and land in Southern Africa. She teaches in the fields of nature-society relations and the political geography of land.

In addition to working within a political ecology framework, she is interested in the quintessentially geographical theme of landscape meanings and contestations. Together with her students, she has explored Human and Non-human Geographies, focusing on Wilderness and Wildness as well as Animal Geographies.

- **Dr Mbulisi Sibanda**, Senior Lecturer
Mbulisi is a Senior Lecturer specialising in GIScience and Earth Observation Data Applications. He is a rated researcher by SA National Research Foundation with research interests in GIScience and Geospatial Data Applications in monitoring plant water use and productivity analysis, resource modelling as well as land-use change. His recent research projects as the research leader and a researcher are in the application of GIScience and Geospatial Data in Water Utilisation for Poverty Reduction and Wealth Creation in Agriculture. These projects are based on his recent research interest in the application of drone technologies in monitoring smallholder croplands. He teaches mostly physical and quantitative techniques in Geography.



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Geographers continued:

- **Dr Mark Boekstein**, Research Fellow

Mark's main interest in both teaching and research is tourism, particularly tourism's potential to contribute to economic development. While his teaching focuses on the planning, development, and marketing of sustainable, community-based tourism, his research interests include health and wellness tourism and the use of thermal springs for healing purposes, and English language learning as a tourist attraction. He also has an interest in developments around Cape Town as a gateway for tourism to Antarctica and the sub-Antarctic islands.

- **Dr Mandy Carolissen**, Lecturer

Mandy is a physical geographer with teaching and research interests in integrated water resource management, catchment hydrology, ecosystem services, and the dynamic physical processes that shape our landscapes. Her current research focuses on understanding the spatial and temporal availability of water and storage of a depression wetland (using in-situ hydrological data and remote sensing), and to relate these to ecosystem services.

- **Prof Jonathan Crush**, Extraordinary Professor

More details on Jonathan and his research can be found here:

<https://www.balsillieschool.ca/jonathan-crush/>

- **Dr Michael Dyssel**, Lecturer

Michael's research and teaching interests include conservation and environmental management, urban-ecological challenges, the impacts of tourism, and mapwork. As a way of bridging (sub) disciplinary boundaries in Geography, transdisciplinary and multi-methods research and teaching approaches underpin his work.

- **Dr Tinashe P. Kanosvamhira** Lecturer
Tinashe is an urban geographer in the department. His research interests are drawn from a broad range of socio-spatial issues including, urban governance, livelihood strategies of the urban poor, urban food security, urban food systems, and neoliberal urbanism. His current research focuses on political gardening within the context of neoliberal urbanism in global South cities. He has previously served as a Teaching Assistant and Part-time Lecturer in the department. Dr Tinashe Kanosvamhira has also received the 'Best Paper Award' by the Society's Student and Young Professionals group (SnP).

- **Mr David Frenchman**, Senior Officer
David is the IT administrator in the Department and part of the Academic Support Staff in the Faculty. His work relates primarily to managing both undergraduate and postgraduate computer laboratories. However, he also offers GIS support to staff and students. He is solely responsible for the installation and maintenance of GIS software in the laboratories. GIS support involves compiling and issuing datasets for research and publications.

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Geographers continued:

• **Mr Logan Plaatjies**, Administrative Officer

Logan was appointed as Administrator in the Department in 2020, having worked in the Recruitment Office, Afrikaans Dept, isiXhosa Dept and now at the Geography, Environmental and Tourism Studies Dept at UWC since 2015. Previously, he worked at UNISA and in the private sector at Shell Oil, but it is the academic environment that he has become attached to.

• **Prof Daniel Tevera**, Extraordinary Professor

Daniel's research is located at the interface of Human Geography and Development Studies with Southern Africa as the geographical focus. His early work focused on livelihoods and spatial strategies in the informal economy, migration geographies, and environmental security. However, it is the domain of food and the city that his recent work focuses on. He has served as an expert participant in policy debates around Temporary Labour Migration Schemes in small countries (Commonwealth), African migration (United Nations Economic Commission for Africa), and Migration Policy Framework for Africa (African Union). For three successive years, Daniel organised field trips for third-year and honours students to the hotly contested Philippi Horticultural Area (PHA).

