



# SSAG

SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

# SSAG NEWS 2024/25

SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

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# SSAG NEWS 2024/25

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## FOREWORD

Since the last SSAG newsletter (2023/24), our Society has seen both change and continuity. We continue to stand steadfast in our commitment to nurturing an inclusive and representative Society of Geographers across the country. A legacy of our past president - Jennifer Fitchett (Wits) - is that our Council now has representation from all nine provinces, including all Geography departments in South Africa. This newsletter too has extended its reach to include news from members who are not part of geography departments or affiliated with academic institutions. You will notice that the format of the newsletter differs this year, to move away from departmental lists and numbers, to capture instead the character of our varied departments. While the world is focused on big data and accessing information easily through technology, we are of the view that the numbers are less significant than articulating our essence and distinctiveness, individually and collectively. As geographers, we are sensitive to the role of context that both facilitates and hinders what success looks like and how it is measured. The intention of the 2025/2026 newsletter is to celebrate the achievements of all South African geographers – regardless of geography, career stage or sub-disciplinary focus.

**President:** Prof Zarina Patel, University of Cape Town, Department of Geographical and Environmental Science.

Website: <http://www.ssag.co.za/>



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## FOREWORD

The past two years have certainly given us much to celebrate. South African Geographers were well represented (over 70 strong) at the International Geographer's Union Conference held in Dublin. We were particularly proud to have witnessed our Society's past president - Mike Meadows (UCT) - perform his last duties as his term as President of the IGU came to an end. A few weeks later, the University of the Northwest hosted a vibrant and exciting biannual conference in Potchefstroom. The conference was a wonderful opportunity to learn from one another through the varied papers presented, as well as the informal opportunities to meet old and new friends. A highlight of the conference was the awarding of Fellowships and Gold Medals to geographers who have consistently and significantly contributed to our discipline. These awardees serve as inspiration and as role models to the Society. We are excited about the forthcoming Student Conference that will be hosted by University of Johannesburg (3-5th September). This conference is a formative opportunity for the next generation of geographers to meet, exchange and bond. Looking into 2026, the University of Mpumalanga will be hosting the next biannual conference. An awesome opportunity for field trips and conversations in a geographically rich location.

The South African Geography Journal is another site of change and continuity. In 2025, we saw the end of Ashley Gunter's (UNISA) term as editor and welcomed Sinthumule (Innocent) Ndidizulafhi (UJ) as Human Geography Editor; with David Hedding (UNISA) continuing in his role as Physical Geography editor. The editorial team are meeting more regularly with their board and are growing the journal from strength to strength. The writing workshops convened by Adrian Nel (UKZN) and Onesimo Mutanga (UKZN) at the biannual conference and student conference provide further opportunities to strengthen and amplify the scholarship of South African geographers.



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## SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

In keeping with the times, the SSAG has a social media presence on Facebook and X (formerly Twitter). We encourage you to follow our accounts, and to submit content on events and activities to JJ Gregory (UP), who holds our social media portfolio. Other changes in our efforts to communicate across and between the Society include the weekly updates received by Society members. Two exciting developments coming up in the next months will include a revamped Society website and a new Society logo.

Finally, I'd like to thank the Newsletter portfolio holders, Nerhene Davis (UP) and Munyaradzi Manjoro (SPU) for their tireless efforts to put this Newsletter together. To facilitate and improve information sharing across the Society, we encourage departments to create SSAG Liaison portfolios. We sincerely hope that you will enjoy paging through the newsletter, that you will learn new things about departments and colleagues near and far, and that these points of commonality bring us closer as a community of geographers.

Zarina Patel

9th June 2025



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## NORTH-WEST UNIVERSITY

Department of Geography and Environmental Studies

Prof. Adeline Ngie (Vaal), Prof. Claudine Roos (Potchefstroom) (for 2025 while Prof. Livhu NemaKonde is on sabbatical leave)

Geographers' Specialisations Within The Department

Title	Last Name	Initials	Position	Specialisation(s)
Prof	Palamuleni	LG	Professor	Applied remote sensing and water resources management
Dr	Ayob	N	Senior lecturer	GIS, severe weather and climatology
Dr	Dlamini	SQ	Lecturer	Climate change, environmental management and sustainability
Dr	Drummond	JH	Senior lecturer	Socio-economic and spatial legacies within the African context
Prof	Munyati	C	Associate professor	environmental analysis, vegetation analysis using remote sensing
Dr	Myeni	L	Senior lecturer	climatology
Miss	Nkosi	NC	Lecturer	air quality, geomorphology, water-borne diseases, climate change, science communication
Mrs.	Van Gessellen	N	Lecturer	aquatic ecosystem health and marine ecotoxicology
Dr	Ah Goo	DFS	Senior Lecturer	urban regeneration, urban informality, sustainable livelihoods
Dr	Belelie	MD	Senior Lecturer	climate change, air quality, and earth observation
Dr	Boshoff	DS	Senior Lecturer	fire science and fire events
Dr	Dlamini	ME	Senior Lecturer	freshwater ecosystem ecology, remote sensing, gis

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## NORTH-WEST UNIVERSITY

### Geographers' Specialisations Within The Department

Title	Last Name	Initials	Position	Specialisation(s)
Mr.	Hoffmann	E	Lecturer	GIS, hydrology, environmental impact studies
Prof	Ngie	A	Subject chair; associate professor	GIS, and remote sensing application in agriculture and urban climates
Prof	Burger	RP	Professor	Atmospheric science and climatology
Prof	Cilliers	DP	Associate professor	Environmental management, conservation planning, spatial analysis
Dr	Coetzee	C	Associate professor	Disaster risk studies, disaste resilience, disaster risk governance and urban disaster risk
Dr	De klerk	TC	Senior lecturer	Geographical Information Systems
Dr	Havenga	H	Senior lecturer	Anthropogenic impact on storms, ambient air pollution, climatology, remote sensing, gis
Dr	Language	B	Senior lecturer	Physical geography, geomorphology, atmospheric science, air pollution, climate change
Prof	Nemakonde	LD	Professor	Disaster risk governance, climate change adaptation, systems thinking, community resilience
Dr	Roos	C	Subject chair; associate professor	Environmental management, waste management, protected areas

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# NORTH-WEST UNIVERSITY

### Geographers' Specialisations Within The Department

Title	Last Name	Initials	Position	Specialisation(s)
Dr	Sibiya	NP	Lecturer	climate change adaptation, community resilience, rural and urban livelihoods
Prof	Van Niekerk	D	Professor	disaster risk governance, resilience building, complexity and complexity theory, anticipatory governance, building institutional capacities for disaster risk reduction, transdisciplinary disaster risk reduction
Prof	Piketh	SJ	Professor; Director: School For Geo- And Spatial Sciences	atmospheric science

### Exciting Departmental News

#### **Geography staff promoted in January 2025**

- Prof Livhu NemaKonde from Associate Professor to Professor
- Prof Adeline Ngie from Senior Lecturer to Associate Professor
- Dr Nisa Ayob from Lecturer to Senior Lecturer
- Dr Monray Belelie from Lecturer to Senior Lecturer

#### **Special Recognitions**

- Dr Nomfundo Sibiya (NWU 2024 Novice Teaching Award Winner) (link: <https://news.nwu.ac.za/excellence-awards-recognise-staff-who-excelled-their-areas-expertise> )

- Prof Stuart Piketh was awarded the Mathieu Rouault Medal – the highest honour in South African atmospheric sciences awarded to Prof. Stuart Piketh in 2024 (<https://news.nwu.ac.za/society-atmospheric-sciences-awards-highest-honour-field-nwu-researcher> )
- At the IAIA Conference in Dublin (2024) Prof. Dirk Cilliers and Prof. Claudine Roos (with other co-authors) were awarded IAPA Best Paper Award (2023) for their work on Understanding the psychology behind significance judgments in environmental impact assessments (<https://www.iaia.org/awards.php> )

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### 2025 List of Publications

Alberts, R. C., Hauptfleisch, M., Retief, F. P., Roos, C., Cilliers, D. P., Atuyama, J., & others. (2025). Developing a deliberative-Delphi method for informing national conservation capacity development strategies. *The Journal of Environment & Development*, 34(1), 101-125.

Belelie, M. D., Burger, R. P., von Holdt, J. R. C., Garland, R. M., Liswaniso, G. Thomallo, S.J & Piketh, S. J. (2025). Namib desert dust affects phytoplankton biomass in the Benguela upwelling region: Insights from first mesocosm study. *Continental Shelf Research*, 285, 105400.

Benyon, M., Kwatala, N., Laban, T., Kapwata, T., Batini, C., Cai, S., Micklesfield, L. K., Panchal, R., Kunene, S., Zondo, S. B., Language, B., Wernecke, B., Hazelhurst, S., Gómez-Olivé, F. X., Vande Hey, J., & Wright, C. Y. (2025). Household PM2.5 in a South African urban and rural setting: A comparative analysis using low-cost sensors. *Atmospheric Pollution Research*, 102459. <https://doi.org/10.1016/j.apr.2025.102459>

Chikuse, S., van Niekerk, D., & Cilliers, D. (2025). Common hazards and prioritisation of livelihoods resilience building in Malawi: A deterministic spatial approach. *Environmental Hazards*, 1-27. <https://doi.org/10.1080/17477891.2025.1234567>

Di Antonio, L., Di Biagio, C., Formenti, P., Gratien, A., Michoud, V., Cantrell, C., Bauville, A., Bergé, A., Cazaunau, M., Chevaillier, S., Cirtog, M., Coll, P., D'Anna, B., de Brito, J. F., De Haan, D. O., Dignum, J. R., Deshmukh, S., Favez, O., Flaud, P.-M., Gaimoz, C., Hawkins, L. N., Kammer, J., Language, B., Maisonneuve, F., Močnik, G., Perraudin, E., Petit, J.-E., Acharja, P., Poulain, L., Pouyes, P., Pronovost, E. D., Riffault, V., Roundtree, K. I., Shahin, M., Siour, G., Villenave, E., Zapf, P., Foret, G., Doussin, J.-F., & Beekmann, M. (2025). Aerosol spectral optical properties in the Paris urban area and its peri-urban and forested surroundings during summer 2022 from ACROSS surface observations. *Atmospheric Chemistry and Physics*, 25(5), 3161-3189. <https://doi.org/10.5194/acp-25-3161-2025>

Du Toit, N., Steenkamp, P., van Niekerk, D., & Groenewald, A. (2025). Analysing the characteristics of post-disaster funding that make it susceptible to the risk of economic crime: A South African frame of reference. *Journal of Financial Crime*, 32(2), 304-320. <https://doi.org/10.1108/JFC-09-2024-0158>

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### 2025 List of Publications

Gharbi, D., Neumann, F. H., Staats, J., McDonald, M., Linde, J., Mmatladi, T., Podile, K., Piketh, S., Burger, R., Garland, R. M., Bester, P., Lebre, P. H., & Ricci, C. (2025). Prevalence of aeroallergen sensitization in a polluted and industrialized area: A pilot study in South Africa's Vaal Triangle. *Environmental Monitoring and Assessment*, 197(3), 1-15.