• **Dr Erin Torkelson**, Postdoctoral Fellow

Erin is a human geographer interested in the collision between normative assumptions about cash transfers as public goods and the lived experience of cash transfers as private debts in the Global South. Her work sits at the intersection of political economy, development studies, critical race theory, feminist kinship studies, and postcolonial science and technology studies. Her current project, Bantustan Banking, explores how a preeminent, state-sponsored cash transfer programme has become a means of racialised and gendered dispossession in post-apartheid South Africa. She examines the everyday practices by which poor, black South African women navigate their entitlements to social assistance against the pressures of expropriation built into the payment system.

• **Ms Musfiqah Majiet**, Associate Lecturer
Musfiqah Majiet is a human geographer focusing on state-led housing. Her research interests are rooted in urban geography with a keen interest in spatial patterns pertaining to gated developments, state-led housing projects and the politics and geographies thereof, housing policy and implementation. Her research interests sit at the intersection of social justice pertaining to housing and addressing geographical challenges in the global South. Her current work focuses on the GAP housing programme in South Africa.

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Geographers continued:

- **Ms Mercia Southon**, Lecturer

Mercia is a Tourism Geographer who joined the department in February 2023 specialising in human geography and tourism development. Mercia is interested in analysing contemporary tourism development patterns with the use of different geographical components across the global South. Her current work focuses on how socio-political and economic changes in a post-apartheid South Africa contributes to rural change and the development of rural tourism. Research interests: rural tourism, land-use change and tourism, game farming and tourism, tourism planning and debates in global niche tourism.

- **Mr Lindokuhle Khumalo**, Associate Lecturer

Lindokuhle is a human geographer who joined the department in January 2023 focusing on society and nature relations. His research interests include human dimensions of conservation, environmental justice, land issues, the informal sector and decolonial geographies. Lindokuhle has a project underway that studies land reform beneficiary communities in the South African province of KwaZulu-Natal who have voluntarily committed large tracts of their land to nature conservation. Through the lens of political ecology, he investigates the impacts of conservation on their livelihoods and environmental behaviour.

Exciting departmental news:

- **Dr Tinashe Kanosvambira - Emerging Researcher Best Paper Award 2023:**

Dr Tinashe Kanosvambira was awarded second prize for the Society of South African Geographers (SSAG) Student and Young Professionals group (SnP) 'Emerging Researcher Best Paper Award 2023' for his manuscript entitled "Rethinking the selling of agro-ecological harvest post-pandemic in urban community gardens in Cape Town, South Africa". Dr Kanosvambira also hosted a discussion workshop entitled 'The Evolution of my Ph.D. Journey and Beyond' to share doctoral degree insights and inspire the SSAG-SnP group.

- **Prof Bradley Rink - TAU Fellowship:** As a result of his successful completion of programme requirements, Prof Bradley Rink was confirmed as a lifetime Teaching Advancement at Universities (TAU) Fellow in 2023. Prof Rink was part of the TAU4 cohort—the fourth since inception of the DHET funded programme which seeks to build a cadre of teaching fellows in a wide range of disciplines and aims to contribute towards the enhancement of teaching and learning in higher education in South Africa by supporting the development of academics across institutions and disciplines as scholars, leaders and mentors in their fields.

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Departmental news continued:

Along with a range of programme requirements and tasks, Prof Rink completed an institutional project entitled *For Slow teaching: Courageous and compassionate pedagogy in times of change*. The project sought to explore the application of Slow teaching practices within a first year module GES111 Introduction to Human Geography.

Dr Mbulisi Sibanda - Emerging Excellent Lecturer Award: Dr Mbulisi Sibanda was recognised by the Faculty of Arts & Humanities with the achievement of the Emerging Excellent Lecturer Award for 2023.

2023/2024 List of publications:

Rink, B. (2023). Public space on the move: Mediating mobility, stillness and encounter on a Cape Town bus. *Urban Studies*, 60(15), 3027-3044.

<https://doi.org/10.1177/00420980221088123>

Rink, B. (2023) Emplacing students through everyday mobilities: From practice to theory, *Transfers*, 13(1/2): 55–67.