Giorio, C., Monod, A., Di Marco, V., Herckes, P., Napolitano, D., Sullivan, A., Tapparo, A., & Journet, E. (2025). Contrasting solubility and speciation of metal ions in total suspended particulate matter and fog from the coast of Namibia. *EGUsphere*, 2025, 1-31.

Motsumi, M. M., & Nemaakonde, L. D. (2025). Coping with COVID-19 using traditional medicine: Perspectives from Joe Morolong, Northern Cape. *Health SA Gesondheid* (Online), 30, 1-12. *Health SA Gesondheid*.

Mpofu, B. F., Kgabi, N., & Piketh, S. (2025). Analysing seasonal rainfall trends in the Cuvelai-Etosha Basin 1968–2018. *Jambá: Journal of Disaster Risk Studies*, 17(1), 8.

Nde, S. C., Palamuleni, L. G., Aruwajoye, G. S., Massoukou, R. Y. M., Richard, G., Felicite, O. M., & Bett, S. K. (2025). Human health risk assessment of potentially toxic elements in soils and rice grains (*Oryza sativa*) using a combination of probabilistic indices and carcinogenic risk modelling. *Journal of Hazardous Materials Advances*, 100664.

Njoku, P. O., Makungo, R., Piketh, S. J., & Edokpayi, J. N. (2025). Quantification and modelling of methane and carbon dioxide surface emissions from a South African landfill. *Environmental Science: Advances*.

Pereira, D. L., Giorio, C., Gratien, A., Zherebker, A., Noyalet, G., Chevaillier, S., Alage, S., Almarj, E., Bergé, A., Bertin, T., Cazaunau, M., Coll, P., Di Antonio, L., Harb, S., Heuser, J., Gaimoz, C., Guillemant, O., Language, B., Lauret, O., Macias, C., Maisonneuve, F., Picquet-Varrault, B., Torres, R., Triquet, S., Zapf, P., Hawkins, L., Pronovost, D., Riley, S., Flaud, P.-M., Perraudin, E., Pouyes, P., Villenave, E., Albinet, A., Favez, O., Aujay-Plouzeau, R., Michoud, V., Cantrell, C., Cirtog, M., Di Biagio, C., & Formenti, P. (2024). Molecular characterization of organic aerosols in urban and forested areas of Paris using high-resolution mass spectrometry. *EGUsphere*, 2024, 1-29. <https://doi.org/10.5194/egusphere-2024-1>

Retief, F. P., Alberts, R. C., Cilliers, D., Roos, C., Moolman, J., & Bond, A. (2025). Unique features of environmental impact assessment (EIA) in protected areas (PAs)—towards best practice principles. *Impact Assessment and Project Appraisal*, 1-8.

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### 2025 List of Publications

Roos, C., Alberts, R. C., Retief, F. P., & Cilliers, D. P. (2025). Exploring the contribution of Ndumo Game Reserve to scientific research and literature: 1988 to 2023. *African Journal of Wildlife Research*, 55(sp1).

Segakweng, C. K., Van Zyl, P. G., Liousse, C., Gnamien, S., Gardrat, E., Beukes, J. P., Jaars, K., Dumat, C., Guinot, B., Josipovic, M., Burger, R. P., Piketh, S. J., & Xiong, T. (2025). Oxidative potential of atmospheric particulate matter collected in low-income urban settlements in South Africa. *Environmental Science: Atmospheres*, 5(1), 48-66.

Wright, C. Y., Benyon, M., Diab, R. D., Naidoo, N., Kwatala, N., Kunene, S., Batini, C., Micklesfield, L. K., Cai, S., Panchal, R., Zondo, S. B., Language, B., Wernecke, B., Hazelhurst, S., Gómez-Olivé, F. X., & Vande Hey, J. (2025). Assessing the human health risks of indoor PM<sub>2.5</sub> exposure in urban and rural households in two provinces of South Africa. *Atmospheric Environment*, 343, 120996.

<https://doi.org/10.1016/j.atmosenv.2025.120996>

### 2024 List of Publications

Ah Goo, D. (2024). The essence of displacement: A phenomenological analysis of inner-city residents' experiences in South Africa. *Indo-Pacific Journal of Phenomenology*, 24(1), e2343675.

Alberts, R. C., Retief, F. P., Bond, A. J., Roos, C., & Cilliers, D. P. (2024). What future for protected areas? Analysing the mismatch between South Africa's pre-existing protected areas system and the declared vision in contemporary conservation policy. *Environmental Management*, 74(6), 1274-1286.

Alberts, R., Retief, F., Bond, A., Roos, C., & Cilliers, D. (2024). Assessment abuse in African protected areas. *Science*, 386(6725), 981-981.

Aniyikaiye, T. E., Piketh, S. J., & Edokpayi, J. N. (2024). A spatial approach to assessing PM<sub>2.5</sub> exposure level of a brickmaking community in South Africa. *Journal of the Air & Waste Management Association*, 74(5), 345-358.

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### 2024 List of Publications

Bol, G. K., & van Niekerk, D. (2024). Application of African indigenous knowledge systems and practices for climate change and disaster risk management for policy formulation. *International Journal of Disaster Risk Reduction*, 111, 104670. <https://doi.org/10.1016/j.ijdrr.2024.104670>

Bond, A., Cilliers, D., Retief, F., Alberts, R., Roos, C., & Moolman, J. (2024). Using an artificial intelligence chatbot to critically review the scientific literature on the use of artificial intelligence in environmental impact assessment. *Impact Assessment and Project Appraisal*, 42(2), 189-199.

Bond, A., Retief, F. P., Alberts, R. C., Roos, C., Cilliers, D. P., & Moolman, J. (2024). What would environmental impact assessment look like if we started from scratch today? Designing better EIA for developed neoliberal nations. *Impact Assessment and Project Appraisal*, 42(5), 410-422.

Bond, A., Retief, F., Morrison-Saunders, A., Pope, J., Alberts, R. C., Roos, C., & Cilliers, D. (2024). Investigating communication of findings in environmental impact assessment and developing a research agenda for improvement. *Environmental Impact Assessment Review*, 105, 107453.

Boshoff, D. S. (2024). Understanding fire regimes: A biogeographical perspective. *Jámhá: Journal of Disaster Risk Studies*, 16(1), 1-5. <https://doi.org/10.4102/jamba.v16i1.1163>

Botha, G., Burger, R. P., & Havenga, H. (2024). A radar-based methodology for aerosol plume identification and characterisation on the South African Highveld. *Atmosphere*, 15(10), 1201. <https://doi.org/10.3390/atmos15101201>

Chikoore, H., Mbokodo, I. L., Singo, M. V., Mohomi, T., Munyai, R. B., Havenga, H., Mahlobo, D. D., Engelbrecht, F. A., Bopape, M.-J. M., & Ndarana, T. (2024). Dynamics of an extreme low temperature event over South Africa amid a warming climate. *Weather and Climate Extremes*, 44, 100668. <https://doi.org/10.1016/j.wace.2024.100668>

Chipangura, P., van Niekerk, D., Mangara, F., & Zembe, A. (2024). Organisational vulnerability: Exploring the pathways. *Disaster Prevention and Management: An International Journal*, 33(6), 16-29. <https://doi.org/10.1108/DPM-09-2023-0275>

Cilliers, D. P., Retief, F. P., Roos, C., Alberts, R. C., Moolman, H. J., & Bond, A. (2024). Towards glint and glare impact assessment best practice. *Impact Assessment and Project Appraisal*, 42(5), 498-504.

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### 2024 List of Publications

Cohen, C., Kleynhans, J., Moyes, J., McMorrow, M. L., Treurnicht, F. K., Hellferscee, O., Wolter, N., Martinson, N. A., Kahn, K., Lebina, L., Mothlaoleng, K., Wafawanaka, F., Gómez-Olivé, F. X., Mkhencele, T., Mathunjwa, A., Carrim, M., Mathee, A., Piketh, S., Language, B., von Gottberg, A., & Tempia, S. (2024). Incidence and transmission of respiratory syncytial virus in urban and rural South Africa, 2017-2018. *Nature Communications*, 15(1), 116. <https://doi.org/10.1038/s41467-023-42978-1>

Covele, A. A., van Niekerk, D., & Cilliers, D. (2024). Statutory and policy-based eco-disaster risk reduction in SADC member states. *Jambá: Journal of Disaster Risk Studies*, 16(2), 1799. <https://doi.org/10.4102/jamba.v16i2.1799>

Dall'Amico, L., Kleynhans, J., Gauvin, L., Tizzoni, M., Ozella, L., Makhasi, M., Wolter, N., Language, B., Wagner, R. G., Cohen, C., Tempia, S., & Cattuto, C. (2024). Estimating household contact matrices structure from easily collectable metadata. *PLoS One*, 19(3), e0296810. <https://doi.org/10.1371/journal.pone.0296810>

Drummond, J. (2024). Contested heritage in South Africa: Perspectives from Mahikeng. *Modern Geografía*, 19(2), 91-108.

Desboeufs, K., Formenti, P., Torres-Sánchez, R., Schepanski, K., Chaboureau, J.-P., Andersen, H., Cermak, J., Feuerstein, S., Laurent, B., Klopper, D., Namwoonde, A., Cazaunau, M., Chevaillier, S., Feron, A., Mirande-Bret, C., Triquet, S., & Piketh, S. J. (2024). Fractional solubility of iron in mineral dust aerosols over coastal Namibia: A link to marine biogenic emissions? *Atmospheric Chemistry and Physics*, 24(2), 1525-1541.

Hauptfleisch, M., Tembo, D., Alberts, R., Cilliers, D., Uiseb, K., Cloete, C., Retief, F., Roos, C. & others. (2024). Exploring implications of elephant movements between land use types in an arid savannah landscape. *Pachyderm*, 65, 119-131.

Havenga, H., Coetzee, B., Burger, R. R., & Piketh, S. J. (2024). Response to Simpson (2024): Standard heat stress indices may not be appropriate for assessing marathons. *South African Journal of Science*, 120(1-2), 1-2.

Havenga, H., Gharbi, D., Sewry, N., Language, B., Neumann, F. H., Finch, J. M., Hill, T., Boulter, J., Jordaan, E., Piketh, S.J. Schweltnus, M. Burger, R.P. (2024). Healthy environments for athletes (HEAT): Environmental conditions along a 90 km ultra-marathon event, South Africa. *International Journal of Biometeorology*, 68(9), 1757-1771

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Havenga, H., Verster, J., & Sewry, N. (2024). Assessing PM2.5 exposure during athletic events in South Africa: Implications for athletes' respiratory health. *British Journal of Sports Medicine*, 58(Suppl 2), A37-A38. <https://doi.org/10.1136/bjsports-2024-FO68>

Jabar, L., Siebert, S. J., Pfab, M. F., & Cilliers, D. P. (2024). Ecology, population biology and conservation status of *Euphorbia schoenlandii* Pax, an endemic to the Succulent Karoo, South Africa. *South African Journal of Botany*, 170, 48-60. <https://doi.org/10.1016/j.sajb.2024.01.001>

Koen, T., Coetzee, C., Kruger, L., & Puren, K. (2024). Assessing the integration between disaster risk reduction and urban and regional planning curricula at tertiary institutions in South Africa. *The Journal for Transdisciplinary Research in Southern Africa*, 20(1), 1451. <https://doi.org/10.4102/td.v20i1.1451>

Korstanje, R., Janusz, K., Van Rompaey, A., & Roos, C. (2024). Barriers to municipal solid waste management policy implementation: A case study in KwaZulu-Natal, South Africa. *South African Geographical Journal*, 106(3), 323-339.

Kruger, L., Sandham, L., & van Niekerk, D. (2024). Streamlining social impact assessment and disaster risk assessment for the 21st century: Perspectives from South Africa. *Current Sociology*, 72(4), 718-731. <https://doi.org/10.1177/0011392122112827>

Kruger, L., Sandham, L. A., & van Niekerk, D. (2024). Integrating risk assessment for increased social resilience: Lessons from South Africa. *Sustainable Development*, 32(2), 1564-1570. <https://doi.org/10.1002/sd.2227>

Letlaila, F., Ayob, N., Nkosi, C., & de Necker, L. (2024). Historic water quality patterns in endemic schistosomiasis regions of southern Africa: Implications for disease vector distribution. *Physics and Chemistry of the Earth, Parts A/B/C*, 135, 103657. <https://doi.org/10.1016/j.pce.2024.103657>

Magadza, T. T., Coetzee, C., & Kruger, L. (2024). The relativity of perspective: Exploring the disconnect between Indigenous and Western paradigms of disaster risk perception. *Disaster Prevention and Management: An International Journal*, 33(6), 43-56. <https://doi.org/10.1108/DPM-03-2024-0194>

Mahamba, C., & Palamuleni, L. G. (2024). Sunflower (*Helianthus annuus*) seeds as a natural coagulant for water turbidity treatment: Assessment of efficacy and dosage. *Applied Water Science*, 14(8), 168.

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### 2024 List of Publications

Mohomi, T., Mbatha, N. B., Boshoff, D. S., Mbokodo, I. L., Ndarana, T., Bopape, M. J. M., ... (2024). Attributing impacts of LULCC on the boundary layer climate of South Africa's eastern escarpment. *Journal of Earth System Science*, 133(4), 178. <https://doi.org/10.1007/s12040-024-01792-w>

Motsumi, M. M., & NemaKonde, L. D. (2024). A framework to integrate indigenous knowledge into disaster risk reduction to build disaster resilience: Insights from rural South Africa. *Disaster Prevention and Management: An International Journal*, 33(6), 73-85.

Mukwevho, P., Radzuma, P., & Roos, C. (2024). Exploring barriers to the effective implementation of integrated waste management plans in developing economies: Lessons learned from South African municipalities. *Sustainability*, 16(22), 9643.

Mukwevho, P., Retief, F., Burger, R., & Moolna, A. (2024). Identifying critical assumptions and risks in air quality management planning using Theory of Change approach. *Clean Air Journal*, 34(1), 1-19. National Association for Clean Air.

Myeni, L., Mahleba, N., Mazibuko, S., Moeletsi, M. E., Ayisi, K., & Tsubo, M. (2024). Accessibility and utilization of climate information services for decision-making in smallholder farming: Insights from Limpopo Province, South Africa. *Environmental Development*, 51, 101020.

Nde, S. C., Felicite, O. M., Aruwajoye, G. S., & Palamuleni, L. G. (2024). A meta-analysis and experimental survey of heavy metals pollution in agricultural soils. *Journal of Trace Elements and Minerals*, 9, 100180.

NemaKonde, L. D., & Kunguma, O. (2024). Revealing the boon and bane of South Africa's disaster management legislation during COVID-19. *Jambá: Journal of Disaster Risk Studies*, 16(1), 1689.

Ngie, A. (2024). A self-reflection on providing companionship through supervision approaches of postgraduate students in geography. *Open Science Journal*, 9(2).

Nyahunda, L., NemaKonde, L. D., & Khoza, S. (2024). Exploring the determinants of disaster and climate resilience building in Zimbabwe's rural communities. *Natural Hazards*, 120(11), 10273-10291.

Palamuleni, L. G., Nde, S. C., du Plessis, Y., & Bakuwa, R. C. (2024). Water conservation by managers at the workplace: Examination of attitudes and behaviour using the theory of planned behaviour. *Physics and Chemistry of the Earth, Parts A/B/C*, 136, 103721.

# SSAG NEWS 2024/25

SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## NORTH-WEST UNIVERSITY

### 2024 List of Publications

Ranaivombola, M., Bègue, N., Fazel-Rastgar, F., Sivakumar, V., Krysztofiak, G., Berthet, G., Jegou, F., Piketh, S., & Bencherif, H. (2024). Characterization of AOD anomalies in September and October 2022 over Skukuza in South Africa. *EGUsphere*, 2024, 1-40.

Roffe, S., Myeni, L., Rapolaki, R., Bello, Z., Moeletsi, M., Mazibuko, S., .(2024). Identifying climatic risks and relevant adaptation strategies for selected smallholder farming regions, Limpopo Province, South Africa. *South African Geographical Journal*, 1-20.

Van Gessellen, N., & Bouwman, H. (2024). Are metal concentrations in lesser flamingo eggs and eggshells good indicators of environmental pollution? *Archives of Environmental Contamination and Toxicology*, 88(1), 39-54.

Verster, R., Ghosh, P. N., Sewell, T. R., Garner, T. W. J., Fisher, M. C., Muller, W., Cilliers, D., & Weldon, C. (2024). Environment predicts *Batrachochytrium dendrobatidis* lineage distribution and zones of recombination in South Africa. *Ecology and Evolution*, 14(2), e11037.  
<https://doi.org/10.1002/ece3.11037>

Zembe, A., NemaKonde, L. D., Chipangura, P., Coetzee, C., & Mangara, F. (2024). A technological perspective of bringing climate change adaptation, disaster risk reduction, and food security together in South Africa. *Sustainability*, 16(16), 6844.  
<https://doi.org/10.3390/su16168444>

# SSAG NEWS 2024/25

SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## NORTH-WEST UNIVERSITY

### Masters and Doctoral Graduations and Supervisors

Student	Degree	Title	Supervisor
Baloyi-Chauke	M in Environmental Management (Dissertation)	Environmental Impact Assessment (EIA) report quality for hazardous waste treatment facilities in South Africa	Prof LA Sandham
Kachidza	M in Environmental Management with Waste Management (Dissertation)	Exploring beneficial uses of Ecklonia maxima waste residue	Prof C Roos
Maphosa	M in Environmental Management with Waste Management (Dissertation)	Perceptions of teachers on the implementation of the waste management hierarchy within secondary schools	Prof C Roos
Modiba	M in Environmental Management with Waste Management (Dissertation)	Investigating solid waste management in unserviced rural areas: A case study of Matobole Village, Limpopo Province	Prof C Roos

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## NORTH-WEST UNIVERSITY

### Masters and Doctoral Graduations and Supervisors

Student	Degree	Title	Supervisor	Supervisor 2
Moeng	M Environmental Management (Dissertation)	in Challenges in implementing environmental requirements for construction of electricity infrastructure: Perspectives of non- environmental project team members	Prof FP Retief	Prof DP Cilliers,
Van der Walt	MSc Environmental Science (Dissertation)	in Impacts of coal-fired power plants on aerosol particles in the Highveld	Prof RM Garland	Prof RP Burger,
Ayob	PhD Environmental Science (Thesis)	in The impact of climate change on the distribution patterns of Schistosoma transmitting snails in South Africa	Prof DP Cilliers	Prof RP Burger,
Kai	PhD Environmental Science Disaster Risk Science (Thesis)	in African Indigenous Perspectives on Climate Change and Disaster Risk Nexus	Prof D van Niekerk	

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## NORTH-WEST UNIVERSITY

### Masters and Doctoral Graduations and Supervisors

Student	Degree	Title	Supervisor	Supervisor 2
Mhlanga	M in Environmental Management with Waste Management (Dissertation)	Perceptions on integrating informal waste tyre dealers into the formal waste sector: Emalahleni Local Municipality	Prof C Roos	Prof R Schenck
Mojapelo	MSc in Geography and Environmental Management (Dissertation)	Determining the sensitivity of flood risk assessment to different multiple criteria analysis	Prof DP Cilliers	Prof C Coetzee
Belelie	PhD in Environmental Sciences (Thesis)	The effectiveness of water use authorisation systems as a policy implementation instrument.	Prof SJ Piketh	Prof RA Garland, Prof RP Burger
Mothloki	PhD in Environmental Sciences (Thesis)	Integrating informal waste reclaiming practices into the formal waste management sector: Madibeng Local Municipality.	Prof C Roos	Prof R Schenck

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## NORTH-WEST UNIVERSITY

### Masters and Doctoral Graduations and Supervisors

Student	Degree	Title	Supervisor	Supervisor 2
Nhlapo	M in Environmental Management with Waste Management (Dissertation)	Exploring zero waste to landfill alternatives for food waste from hospitals in Gauteng, South Africa	Prof Roos C	
Koen	MSc in Environmental Science with Disaster Risk Science (Dissertation)	Urban Disaster Risk: Evaluating Disaster Risk Reduction integration with Urban Planning curriculums at South African Universities	Prof Coetzee C	Dr L Kruger, Dr K Puren
Botha	MSc in Geography and Environmental Management (Dissertation)	Exploring plastic waste management practices surrounding the Agulhas National Park: The case of Struisbaai Harbour	Prof Roos C	
Bvukumbwe	MSc in Environmental Science (Dissertation)	Investigating the co-processing of municipal solid waste as an alternative fuel in cement production	Prof Roos C	

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## NORTH-WEST UNIVERSITY

### Masters and Doctoral Graduations and Supervisors

Student	Degree	Title	Supervisor	Supervisor 2
Cokart	M in Environmental Management with Waste Management (Dissertation)	Towards reducing electronic waste: Exploring environmental professionals' perceptions on the Sharing Economy in South Africa	Prof C Roos	
Letlole	M of Environmental Management with Waste Management (Dissertation)	Exploring the perceptions on the effectiveness of solid waste management of end-of-life photovoltaic installations in Gauteng	Prof L Kruger	Prof C Roos
Mbatha	M in Environmental Management with Waste Management (Dissertation)	Evaluating E-waste management practices in buildings of the National Department of Public Works, South Africa	Prof C Roos	T Meyer
Nqono	MSc Environmental Sciences with Disaster Risk Science (Dissertation)	Integrating Indigenous and Western Knowledge in Disaster Risk Management Policy and Legislative Frameworks of the Buffalo City Metropolitan Municipality	Prof LD Nemakonde	K Fourie
Shihepo	MSc in Geography and Environmental Management (Dissertation)	Evaluating consumer behaviour related to plastic carrier bags: A Namibian case study	Prof C Roos	