<https://doi.org/10.3167/TRANS.2023.13010205>

Morgan, N. and Rink, B. (2023). The Past in Present African Urban Mobility Systems: Towards a Mobilities *Longue Durée*. *Urban Forum*, 34(4): 413–418.

<https://doi.org/10.1007/s12132-023-09501-2>

Morgan, N. and Rink, B. (Eds) (2023). The Past in Present African Urban Mobility Systems, Special Issue of *Urban Forum*, Vol. 34(4).

M Vawda, R Lottering, O Mutanga, K Peerbhay, M Sibanda (2024) Comparing the utility of Artificial Neural Networks (ANN) and Convolutional Neural Networks (CNN) on Sentinel-2 MSI to estimate dry season aboveground grass biomass. *Sustainability* 16 (3), 1501.

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF WESTERN CAPE

Publications continued:

Sibanda, M., Ndlovu, H.S., Brewer, K., Buthelezi, S., Matongera, T.N., Mutanga, O., Odidndi, J., Clulow, A.D., Chimonyo, V.G. and Mabhaudhi, T., 2023. Remote sensing hail damage on maize crops in smallholder farms using data acquired by remotely piloted aircraft system. *Smart Agricultural Technology*, 6, p.100325.

Maake, R., Mutanga, O., Chirima, G., & Sibanda, M. (2023). Quantifying Aboveground Grass Biomass Using Space-Borne Sensors: A Meta-Analysis and Systematic Review. *Geomatics*, 3(4), 478-500.

Mpakairi, K. S., Dube, T., Sibanda, M., & Mutanga, O. (2023). Fine-scale characterization of irrigated and rainfed croplands at national scale using multi-source data, random forest, and deep learning algorithms. *ISPRS Journal of Photogrammetry and Remote Sensing*, 204, 117-130.

Abrahams, M., Sibanda, M., Dube, T., Chimonyo, V.G. and Mabhaudhi, T., 2023. A systematic review of UAV applications for mapping neglected and underutilised crop species' spatial distribution and health. *Remote Sensing*, 15(19), p.4672.

Bangira T, Mutanga O, Sibanda M, Dube T, Mabhaudhi T. Remote Sensing Grassland Productivity Attributes: A Systematic Review. *Remote Sensing*. 2023 Apr 12;15(8): 2043.

Mutanga, O., Masenyama, A. and Sibanda, M., 2023. Spectral saturation in the remote sensing of high-density vegetation traits: A systematic review of progress, challenges, and prospects. *ISPRS Journal of Photogrammetry and Remote Sensing*, 198, pp.297-309.

Buthelezi, S., Mutanga, O., Sibanda, M., Odindi, J., Clulow, A.D., Chimonyo, V.G. and Mabhaudhi, T., 2023. Assessing the prospects of remote sensing maize leaf area index using UAV-derived multi-spectral data in smallholder farms across the growing season. *Remote Sensing*, 15(6), p.1597.

Masenyama, A., Mutanga, O., Dube, T., Sibanda, M., Odebiri, O. and Mabhaudhi, T., 2023. Inter-Seasonal Estimation of Grass Water Content Indicators Using Multisource Remotely Sensed Data Metrics and the Cloud-Computing Google Earth Engine Platform. *Applied Sciences*, 13(5), p.3117.

Gokool, S., Mahomed, M., Kunz, R., Clulow, A., Sibanda, M., Naiken, V., Chetty, K. and Mabhaudhi, T., 2023. Crop monitoring in smallholder farms using unmanned aerial vehicles to facilitate precision agriculture practices: a scoping review and bibliometric analysis. *Sustainability*, 15(4), p.3557.

Crush, J. (Ed). (2023). *Transforming Food Systems in Secondary Cities in Africa* (London: Palgrave Macmillan).

Crush, J. (2023). "Food Security, Equitable Development and South-South Migration: Towards a Research Agenda" *International Migration*, 61: 341-344.

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

UNIVERSITY OF WESTERN CAPE

Publications continued:

Crush, J. (2023). "Governing for Food Security During the COVID-19 Pandemic in Wuhan and Nanjing, China." *Urban Governance* 3(2): 106-115.

Crush, J. (2023). "The Nanjing Model: Comprehensive Food System Governance, Localization and Urban Food Security in China" *Global Food Security* 38: 100709.