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## NORTH-WEST UNIVERSITY

### Masters and Doctoral Graduations and Supervisors

Student	Degree	Title	Supervisor	Supervisor 2
Tshidzumba	MSc in Environmental Management (Dissertation)	The air quality impact of the Medupi Power Station on the Lephalale Airshed	Dr P Mukwevho	Prof RP Burger
Wessels	MSc in Geography and Environmental Management (Dissertation)	Evaluating the contribution of ISO 14001:2015 towards enhancement of environmental performance: A mining case study	Prof C Roos	
Sibisi	MSc in Geography and Environmental Management (Dissertation)	Modelling ambient vehicle emissions in Zamdela using AERMOD	Dr B Language	Prof RP Burger, Prof A Ngie
Tsisi	MSc in Geography and Environmental Management (Dissertation)	Characterising ambient air quality over Gauteng using surface in-situ and remotely derived measurements	Prof SJ Piketh	Prof RP Burger
LETLAILA	MSc in Geography and Environmental Management (Dissertation)		Dr N Ayob	N Nkosi

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## NORTH-WEST UNIVERSITY

### Masters and Doctoral Graduations and Supervisors

Student	Degree	Title	Supervisor	Supervisor 2
Le Roux	MSc in Environmental Sciences	The extent to which sustainability performance indicators give effect to South Africa's Integrated Environmental Management principles	Prof DP Cilliers	
Mabuza	MSc in Environmental Sciences	Exploring alternative uses of non-hazardous construction and demolition waste within a circular economy context	Prof DP Cilliers	
Thibedi	MSc in Environmental Sciences	The historical distribution of <i>Bulinus globosus</i> and <i>Biomphalaria pfeifferi</i> in the Vhembe district, Limpopo Province	Dr Nisa Ayob	Dr N Ayob, Dr L de Necker, Ms N Nkosi

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## NORTH-WEST UNIVERSITY

### Masters and Doctoral Graduations and Supervisors

Student	Degree	Title	Supervisor	Supervisor 2
Khwela	MSc in Environmental Sciences	The effects of climate variability on the historical distribution of <i>Bulinus africanus</i> and <i>Biomphalaria pfeifferi</i> in Johannesburg and Tshwane Municipalities	Ms N Nkosi,	Dr N Ayob, Dr L de Necker
Richter	MSc in Environmental Sciences	Contribution of waste burning to ambient PM2.5: A case study of Sharpeville, South Africa	Dr B Language	Prof C Roos, Prof RP Burger
Lugetye	MSc in Environmental Sciences	Reviewing the quality of EIA reports conducted in the O.R. Tambo region of the Eastern Cape Province.	Prof. L Kruger	
Lesomo	MSc in Environmental Sciences	Perspectives on the contribution of SIA to EIA decision making in South Africa.	Prof. L Kruger	
Mathekga	MSc in Environmental Sciences	Evaluating the barriers and opportunities to the implementation of the Integrated Waste Management Plan of the City of Johannesburg.	Prof. L Kruger	Prof. R. Alberts

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## SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

# NORTH-WEST UNIVERSITY

### Masters and Doctoral Graduations and Supervisors

Student	Degree	Title	Supervisor	Supervisor 2
Radingoana	MSc in Environmental Sciences	Exploring opportunities for implementing waste-to-energy projects in the City of Johannesburg Metropolitan Municipality.	Mrs. C. van Niekerk	Prof. L Kruger
Sibali	MSc in Environmental Sciences	Reviewing the quality of EIA follow-up reports for platinum mines in South Africa.	Mrs. C. van Niekerk	Prof. L Kruger

### Information of Interest for Prospective Students

#### **Undergraduate**

The undergraduate Geography programme at North-West University (NWU) offers students a dynamic education, combining academic rigour with practical experience. Designed to tackle global challenges like climate change, sustainability, and urbanisation, the programme equips students with the knowledge to understand complex relationships between people and the environment.

A key strength of our undergraduate programmes with Geography is its emphasis on hands-on learning.

With state-of-the-art facilities and access to technology, students gain real-world experience in spatial analysis, and geographical data collection.

The programme offers a multidisciplinary approach, covering human geography, physical geography, and aspects of environmental management. This allows students to specialise in areas that align with their interests and career goals, ensuring they are well-rounded and capable of addressing issues like urban development, conservation, and disaster risk management.

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## NORTH-WEST UNIVERSITY

### Information of Interest for Prospective Students

NWU's dedicated academic staff are experts in their fields and passionate about student success. The Geography subject group fosters a collaborative and supportive learning environment, helping students excel both academically and personally.

The programme's strong industry and research ties enhance employability, ensuring students are ready to make a meaningful impact.

### **Postgraduate**

Our BSc Honours programmes with Geography are offered across all three campuses of the North-West University (NWU), and offers an advanced, research-driven academic experience for students seeking to deepen their understanding of human-environment interactions. Our Honours programmes combine rigorous academic training with practical research opportunities, equipping graduates with real-world experience.

A key strength of the Honours programme is its flexibility, allowing students to tailor their studies to their interests and career goals. It also serves as a stepping stone to further postgraduate studies, particularly research-based MSc programmes in Geography and Environmental Management.

Students may also articulate from from their Honours degrees to coursework Masters degrees in Environmental Management, with the option to enrol for programmes with specialisation in waste management, ecological water requirements, air quality and climate change, and conservation leadership.

NWU's postgraduate programmes are supported by experienced faculty. Students benefit from a collaborative academic environment with opportunities to engage in impactful research and develop practical skills highly valued in the environmental sector.

For more information about our coursework Masters programmes: <https://natural-sciences.nwu.ac.za/unit-environmental-sciences-and-management/m-environmental-management-taught>

### **Link to Departmental Webpage**

<https://natural-sciences.nwu.ac.za/geography-and-environmental-management>

# SSAG NEWS 2024/25

SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## SOL PLAATJE UNIVERSITY

Geography Unit, Department of Physical and Earth Sciences

Geography Academic Unit Leader, Dr Mafame T and Prof N Chaukura, HOD

Geographers' Specialisations Within The Department

Name (Title, Initial(s), Surname)	Rank / Position	Specialisation(s)	Qualification(s)
Prof. Mohamed A. M Abd Elbasit	Associate Professor	Geospatial Sciences and Physical Geography	BSc, DipIT, MSc, PhD
Dr M. Manjoro	Senior Lecturer	Physical Geography and Environmental Sciences	PhD, MSc, BSc.Hons, BScEd
Dr T. Mafame	Lecturer	Urban, Rural and Human Geography	BSc, BA.Hons, PGDip, MPhil, MDP, PhD
Mr M. Djeco	Lecturer	Geospatial Sciences, Urban and Development Planning	MSc, BSc.Hons, BSc
Dr J. Hlatywayo	Lecturer	Physical Geography and Environmental Sciences	PhD, MSc; MCom, BSc.Hons, Dip Ed
Mr A. Masana	Laboratory Technician	Geography	BSc, BSc. Hons
Mr P. Zwane	Laboratory Technician	Remote sensing, GIS, Hydrology, Physical Geography	MSc, BSc, BScHons



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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## SOL PLAATJE UNIVERSITY

### Exciting Departmental News

Dr Manjoro M was recently been appointed as a member to the new Environmental Assessment Practice Standard Working Group at the Council for Higher Education (CHE) in South Africa.

### **Establishment of the Arid Region Water Research Centre (ARWRC)**

We are excited to announce the establishment of the Arid Region Water Research Centre (ARWRC) at Sol Plaatje University in collaboration with the Water Research Commission (WRC). This new center is dedicated to advancing research and developing innovative solutions for water scarcity challenges in arid and semi-arid regions. With a focus on sustainable water management, climate resilience, and the implementation of cutting-edge technologies, the center aims to provide critical insights to communities and industries in water-stressed areas. By collaborating with local, national, and international partners, the Arid Region Water Research Centre (ARWRC) will contribute to ensuring water security and promoting the responsible use and protection of this vital resource. We look forward to the impactful partnership and research and initiatives that will emerge from this new endeavor.

### **Postdoctoral Position: 3D Analysis of Soil Erosion**

Sol Plaatje University invites applications for a postdoctoral position in an exciting project focusing on the use of 3D analysis to quantify

soil erosion at various scales. This project offers a unique opportunity to work at the forefront of environmental science and geospatial technologies. Candidates with a PhD (within the last 5 years) in any related discipline (e.g. Geography, Soil, Computer Science) are encouraged to apply.

Join us to contribute to cutting-edge research in soil conservation and land management! Apply now! (for more information contact [mohamed.ahmed@spu.ac.za](mailto:mohamed.ahmed@spu.ac.za))

### 2024/2025 List of Publications

Jombo, S., Adelabu, S., Gumbo, A.D. and Seti, N., 2025. Stakeholder-driven evaluation of the impact of land reform programme on landscape changes using earth observation data. *Modeling Earth Systems and Environment*, 11(2), p.89.

Malongweni, S.O., Mrubata, K., van Tol, J., Abd Elbasit, M.A. and Harebottle, D.M., 2025. Consequences of Invasive Prosopis (Mesquite) on Vegetation, Soil Health, Biodiversity, and Compliance of Management Practices in South African Rangelands: A Review. *Grasses*, 4(1), p.2.



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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## SOL PLAATJE UNIVERSITY

### 2024/2025 List of Publications

Ratshiedana, P.E., Abd Elbasit, M.A., Adam, E. and Chirima, J.G., 2025. Evaluation of Micrometeorological Models for Estimating Crop Evapotranspiration Using a Smart Field Weighing Lysimeter. *Water*, 17(2), p.187.

Xuan, F., Liu, H., Xue, J., Li, Y., Liu, J., Huang, X., Tan, Z., Abd Elbasit, M.A., Gu, X. and Su, W., 2024. The novel triangular spectral indices for characterizing winter wheat drought. *International Journal of Applied Earth Observation and Geoinformation*, 134, p.104151.

Knight, J. and Abd Elbasit, M.A., 2024. Spatial and Temporal Patterns of Rainfall Erosivity in Southern Africa in Extreme Wet and Dry Years. *Atmosphere*, 15(11), p.1283.

Jombo, S. and Abd Elbasit, M., 2024, May. Mapping of the Maize Area Using Remotely Detected Multispectral and Radar Images Based on a Random Forest Machine Learning Algorithm. In 2024 IST-Africa Conference (IST-Africa) (pp. 1-10). IEEE.

Xuan, F., Liu, H., Xue, J., Li, Y., Liu, J., Huang, X., Tan, Z., Abd Elbasit, M.A., Gu, X. and Su, W., 2024. The novel triangular spectral indices for characterizing winter wheat drought. *International Journal of Applied Earth Observation and Geoinformation*, 134, p.104151.

Ogunniyi, J.A., Abd Elbasit, M.A. and Obagbuwa, I.C., 2024. Monthly rainfall prediction for different climatic zones in south Africa for 2024 using a random forest model. *Edelweiss Applied Science and Technology*, 8(6), pp.1805-1827.

Nyamane, S., Abd Elbasit, M.A. and Obagbuwa, I.C., 2024. Harnessing Deep Learning for Meteorological Drought Forecasts in the Northern Cape, South Africa. *International Journal of Intelligent Systems*, 2024(1), p.7562587.

Mafame, T. and Horn, A. 2025 'Placemaking for inclusive public spaces in South African townships: a community-led approach', *African Geographical Review*, pp. 1–17. doi: 10.1080/19376812.2024.2446237

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>

Schmidt, A., Kerley, G. and Manjoro, M., 2024. Threshold changes in the production potential of bush clumps along phosphorus gradients in arid thicket mosaics. *African Journal of Range & Forage Science*, pp.1-8. <https://doi.org/10.2989/10220119.2024.2404245>

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## SOL PLAATJE UNIVERSITY

### 2024/2025 List of Publications

Kabanda, T.H., Hlatywayo, J. and Jombo, S., 2024. Using Link Analysis to Understand Persons of Concern in Zimbabwe. *Journal of Identity and Migration Studies*, 18(1), p.22.

Munjonji, L., Ntuli Innocentia, H., Ayisi, K. K., Dlamini, P., Mabitsela, K. E., Lehutjo, C. M., & Magnificent Zwane, P. S. (2024). Seasonal dynamics of soil CO<sub>2</sub> emissions from different semi-arid land-use systems. *Acta Agriculturae Scandinavica, Section B — Soil & Plant Science*, 74(1). <https://doi.org/10.1080/09064710.2024.2312934>

Mashao, F. M., Thaba, S. J., Muyambo, N. P., Tjale, C. R., Zwane, P. S. M., Munjonji, L., ... Thamaga, K. H. (2024). Exploring laboratory-based spectroscopy for estimating NPK content in the hutton soils of Syferkuil Farmlands, South Africa. *Geocarto International*, 39(1). <https://doi.org/10.1080/10106049.2024.2339289>

Jombo, S., 2024. Examining the Impact of Urban Green Space Changes on Public Health. In *Sustainable Development Goals and Urban Health: Strides, Challenges and Way Forward for Poor Neighborhoods* (pp. 131-143). Cham: Springer Nature Switzerland.

### Masters and Doctoral Graduations and Supervisors

There are not yet any MSc and PhD programmes.

### Information of Interest for Prospective Students

#### **Undergraduate**

BSc in Physical Sciences (Geography): Students may specialize in Geography and another elective (Computer Science or Mathematics or Biological Sciences or Chemistry) from first to second year. The last year will develop skills and integrated knowledge of Geography and Environmental Sciences.

#### **Postgraduate**

BSc.Honours in Physical Sciences (Geography). We offer modules in major areas of Geography disciplines to provide students with a wider and yet detailed knowledge and specific skills. A research project done under the supervision of our highly trained and experienced staff will help introduce students to fundamentals of research conceptualization, data collection and analysis, including report writing.

### Link to Departmental Webpage

<https://www.spu.ac.za/index.php/faculty-of-natural-and-applied-sciences-home/>



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## SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

# STELLENBOSCH UNIVERSITY

## Department Of Geography and Environmental Studies

### Prof. Gustav Visser

The Department of Geography and Environmental Studies is 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 fundamentally alter the structure of the geography department during what can be called its 'geographical technology phase'.

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## STELLENBOSCH UNIVERSITY

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 in 2010. 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 105-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 members take forward this ambition.



**Stellenbosch**

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## SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

# STELLENBOSCH UNIVERSITY

### Geographers' Specialisations Within The Department

Name (Title, Surname, Initials)	Rank/ Position	Area of specialisation	E-mail
Prof Ronnie Donaldson	Professor	Urban social geography and tourism studies, SA city structure and changes, tourism landscapes in the countryside, residential desegregation in SA cities	<a href="mailto:rdonaldson@sun.ac.za">rdonaldson@sun.ac.za</a>
Prof Gustav Visser	Professor	Urban geography; tourism geography	<a href="mailto:gvisser@sun.ac.za">gvisser@sun.ac.za</a>
Prof Manfred Spocter	Associate Professor	Small-town geographies; Suburban geographies; Geographies of naming; Public space geographies	<a href="mailto:mspocter@sun.ac.za">mspocter@sun.ac.za</a>
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	<a href="mailto:sgrenfell@sun.ac.za">sgrenfell@sun.ac.za</a>
Dr Jan De Waal	Senior Lecturer	Climate change; Flooding risk assessment; hydrology; ecosystem services; water management	<a href="mailto:janniedw@sun.ac.za">janniedw@sun.ac.za</a>
Dr Kenwin Wiener	Lecturer	Fluvial sedimentology; Nutrient Biogeochemistry; Palaeoecology.	<a href="mailto:kwienner@sun.ac.za">kwienner@sun.ac.za</a>
Prof Adriaan Van Niekerk	Professor and Director of CGA	GIT, Spatial decision support systems	<a href="mailto:avn@sun.ac.za">avn@sun.ac.za</a>

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## STELLENBOSCH UNIVERSITY

### Geographers' Specialisations Within The Department

Name (Title, Surname, Initials)	Rank/Position	Area of specialisation	E-mail
Dr Zahn Munch	Senior Lecturer	GIS; Spatial decision-making	<a href="mailto:zmunch@sun.ac.za">zmunch@sun.ac.za</a>
Dr Eric Mashimbye	Senior Lecturer	Remote Sensing, Geoinformatics, Agronomy	<a href="mailto:ericm@sun.ac.za">ericm@sun.ac.za</a>
Dr Jaco Kemp	Senior Lecturer	Earth Observation, Synthetic Aperture Radar, Photogrammetry	<a href="mailto:jkemp@sun.ac.za">jkemp@sun.ac.za</a>
Mr Kyle Loggenberg	Lecturer	High-dimensional data in precision agriculture, crop water stress detection, and proximal remote sensing	<a href="mailto:kyleloggenberg@sun.ac.za">kyleloggenberg@sun.ac.za</a>
Mr Curtis Bailey	Lecturer	Spatial/statistical modelling of geographic, climatic, ecological and social phenomena.	<a href="mailto:cbailey@sun.ac.za">cbailey@sun.ac.za</a>
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	<a href="mailto:ddp@sun.ac.za">ddp@sun.ac.za</a>
Dr Herman Geyer	CRUISE - Town & Regional Planner/ Lecturer.	Complexity theory; Urban systems; Economic geography	<a href="mailto:hsgeyerjr@sun.ac.za">hsgeyerjr@sun.ac.za</a>
Dr Sam Ngema	CRUISE - Lecturer	Spatial Analysis of Integrated Human Settlements and Urban Crime	<a href="mailto:samukele@sun.ac.za">samukele@sun.ac.za</a>



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# SSAG NEWS 2024/25

SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## STELLENBOSCH UNIVERSITY

### Geographers' Specialisations Within The Department

Name (Title, Surname, Initials)	Rank/Position	Area of specialisation	E-mail
Ms Lodene Willemse	CRUISE -Lecturer	Urban and Human Geographer	<a href="mailto:lodene@sun.ac.za">lodene@sun.ac.za</a>
Mr Garth Stephenson	CGA Manager, GIS & EO Analyst	GeoSpatial R&D Project Management; GIS & EO Analysis	<a href="mailto:garth@sun.ac.za">garth@sun.ac.za</a>
Ms Jessica Eichhoff	CGA Short Course Manager, GIS Operator	Cartography; GIS Analysis; GeoSpatial training	<a href="mailto:eichhoffj@sun.ac.za">eichhoffj@sun.ac.za</a>
Mr James Kapp	CGA GIS & EO Analyst	GIT scripting; Web App Development; Climate Modelling	<a href="mailto:jkapp@sun.ac.za">jkapp@sun.ac.za</a>
Ms Rebecca Light	Junior Project Facilitator	Project Coordination, Disaster Risk, Human Geography, Urban Geography	<a href="mailto:rlight@sun.ac.za">rlight@sun.ac.za</a>
Mr Bradley Davids	Junior Technical Officer, GIS & EO Operator	Systems Administration, GIS Operations	<a href="mailto:bradleybd@sun.ac.za">bradleybd@sun.ac.za</a>



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# SSAG NEWS 2024/25

## SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

# STELLENBOSCH UNIVERSITY

### Exciting Departmental News

The Department had many highlights during 2024. Here are a few of them.

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

- Best BA Honours student in 2024 – Emily Hobbs
- Best BSc Honours student in 2024 – Luke Booysen
- Best overall Honours Research Project (WA Nieman Prize) in 2024 - Yusrah Eksteen.

A few researchers and friends of the Department visited during 2024. These include:

1. Prof Jarkko Saarinen - Oulu University (Finland)
2. Prof Marinus Otte – North Dakota State University (US)
3. Prof Michael Pretes - University of North Alabama (US).
4. Prof Gijsbert Hoogendoorn - University of Johannesburg (RSA)
5. Prof Magnfridur Juliusdottir - University of Iceland (Iceland)
6. Prof Jennifer Robinson - University College London (UK)
7. Dr Margot Rubin – Cardiff University (Wales)

8. Dr Adriaan van der Walt - University of the Free State (RSA)

9. Dr Laeticia Jacobs - National Department of Tourism (RSA)

### Coffee Talks

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.

### Social Media

The Department has an active social media footprint with loads of additional news and photos and many other events throughout the year. Follow our Facebook ([Department of Geography & Environmental Studies, Stellenbosch University | Stellenbosch | Facebook](#)) or Instagram pages ([@Geomaties|Department of Geography & Environmental Studies, Stellenbosch University | Stellenbosch | Instagram](#)) for the latest departmental updates.

# SSAG NEWS 2024/25

SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## STELLENBOSCH UNIVERSITY

### Awards, Projects and Grants

Physical geographers in the department were awarded an Earth Systems Science Research Programme grant, one of the NRF's flagship research programmes that focusses on the interface between climate change and landscape processes. The research project, titled "South African Riverscapes at the Holocene–Anthropocene Transition" is a collaboration between scientists at UWC, UFS and Wits over the next three years.

Ronnie Donaldson is collaborating with Dr. Bongsi Ndimande (University of Zululand), Musfiqah Majiet (University of the Western Cape), and colleagues from the Architecture Department at Hasselt University (Belgium) on an NRF-funded project examining the decline of cultural heritage in small towns and villages in South Africa and Belgium. In 2024, an honours student from Stellenbosch University, Mmatlou Molele, along with Musfiqah Majiet, visited Hasselt University, where they presented their research findings.

Ronnie Donaldson is also collaborating with colleagues from Pecs University (Hungary), Qatar University, and Hamad Bin Khalifa University (Qatar) on a Qatar Research, Development, and Innovation-funded project focused on reimagining rural spaces. This multidisciplinary initiative explores urban identity and cultural heritage in rural villages and small towns.

### • The Centre for Geographical Analysis

The Department houses the [Centre for Geographical Analysis \(CGA\)](#), a Type 1 Centre which provides a range of geospatial research, development, consulting and training services to the university, state institutions and private industry. Recently completed work includes the National Water Use Quantification of Indigenous Forests Using Remotely Sensed Evapotranspiration Data project for the Water Research Commission (WRC) of South Africa ([WRC Report 3131/1/24](#))

Indigenous forests in South Africa are highly fragmented and diverse, which complicates their effective management. A need previously highlighted by the WRC was to better understand how environmental and topographic factors influence water use of trees at regional scales, particularly in regard to the impact of afforestation and deforestation on stream-flow reduction. We addressed this by using geospatial methods to improve indigenous forest types mapping, assisted by Prof Laco Mucina, and then extracted remotely, as well as among different plantation ages, remotely sensed evapotranspiration data per forest types under a range of environmental conditions (region, terrain morphology, soil and climate).