Crush, J. (2023). "Pathways to Food Insecurity: Migration, Hukou and COVID-19 in Nanjing, China. *Population, Space and Place* 29(1): 1-15.

Crush, J. (2023). 'A Foreigner is Not a Person in This Country': Xenophobia and the Informal Sector in South Africa's Secondary Cities" *Urban Transformations* 5: 2.

Crush, J. (2023). "Opportunity and Survival in the Urban Informal Food Sector of Namibia." *Businesses* 3(1): 129-149.

Crush, J. (2023). "COVID-19 and Urban Food Security in Ghana During the Third Wave." *Land* 12(2): 504.

Crush, J. (2023). "Food Insecurity and Dietary Deprivation: Migrant Households in Nairobi, Kenya." *Nutrients* 15(5): 1215.

Crush, J. (2023). "Urban Food Insecurity and the Impact of China's Affordable Food Shop (AFS) Program: A Case Study of Nanjing City." *Applied Geography* [154](#): 102924

Crush, J. (2023). "Food Insecurity, Food Sourcing and Food Coping Strategies in the OOO Urban Corridor, Namibia" In L. Riley and J. Crush (eds.), *Transforming Food Systems in Secondary Cities in Africa* (London: Palgrave Macmillan), pp. 169-190.

Crush, J. (2023). "African Secondary Food Systems in Context" In L. Riley and J. Crush (eds.), *Transforming Food Systems in Secondary Cities in Africa* (London: Palgrave Macmillan), pp. 1-24.

Kanosvamhira TP. (2024). Urban Agriculture and the Sustainability Nexus in South Africa: Past, Current, and Future Trends. *Urban Forum* 35, 83–100.

Kanosvamhira. T.P. (2023). The institutionalisation of urban community gardens in Cape Town, South Africa. *AREA*. DOI: 10.1111/AREA.12911

Kanosvamhira. T.P. Follmann, A. & Tevera. D. (2023). Experimental urban commons?: Re-examining urban community food gardens in Cape Town, South Africa. *The Geographical Journal*. DOI: 10.1111/geoj.12553

Kanosvamhira TP. (2023). How do we get the community gardening?: grassroots perspectives from urban gardeners in Cape Town, South Africa. *Journal of Cultural Geography*. <https://doi.org/10.1080/08873631.2023.2187509>

Kanosvamhira. T.P. Follmann, A. & Tevera. D. (2023). Experimental urban commons?: Re-examining urban community food gardens in Cape Town, South Africa. *The Geographical Journal*. DOI: 10.1111/geoj.12553

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Publications continued:

Tevera, D. (2023). Secondary Cities and Urban Agriculture in Sub-Saharan Africa, In: Riley, L., and Crush, J. (Eds). Book: Transforming Urban Food Systems in Secondary Cities in Africa, (London: Palgrave Macmillan), pp. 133-147.

Popular and non-accredited publications

Erin Torkelson, Melisew Djenne Lemma, Nathanael Ojong and Ebenezer Owusu-Addo. "The Urgent Need for Expanded Cash Transfers in Africa." UN Office of the Special Advisor for Africa. New York: United Nations.

Patrick Bond, Milford Bateman, Lena Lavinas and Erin Torkelson. "Grant Distribution Failures Foil Financial Inclusion." *Independent Online*. 23 September 2023.

Erin Torkelson, Abby May and Michael Marchant. "Net1 and CPS: Welfare Profiteers." *Daily Maverick*. 25 May.

Patrick Bond, Milford Bateman, Lena Lavinas and Erin Torkelson. "Appointment of World Bank President Ajay Banga Threatens More Prolific Bank Poverty Creation." *Counterpunch*. 14 April.

Patrick Bond, Milford Bateman, Lena Lavinas and Erin Torkelson. "New World Bank President Ajay Banga's Predatory Finance Background." *ZNet*. 13 April.

Patrick Bond, Milford Bateman, Lena Lavinas and Erin Torkelson. "Incoming World Bank President Ajay Banga's Promotes Predatory Financial Inclusion." *Committee for the Abolition of Illegitimate Debt*. 12 April.

Olsen, Jared, "Can the World Bank's New CEO Change Their Toxic Lending Practices?" *Truth Dig*. 6 September 2023.