# SSAG NEWS 2024/25

## SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

# STELLENBOSCH UNIVERSITY

### Awards, Projects and Grants

Earth Observation Approach Towards Mapping Irrigated Areas and Quantifying Water Use by Irrigated Crops in South Africa ([WRC Report TT 745/17](#)) in 2018 and The Application of National Scale Remotely Sensed Evapotranspiration Estimates to Quantify Water Use and Difference Between Plantations in Commercial Forestry Regions of South Africa ([WRC Report 2966/1/23](#)) in 2023. Expanding this body of knowledge supports direct comparisons of water use between different land uses and improves methodological cost-effectiveness by incorporating remote sensing techniques.

- **GeoSmart and TerraClim**

The Department, through the CGA, also acts as a commercial business incubator for various entities focused on spatial research, development and data creation. Two companies, [GeoSmart](#) and [TerraClim](#), have been established to date through the Innovus Technology Transfer Office, utilising intellectual property developed within the Department.

Based on over a decade of research and development in terrain modelling, GeoSmart makes use of advanced space technologies such as earth observation and machine learning to provide cutting-edge geospatial and data-driven solutions to address the unique challenges of diverse industries. Their catalogue of products includes elevation data unmatched in South Africa in terms of resolution, accuracy and coverage: the 2 m Digital Elevation Model of South Africa (DEM SA2) and 5 m Stellenbosch University Digital Elevation Model of South Africa (SUDEM). GeoSmart consists of a team of three full-time staff, headed by Prof Adriaan van Niekerk.

TerraClim originated as an SA Wine (formerly Winetech) funded project in the CGA in 2018, and was established as a commercial entity in 2022. In collaboration with the CGA, TerraClim acquires, standardised and cleans data from 1000+ weather stations around South Africa every day, which are integrated with high resolution elevation data (provided by GeoSmart) to model very-high-resolution climatic layers at a vineyard/orchard/field scale.

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## STELLENBOSCH UNIVERSITY

### Awards, Projects and Grants

The aim of TerraClim is to provide accurate, up-to-date climate data to aid farmers and the agricultural industry in seasonal (e.g. compliment phenology, canopy growth, ripening, yield development monitoring) and long-term decision-making (e.g. establishment of new vineyards/orchards/fields). This data is disseminated to industry in a variety of products. TerraClim data packs and climatic reports have been developed for multiple wine producing areas in the Western Cape, including Hidden Valley, Paul Cluver, Bredekloof, Meerlust, Polkaidraai, Rupert and Rothschild, Lourensford, Ernie Els and others.

TerraClim has developed various online spatial decision support systems to deliver data to the industry through technology. One example, which has been adopted by Heineken Beverages South Africa, is the TerraClim Suitability Tool. Client field and farm data is integrated into an online platform, which provides functionality to analyse climatic drivers of high-yield or top quality wine cultivars anywhere in South Africa.

In addition to SA Wine, TerraClim is an active presence elsewhere in the agricultural industry and research space, including engagements with SAWIS, Hortgro, Vinpro, PotatoesSA, Food for Mzansi, SAMAC (Macadamias South Africa), Kiwi Connect, RasinsSA, the Agricultural Research Council and SU's Department of Viticulture and Oenology. The response from the industry has been resoundingly positive.

TerraClim consists of a team of seven full- and part-time staff, and is headed by former Departmental Postdoc, Dr Tara Southey.



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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## STELLENBOSCH UNIVERSITY

### 2024/2025 List of Publications

#### Journal Articles (subsidised)

BUCHANAN, L (2024). The Status of Urban Heritage Conservation: Competency of Local Government in the Western Cape Province. *Modern Geografía*

DE FREITAS, C (2024). Event-scale suspended sediment fluxes in a dryland environment valley-bottom wetland: Implications for downstream sediment and phosphorous fluxes. *Geomorphology*

DE WAAL, J (2024). Source-to-sink process transitions in fluvial systems. *South African Geographical Journal*

DE WAAL, J (2024). Estimating impacts of land cover change on erosion in a data-scarce catchment: Bot River, South Africa. *Hydrological Sciences Journal*

DE WAAL, J (2024). Evaluating input data sources for isotope-enabled rainfall-runoff models. *Hydrological Processes*

DE WAAL, J (2024). Estimating the cost-effectiveness of several reservoir evaporation suppression strategies: a case study. *Water SA*

DONALDSON, S (2024). No Room for Modesty in Heritage Significance: The Case of Dennesig in Stellenbosch, South Africa. *Modern Geografía*

DONALDSON, S (2024). Pigeon racing in South Africa: Exploring the socio-economic nature and extent of this 'unknown sport'. *GeoSport for Society*

DONALDSON, S (2024). Risk Management Strategies: An Empirical Analysis of Strategies Employed by Tourism Business Managers in Plateau State, Nigeria during the COVID-19 Pandemic. *Modern Geografía*

DONALDSON, S (2024). Tourists' Experiences During the Covid-19 Pandemic in Plateau State, Nigeria: An Empirical Evaluation Using Chaos Theory. *Modern Geografía*

DONALDSON, S (2024). 'If you name a child and then change the name, it is someone else': opinions of Graaff-Reinet residents on the proposed name change of their town to Robert Mangaliso Sobukwe. *South African Geographical Journal*

ENGELBRECHT, J (2024). Characterization of the Fels Landslide (Alaska) Using Combined Terrestrial, Aerial, and Satellite Remote Sensing Data. *Remote Sensing*



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### 2024/2025 List of Publications

GEYER, H (2024). The theory and praxis of mixed-use development - An integrative literature review. *Cities*

GEYER, H (2024). ZONING AND THE 'RIGHT' CITY: The Challenges of Zoning in the Global South and Possibilities for Unzoning Informality. *International Journal of Urban and Regional Research*

GEYER, H (2024). The medicalisation of solid waste: Coordination challenges of domestic biomedical risk waste in illegal dumping sites in informal settlements in Cape Town. *Habitat International*

GEYER, H (2024). Customary land management systems and urban planning in peri-urban informal settlements. *Urban Studies*

GEYER, H (2024). The self-regulation of informal land uses and tenure through customary land management systems. *International Development Planning Review*

GRENFELL, S (2024). Event-scale suspended sediment fluxes in a dryland environment valley-bottom wetland: Implications for downstream sediment and phosphorous fluxes. *Geomorphology*

GRENFELL, S (2024). Valley-bottom wetlands as temporary buffers for source-to-sink dispersal of sediment and associated phosphorus in dryland landscapes. *Earth Surface Processes and Landforms*

GRENFELL, S (2024). System-scale dynamics of long-term sediment and phosphorus accumulation in contrasting valley-bottom wetlands in dryland landscapes of South Africa. *Catena*

GRENFELL, S (2024). Source-to-sink process transitions in fluvial systems. *South African Geographical Journal*

GRENFELL, S (2024). Controls on sediment transfer dynamics at a tributary-trunk transition in the Little Karoo, with implications for interpreting the landscape response to environmental change. *South African Geographical Journal*

HARMSE, C (2024). Spectral Discrimination of Common Karoo Shrub and Grass Species Using Spectroscopic Data. *Remote Sensing*

HIGGS, C (2024). Signature extension as a machine learning strategy for mapping plantation forest genera with Sentinel-2 imagery. *Remote Sensing Applications: Society and Environment*



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### 2024/2025 List of Publications

LOGGENBERG, K (2024). Scoping the Field: Recent Advances in Optical Remote Sensing for Precision Viticulture. *ISPRS International Journal of Geo-Information*

LUCK-VOGEL, M (2024). Considerations for kelp aquaculture on South Africa's west coast: geospatial analysis and research implications. *Botanica Marina*

LUCK-VOGEL, M (2024). Mapping South Africa's canopy-forming kelp forests using low-cost, high-resolution Sentinel-2 imagery. *Estuarine, Coastal and Shelf Science*

LUCK-VOGEL, M (2024). Evaluating the Enhanced Bathtub Model for Coastal Flood Risk Assessment in Table Bay, South Africa. *Transactions in GIS*

MARTINEZ FALCO, J (2024). Green ambidexterity innovation as the cornerstone of sustainable performance: Evidence from the Spanish wine industry. *Journal of Cleaner Production*

MARTINEZ FALCO, J (2024). Social media influencer marketing and economic performance in the Spanish wine industry: unravelling the role of corporate social legitimacy. *British Food Journal*

MARTINEZ FALCO, J (2024). Knowledge management as a driver of economic performance in the Spanish wine industry: the mediating role of open innovation. *Journal of Strategy and Management*

MARTINEZ FALCO, J (2024). Do organizational commitment and consumer satisfaction mediate the relationship corporate social responsibility-sustainable performance? Assessing happiness management in Spanish wineries. *Management Decision*

MARTINEZ FALCO, J (2024). Do circular economy practices moderate the wine tourism-green performance relationship? A structural analysis applied to the Spanish wine industry. *British Food Journal*

MARTINEZ FALCO, J (2024). Green intellectual capital and sustainable competitive advantage: unraveling role of environmental management accounting and green entrepreneurship orientation. *Journal of Intellectual Capital*

MARTINEZ FALCO, J (2024). Green intellectual capital and environmental performance: identifying the pivotal role of green ambidexterity innovation and top management environmental awareness. *Journal of Intellectual Capital*



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### 2024/2025 List of Publications

MARTINEZ FALCO, J (2024). Green supply chain management and sustainable performance: exploring the role of circular economy capability and green ambidexterity innovation. *British Food Journal*

MARTINEZ FALCO, J (2024). Preface. Green Supply Chain Management Practice and Principles

MARTINEZ FALCO, J (2024). Preface. Building Sustainable Human Resources Management Practices for Businesses

MARTINEZ FALCO, J (2024). Green supply chain management and sustainable performance: exploring the role of green ambidexterity innovation and top management environmental awareness. *Business Process Management Journal*

MISTRY, A (2024). Exploring the “eco-ness” of South Africa’s eco-estates. *Journal of Urbanism*

MOSTERT, C (2024). Pigeon racing in South Africa: Exploring the socio-economic nature and extent of this 'unknown sport'. *GeoSport for Society*

MUCINA, L (2024). Drought and life-history strategies in *Heliophila* (Brassicaceae). *New Phytologist*

MUCINA, L (2024). Ecological versus biogeographical regionalization: Colliding or colluding?. *Journal of Biogeography*

MUCINA, L (2024). Plant interactions can lead to emergent relationships between plant community diversity, productivity and vulnerability to invasion. *Scientific Reports*

MUCINA, L (2024). FloraVeg.EU — An online database of European vegetation, habitats and flora. *Applied Vegetation Science*

MUCINA, L (2024). A tough nutlet to crack: Resolving the phylogeny of *Thesium* (Thesiaceae), the largest genus in Santalales. *Taxon*

MUCINA, L (2024). Structural, ecological and biogeographical attributes of European vegetation alliances. *Applied Vegetation Science*

MUCINA, L (2024). *Thlipthisa sapphus* (Rubiaceae, Rubieae), a new species from Lefkada (Ionian Islands, Greece) and its ecological position. *PhytoKeys*

MUCINA, L (2024). Protecting stable biological nomenclatural systems enables universal communication: A collective international appeal. *Bioscience Reports*



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## STELLENBOSCH UNIVERSITY

### 2024/2025 List of Publications

MUCINA, L (2024). Global decoupling of functional and phylogenetic diversity in plant communities. *Nature Ecology & Evolution*

MUNCH, Z (2024). Is groundwater running out in the Western Cape, South Africa? Evaluating GRACE data to assess groundwater storage during droughts. *Journal of Hydrology: Regional Studies*

MUNCH, Z (2024). Is groundwater running out in the Western Cape, South Africa? Evaluating GRACE data to assess groundwater storage during droughts. *Journal of Hydrology: Regional Studies*

MUNCH, Z (2024). Scoping the Field: Recent Advances in Optical Remote Sensing for Precision Viticulture. *ISPRS International Journal of Geo-Information*

NAIK, N (2024). The geography of commercial activities in business parks in Cape Town. *South African Geographical Journal*

NDIMANDE, N (2024). The lived experiences and the struggles for visibility of the University of Zululand's (South Africa) off-campus students: a Fanonian analysis. *AFRICAN GEOGRAPHICAL REVIEW*

SHEBURAH ESSIEN, R (2024). Local Market Institutions and Solid Waste Management in Accra's Open-Air Markets. *African Studies*

SHEBURAH ESSIEN, R (2024). "Be ready to pay because others are paying": contested solid waste management transitions and charges in Accra's open-air markets. *Local Environment*

SPOCTER, M (2024). The urban materialities of disused quarries in Cape Town. *South African Geographical Journal*

SPOCTER, M (2024). Exploring the "eco-ness" of South Africa's eco-estates. *Journal of Urbanism*

SPOCTER, M (2024). Local Market Institutions and Solid Waste Management in Accra's Open-Air Markets. *African Studies*

SPOCTER, M (2024). The geography of commercial activities in business parks in Cape Town. *South African Geographical Journal*

SPOCTER, M (2024). "Be ready to pay because others are paying": contested solid waste management transitions and charges in Accra's open-air markets. *Local Environment*

SPOCTER, M (2024). Google Reviews of Tourist Attractions in Langa and Gugulethu, Cape Town. *Urban Forum*

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## STELLENBOSCH UNIVERSITY

### 2024/2025 List of Publications

SVENDSEN, D (2024). Estimating the cost-effectiveness of several reservoir evaporation suppression strategies: a case study. *Water SA*

SZANTOI, Z (2024). Net fluxes of broadband shortwave and photosynthetically active radiation complement NDVI and near infrared reflectance of vegetation to explain gross photosynthesis variability across ecosystems and climate. *Remote Sensing of Environment*

SVENDSEN, D (2024). Estimating the cost-effectiveness of several reservoir evaporation suppression strategies: a case study. *Water SA*

SZANTOI, Z (2024). Net fluxes of broadband shortwave and photosynthetically active radiation complement NDVI and near infrared reflectance of vegetation to explain gross photosynthesis variability across ecosystems and climate. *Remote Sensing of Environment*

SZANTOI, Z (2024). High-resolution Mapping of Terrestrial Evapotranspiration using ECOSTRESS: Insights into Surface Energy Balance Modeling.

SZANTOI, Z (2024). Global mapping of oil palm planting year from 1990 to 2021. *Earth System Science Data*

SZANTOI, Z (2024). Mapping oil palm plantations and their implications on forest and great ape habitat loss in Central Africa. *Remote Sensing in Ecology and Conservation*

VAN COLLER, F (2024). Evaluating the Enhanced Bathtub Model for Coastal Flood Risk Assessment in Table Bay, South Africa. *Transactions in GIS*

VAN LILLE, G (2024). The medicalisation of solid waste: Coordination challenges of domestic biomedical risk waste in illegal dumping sites in informal settlements in Cape Town. *Habitat International*

VAN NIEKERK, A (2024). Estimating impacts of land cover change on erosion in a data-scarce catchment: Bot River, South Africa. *Hydrological Sciences Journal*

VAN NIEKERK, A (2024). Drought and life-history strategies in *Heliophila* (Brassicaceae). *New Phytologist*

VAN NIEKERK, A (2024). Signature extension as a machine learning strategy for mapping plantation forest genera with Sentinel-2 imagery. *Remote Sensing Applications: Society and Environment*

VAN NIEKERK, A (2024). Spectral Discrimination of Common Karoo Shrub and Grass Species Using Spectroscopic Data. *Remote Sensing*

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## SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

# STELLENBOSCH UNIVERSITY

### 2024/2025 List of Publications

VISSER, G (2024). Green ambidexterity innovation as the cornerstone of sustainable performance: Evidence from the Spanish wine industry. *Journal of Cleaner Production*

VISSER, G (2024). The Authenticity of Cultural Festivals as Perceived by Host Communities: A South African Case Study. *African Journal of Hospitality, Tourism and Leisure*

VISSER, G (2024). "Bringing Sandton into Soweto". *Tourism*

WIENER, K (2024). Valley-bottom wetlands as temporary buffers for source-to-sink dispersal of sediment and associated phosphorus in dryland landscapes. *Earth Surface Processes and Landforms*

WIENER, K (2024). System-scale dynamics of long-term sediment and phosphorus accumulation in contrasting valley-bottom wetlands in dryland landscapes of South Africa. *Catena*

WILLIAMS, L (2024). Evaluating the Enhanced Bathtub Model for Coastal Flood Risk Assessment in Table Bay, South Africa. *Transactions in GIS*

### Chapters in Books

HIGGS, C (2024). Major Zonobiome and Zonoecotone Patterns in Southern Africa. *Biome Ecology*

HIGGS, C (2024). Mapping Zonal Biomes of Southern Africa: Data Sources and Methods. *Zonal Biomes of Southern Africa*

MUCINA, L (2024). Major Zonobiome and Zonoecotone Patterns in Southern Africa. *Biome Ecology*

MUCINA, L (2024). Warm-Temperate Zonobiome: Afrotemperate Forests. *Zonal Biomes of Southern Africa*

MUCINA, L (2024). Subtropical Southern African Rainforests. *Zonal Biomes of Southern Africa*

MUCINA, L (2024). Southern African Savannas and Dry Forests. *Zonal Biomes of Southern Africa*

MUCINA, L (2024). Southern African Biomes: Caveats, Perspectives, Future Tasks. *Zonal Biomes of Southern Africa*

MUCINA, L (2024). Mapping Zonal Biomes of Southern Africa: Data Sources and Methods. *Zonal Biomes of Southern Africa*

MUCINA, L (2024). Fynbos: A Jewel of the Ethesial Zone. *Zonal Biomes of Southern Africa*

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### 2024/2025 List of Publications

MUCINA, L (2024). Europe, Ecosystems of. Encyclopedia of Biodiversity, Third Edition: Volume 1-7

MUCINA, L (2024). Ecotonal Biomes of Southern Africa. *Zonal Biomes of Southern Africa*

MUCINA, L (2024). Drakensberg: Southern African Subtropical Alpine Zone. *Zonal Biomes of Southern Africa*

MUCINA, L (2024). Deserts and Semideserts of Southern Africa. *Zonal Biomes of Southern Africa*

SPOCTER, M (2024). Reimagining Urban Planning in Africa.

VAN NIEKERK, A (2024). Major Zonobiome and Zonoecotone Patterns in Southern Africa. *Biome Ecology*

VAN NIEKERK, A (2024). Mapping Zonal Biomes of Southern Africa: Data Sources and Methods. *Zonal Biomes of Southern Africa*

YAMUNGU, N (2024). Reimagining Urban Planning in Africa.

SZANTOI, Z (2024). Earth observation applications to agricultural and environmental statistics. Revolutionizing Earth Observation - New Technologies and Insights

### Conference papers

ENGELBRECHT, J (2024). Time Series Insar Analysis For Slope Stability Monitoring Using Sentinel-1 In Open Pit Mining. International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - *ISPRS Archives*

103. HAUPT, S (2024). Time Series Insar Analysis For Slope Stability Monitoring Using Sentinel-1 In Open Pit Mining. International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - *ISPRS Archives*

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## SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

# STELLENBOSCH UNIVERSITY

### Masters and Doctoral Graduations and Supervisors

Surname	Nickname	Programme Description	Supervisor
Ghoos	Baylee	MA Geography and Environmental Studies	Prof Donaldson
Saayman	Dawid		Prof Spocter
Hannah	Chemaly		Dr Grenfell
Philip	Myburgh		Dr Grenfell

### 2024 Student Numbers (First Year to Doctoral Level)

**Undergraduate, module enrolment:** Total number of undergraduate students registered or enrolled in modules offered by the Department.

Year	Count
1 <sup>st</sup> Year	444
2 <sup>nd</sup> Year	627
3 <sup>rd</sup> Year	542

**Postgraduate student enrolment:** Total number of students registered or enrolled for postgraduate degrees offered by the Department.

Year	Count
Hons	29
Masters (CRUISE incl.)	36
Doctoral (CRUISE incl.)	23

### Changes to Curriculum or Courses

None

### Link to Departmental Webpage

[www.sun.ac.za/geography](http://www.sun.ac.za/geography)

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## UNIVERSITY OF FORT HARE

### Department of Chemical and Earth Sciences: Geography and Environmental Science Discipline

#### Prof. PD Sumner (Interim HoD for the Department of Chemical and Earth Sciences)

Over the last two years, the University of Fort Hare began restructuring departments within the University and the Faculty of Science and Agriculture, a process completed in 2024. Initially, the Faculty had 17 departments; this restructuring process merged departments and reduced them to 6 new departments. The Department of Geography and Environmental Science merged with Geology, GIS/Remote Sensing, and Chemistry to form the Department of Chemical and Earth Sciences (CES). The former departments are now called “Disciplines” within the superdepartment.

#### Geographers’ Specialisations Within the Department

Name (Title, Initials, Surname)	Area of Specialisation
Prof. PD Sumner	Physical Geography (Geomorphology and Environmental Studies).
Prof. W Nel	Physical Geography (Climatology and Geomorphology).
Prof. AM Kalumba	Environmental Sciences (Climate change and GIS-Remote Sensing).
Dr SP Mazinyo	Environmental Studies (Urban Sustainability, Food Security and Climate Change).