Jomo Kwame Sundaram, "Debt-Pushing as Financial Inclusion," *Interpress Service*. 4 October 2023.

Kanosvamhira, T. P. (2024). Healthy food is hard to come by in Cape Town's poorer areas: how community gardens can fix that. The Conversation. <https://theconversation.com/healthy-food-is-hard-to-come-by-in-cape-towns-poorer-areas-how-community-gardens-can-fix-that-215742>

Kanosvamhira, T., Follmann, A., and Tevera, D. (2023) Cultivating hope: urban community gardens as beacons of resilience in the neoliberal city – a case study in Cape Town, South Africa. *Geography Directions*. <https://doi.org/10.55203/MTCY3667>

Sithole, S., Tevera, D., & Dinbabo, M. F. (2023). Emerging Digital Technologies and Cross-Border Food Remittances of Zimbabwean Migrants in Cape Town, South Africa, During the Early COVID-19 Pandemic. *MiFood Paper No. 9*, Waterloo.

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UNIVERSITY OF WESTERN CAPE

MA and PhD
graduations 2023 and
supervisors:

Link to departmental
webpage:

MA:

A Burgess, 'Assessing sense of place amongst returnees of District Six, Cape Town'
(Supervisor: Bradley Rink)

M Majiet, 'Gated communities for the working class: A Cape Flats case study'
(Supervisor: Bradley Rink)

<https://www.uwc.ac.za/study/all-areas-of-study/departments/department-of-geography-environmental-studies-and-tourism/overview>

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MEMBERS AFFILIATED TO SSAG NOT WORKING IN GEOGRAPHY DEPARTMENTS

Prof. Clinton David van der Merwe

Department of Humanities Education, Faculty of Education, University of Pretoria, South Africa. clinton.vandermerwe@up.ac.za

Clinton van der Merwe teaches Geography Education in the BEd and PGCE Programmes at the University of Pretoria. He is a C2 NRF-Rated researcher with a keen interest in Geography Education, Pedagogy, Assessment and Cultural and Heritage Tourism. Clinton is the founding editor of JoGEA (the Journal of Geography Education in Africa) - <https://upjournals.up.ac.za/index.php/jogea>. Clinton supervises 8 postgraduate students and is an avid parkrunner. A list of publications and graduated students from 2023/2024 - Antonio Sikerete (MEd)

A list of publications and graduated students from 2023/24:

- van der Merwe, C. D. (2024). **Contested Heritage(s) – The Case(s) of the Battle of Blood River (December 16th, 1838), Dundee and Nquthu, South Africa.** *Modern Geografía*, 19(2), 109–125. <https://doi.org/10.15170?MG.2024.19.02.07>.
- Nakazwe, K.M., & van der Merwe, C. D. (2024). **Newly Qualified Teachers and Their Preparedness as Geography Teachers in Zambia.** *Didáctica Geográfica*, <https://doi.org/10.21138/DG.705>.
- van Eck, Z., Wassermann, J., & van der Merwe, C. D. (2023). **Grade 6 primary school learners' views on minibus taxis and their drivers.** *South African Journal of Childhood Education*, 13(1), 10. <https://doi.org/10.4102/sajce.v13i1.1320>.
- Warinda, P., & van der Merwe, C. D. (2023). **Tourism and recreation in protected areas: An exploration of community-based tourism and local participation in Zimbabwe.** *Studia Periegetica*, 43(3), 65–86. <https://doi.org/10.58683/sp.574>.
- van der Merwe, C. D. and Timothy, D. J. (2023). **Industrial Heritage Tourism in Africa: Prospects and Challenges.** In D. J. Timothy (Ed). *Cultural Heritage and Tourism in Africa*. Routledge: London. <https://doi.org/10.4324/9781003153955-12>.



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Gauteng City-Region Observatory

The GCRO is not a teaching and learning Geography department, but is an urban research unit with a focus on Gauteng. Institutionally, it is a partnership between the University of Johannesburg (UJ); the University of the Witwatersrand (Wits University); the Gauteng Provincial Government (GPG); and South African Local Government Association (SALGA). It employs an interdisciplinary grouping of researchers including a number of graduates of Geography programmes. In November 2023, the GCRO [celebrated its 15 year anniversary](#).

Head of organisation:

- **Rashid Seedat**

GCRO researchers

- Richard Ballard, Human Geographer with a focus on spatial transformation.
- Fiona Els, Epidemiologist researching the detection of pathogens in waste water.
- Graeme Gotz, urban researcher with a particular interest in governance.
- Ebrahim-Khalil Hassen, labour economist working on inclusive economies.
- Christian Hamann, Geographer focusing on urban desegregation.
- Ebrahim-Khalil Hassen, Economist with an interest in public policy analysis and inclusive economies.
- Samkelisiwe Khanyile, Geographer researching post mining landscapes.
- Phemelo Mahamuza, GIS intern.
- Gillian Maree, Urban Planner specialising in sustainability and environmental management.
- Shamsunisaa Miles-Timotheus, Demographer with an interest in population studies and sexual and reproductive health.
- Sthembiso Pollen Mkhize, Human Geographer with an interest in geographies of sexuality and youth health.
- Themani Mkhize, Planner interested in urban governance and social issues.

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GCRO researchers continued:

- Mamokete Modiba, Planner researching the governance of informal enterprises.
- Ngaka Mosiane, Human Geographer with an interest in urban peripheries.
- Brian Murahwa, Planner with an interest in urban and regional planning, migration and religious urbanism.
- Darlington Mushongera, Planner researching the governance of infrastructure.
- Laven Naidoo, Geographer using Earth Observation technologies to measure environmental indicators.
- Yashena Naidoo, Geographer using Geoinformatics to measure social indicators.
- Pedzisai Ndagurwa, Demographer with an interest in family demography and population health.

2022/23 Publications and research outputs

GCRO Research Reports, Occasional Papers and Monthly outputs

Els, F., Seleka, T. and Maree, G. (2023). Photo essay: Sewersheds: What can wastewater tell us about community health? 5 September 2023.

Götz, G., Ballard, R., Hassen, E.K., Hamann, C., Mahamuza, P., Maree, G., Miles-Timotheus, S., Modiba, M. Murahwa, B. Mushongera, D., Naidoo, L., Naidoo, Y., Ndagurwa, P. (2023). Statistical surprises: Key results from Census 2022 for Gauteng. GCRO Rapid Research Paper. Johannesburg: Gauteng City-Region Observatory. <https://doi.org/10.36634/PTPX7414>

Petersen, C. and Mkhize, S. P. (2023). Intersections of intimate partner violence and food insecurity in Gauteng. Vignette 44. Gauteng City-Region Observatory. April 2023. <https://doi.org/https://doi.org/10.36634/ULAF7237>

Culwick Fatti, C. and Khanyile, S. (2023). Justice implications of household access to alternative water and electricity. Vignette 43. Gauteng City-Region Observatory. February 2023. <https://doi.org/10.36634/EGZT1696>

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MEMBERS AFFILIATED TO SSAG NOT WORKING IN GEOGRAPHY DEPARTMENTS

GCRO Publications Continued:

Ballard, R., Mahamuza, P., Naidoo, L. (2023). Patterns of voter participation in the 2019 elections. Map of the Month. Gauteng City Region Observatory. November 2023. <https://doi.org/10.36634/KSCM1484>

Masters Students on The Politics, Economics and Governance of Extended Urbanisation course, University of the Witwatersrand, and UCL, City Co-Labs module, MASc Global Urbanism. (2023). Extended urbanisation of the GCR: gender, commuting, migration and belonging. Map of the Month. Gauteng City-Region Observatory. August 2023. <https://doi.org/https://doi.org/10.36634/ROWC8845>

Naidoo, L., Ballard, R., Naidoo, Y., Maree, G., Khanyile, S., Palacios Lopez, D. and Esch, T. (2023). Unveiling housing disparities: Leveraging Earth Observation and population data to estimate building volume per person Gauteng. Map of the Month. Gauteng City-Region Observatory. July 2023. <https://doi.org/10.36634/MFZU7642>

Mkhize, T. and Naidoo, Y. (2023). Gender and race representation in street renaming in Pretoria/Tshwane. Map of the Month. Gauteng City-Region Observatory. June 2023. <https://doi.org/10.36634/YNCH9140>

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