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## UNIVERSITY OF FORT HARE

### Geographers' Specialisations Within the Department

Name (Title, Initials, Surname)	Area of Specialisation
Dr L Zhou	Director of the Centre for Global Change. Environmental Studies (Climate Impacts Assessment and Adaptation, Food & Water Security, Biodiversity and Nexus Issues).
Dr HB Magagula	Physical Geography (Geomorphology and Environmental Studies).
Ms ZAF Mzitshi	Human Geography (Feminist Geography and Rural Development).
Ms S Serame	Human Geography (Remote Sensing, Rural Sustainability and Youth Welfare).
Mrs KN Xoxo	Human Geography - Senior Laboratory Technician (Climate Change and Remote Sensing)
Mrs Nogqala-Gqomfa	Administrator (Support Staff)



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## UNIVERSITY OF FORT HARE

### Exciting Departmental News

Prof. AM Kalumba was promoted to Associate Professor in 2024. Prof. Kalumba is a hardworking academic; thus, his promotion is a testimony.

NRF awarded Dr Leocadia Zhou a C3 rating for her research output. In addition, she was awarded the NRF Grant for the Global Change Social Sciences Research Programme. This grant is for the funding years 2024 to 2026 at R1.5M every year.

### 2024/2025 List of Publications

#### **Geography and Centre for Global Change**

Adom, R., Simatele, M.D., Das, D.K., Kalumba, A., Mazinyo, S., Mudau, L., Sithole, M., Kubanza, S., Vogel, C., Zhou, L. (2024). Enhancing climate change adaptation governance through transforming institutions in Kwa-Zulu Natal Province, South Africa. *International Journal of Climate Change Strategies and Management* 16, 413-438.

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Afuye, G.A., Kalumba, A.M., Owolabi, S.T., Thamaga, K.H., Ndou, N., Sibandze, P., & Orimoloye, I.R. (2024). Analyzing spatiotemporal variations and dynamics of vegetation over Amathole district municipality in South Africa. *Environment, Development and Sustainability*.  
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# SSAG NEWS 2024/25

SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

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### 2024/2025 List of Publications

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Mpanyaro, Z., Kalumba, A. M., Zhou, L., & Afuye, G.A. (2024). Mapping and Assessing Riparian Vegetation Response to Drought along the Buffalo River Catchment in the Eastern Cape Province, South Africa. *Climate*, 12(1), 7

Mpofu, BI., Slayi, M., Zhou, L., Jaja, IF (2024). Farmers' perceptions and awareness of cattle feedlots as a climate-smart approach to enteric methane emissions. *Heliyon* 10 (21,) e39849

Muchaku, S., & Magaiza, G. (2024). The struggle within dual systems of government: dealing with conflict between traditional leaders and ward councilors in the greater Giyani Municipality in South Africa. *Frontiers in Political Science*, 6, 1311178



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### 2024/2025 List of Publications

Muchaku, S., Francis, J., & Magaiza, G. (2024). Power Struggles in Dual Systems of Government: Conflict Challenges between Elected and Traditional Leaders in Greater Giyani Local Municipality. *African Journal of Peace and Conflict Studies (formerly Ubuntu: Journal of Conflict and Social Transformation)*, 13(1), 9-24.

Muchaku, S., H. M. Kabiti, and B. Nthambeleni. "A systematic review of the determinants of successful entrepreneurship education across universities in South Africa." *African Journal of Development Studies (formerly AFFRIKA Journal of Politics, Economics and Society)* 14.2 (2024): 93-110.

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Ndou, N., Nontongana, N., Thamaga, K. H., & Afuye, G. A. (2024). Uncertainty Evaluation and Compensation for Reservoir's Bathymetric Patterns Predicted with Radial Basis Function Approaches Based on Conventionally Acquired Water Depth Data. *Water*, 16(21), 3052.  
<https://doi.org/10.3390/w16213052>

Nduku, L.; Munghemezulu, C.; Mashaba-Munghemezulu, Z.; Masiza, W.; Ratshiedana, P.E.; Kalumba, A.M.; & Chirima, J.G. (2024). Field-Scale Winter Wheat Growth Prediction Applying Machine Learning Methods with Unmanned Aerial Vehicle Imagery and Soil Properties. *Land*, 13, 299.  
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Nel, W., Hodgson, D.A, Hedding, D.W., Whittle, A and Rudolph, E.M. (2024). Twenty-thousand-year gap between deglaciation and formation of peats on sub-Antarctic Marion Island attributed to climate and sea level change. *Journal of Quaternary Science* DOI: 10.1002/jqs.3642

Nocezo, YI., Manyike, JZ., Zhou, L., Ngarava S (2024). Determinants of smallholder crop farmers' access to climate services in Elundini local municipality, Eastern Cape province, South Africa. *Frontiers in Climate*, 6, 1447510



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### 2024/2025 List of Publications

Nocezo, YI., Manyike, JZ., Zhou, L., Ngarava S (2024). The impact of access to climate services on smallholder farmers' cropping decisions and household food security in Elundini municipality, Eastern Cape province. *Frontiers in Climate*, 6, 1458999

Rudolph, E.M., Hedding, D.W., Fabel, D., Hodgson, D.A., Gheorghiu, D.M., Shanks, R and Nel, W. (2024). A glacial chronology for sub-Antarctic Marion Island from MIS 2 and MIS 3, *Quaternary Science Reviews*, 325, 108485.

Serame, S. M. and Afuye, G. A. (2024). *Geographic Information Systems Methods in Practice: Higher Education Curricula and Practitioner Registration Standards in South Africa*. *Trends in Higher Education*. 3 (4). Pp 1053-1071. <https://doi.org/10.3390/higheredu3040061>

Shinga, P.S., Tesfamichael, S.G., Sibandze, P., Kalumba, A.M., & Afuye, G.A. (2024). Modelling spatiotemporal patterns of wildfire risk in the Garden Route District biodiversity hotspots using analytic hierarchy process in South Africa. *Natural Hazards*. <https://doi.org/10.1007/s11069-024-06877-7>

Sibandze, P., AM Kalumba, A H Aljaddani, L Zhou, GA Afuye (2024). Geospatial mapping and meteorological flood risk assessment: a global research trend analysis. *Environmental Management*, 1-18.

Slayi, M., Zhou, L., Dzvene, AD., Mpanyaro, Z. (2024). Drivers and consequences of land degradation on livestock productivity in Sub-Saharan Africa: A systematic literature review. *Land*, 13 (9), 14025

Slayi, M., Zhou, L., Jaja, IF (2024). Assessing the multidimensional impact of community-based cattle feedlot programs in the Eastern Cape, South Africa. *Frontiers in Sustainable Food Systems*, 8, 1452447

Slayi, M., Zhou, L., Jaja, IF (2024). Strategies, challenges, and outcomes of heat stress resilience in sub-Saharan African community-based cattle feedlots: a systematic review. *Frontiers in Veterinary Science*, 11, 1455917

Slayi, M., Zhou, L., Nyambo, P., Jaja, IF & Muchaku (2024). Communally established cattle feedlots as a sustainable livelihood option for climate change resilience and food security in sub-Saharan Africa: A systematic review. *Frontiers in Sustainable Food Systems*, 7, 1325233. <https://doi.org/10.3389/fsufs.2023.1325233>



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Slayi, M., Zhou L., Thamaga, KH (2024). Land Degradation in Southern Africa: Restoration Strategies, Grazing Management, and Livelihoods. *Agriculture*, 14 (10), 1849

Slayi, M., Zhou, L., Thamaga, KH., Nyambo, P. (2024). The role of social inclusion in restoring communal rangelands in Southern Africa: A systematic review of approaches, challenges, and outcomes. *Land*, 13 (9), 1521

Thamaga, K.H., Gom, S., Adesola, G.O., Ndou, N., Muavhi, N., Mndela, M., Sibandze, P., Abdo, H.G., Maphanga, T., Afuye, G.A., and Madonsela, B.S. (2024). Integration of geospatial-based algorithms for groundwater potential characterization in Keiskamma Catchment of South Africa. *Groundwater for Sustainable Development*, 26, 101262. <https://doi.org/10.1016/j.gsd.2024.101262>

Tjale, M. M., Muchaku, S., Magaiza, G., Sharma, D. D., Sharma, G. K., Negi, Y. S., & Mwale, M. (2024). Review of community development initiatives for poverty reduction in Southern Africa. *Interdisciplinary Journal of Rural and Community Studies*, 6, 1-21.

Wu, W, Guan, Y, Nel, W, Xu, C (2024) Heavy metal migration and Lithium isotope fractionation under extreme weathering of basalt on tropical Hainan Island, China, *Applied Geochemistry* 175, 106163

Wu, W., Nel, W., Ji, J. and Chen, J (2024) Prospects for the potential carbon sink effects of afforestation to enhance weathering in China, *Journal of Asian Earth Sciences*, 276, 106370.

### **Book Chapters**

Muchaku, S., Magaiza, G., & Hamandawana, H. (2024). Enhancing Sustainability by Resolving Conflicts Between Traditional Leaders and Ward Committees. In *SDGs in Africa and the Middle East Region* (pp. 1399-1413). Cham: Springer International Publishing.



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### 2024/2025 List of Publications

Nyambo, P., Zhou, L., Mapuka, FN., Slayi, M., Muchaku, S., & Dzvene, AR (2024). Nature-based solutions to climate change for enhanced nutrition, food, and income security of rural communities in sub-Saharan Africa: Handbook of Nature-Based Solutions to Mitigation and Adaptation to Climate Change. Springer, 1-24

Zhou, L., Matsa, M., Dzvene, AR (2024). A Systematic Review of Climate Change Mitigation Policies in Southern Africa, Book Chapter in Climate Change Resilience in Rural Southern Africa: Dynamics, Prospects and Challenges page 181-200 , Springer Nature Switzerland Assessing the multidimensional impact of community-based cattle feedlot programs in the Eastern Cape, South Africa

Pharoe, BK (2024). Indicative Role of Trace and Rare-Earth Elements of the North-West Manganese Ore Deposit (South Africa) in Constraining the Genetic Model of Supergene Orebodies. In: Çiner, A., et al. Recent Research on Sedimentology, Stratigraphy, Paleontology, Geochemistry, Volcanology, Tectonics, and Petroleum Geology. MedGU 2022. Advances in Science, Technology & Innovation. Springer, Cham.

### Masters and Doctoral Graduations and Supervisors

**Schoenknecht, Kayla**, 2024. MSc. Physicochemical dynamics of the Soft Plume River on sub-Antarctic Marion Island. *Cum laude*. Supervisor: Prof. Werner Nel

**Mbuqwa, Phumelelani**, 2024. MSc. Monitoring agricultural drought using land surface temperature and vegetation indices: A case study of Amahlathi Local Municipality, Eastern Cape, South Africa. Supervisors: Dr. Hezekiel B. Magagula and Prof Ahmed M. Kalumba

**Manyenyeza, Akhona Wesley Siyavuya**, 2024. MPhil. Crop production constraints and coping strategies of small-scale crop and maize farmers in Gcuwa, Mquma Local Municipality, South Africa. Supervisors: Drs. Sonwabo P. Mazinyo and S. Ngarava



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### Information of Interest for Prospective Students

#### **Undergraduate**

Teaching Geography and Environmental Studies is not limited to classroom discussions and related activities. Field excursions are an integral part of the instructional methods we adopted. This approach creates opportunities for students to develop their observational skills and encourage collaborative learning among students. We always ensure that our undergraduate students spend a minimum of 8 hrs in the field at every level of study to promote lifelong learning. Our field excursions accommodate Physical and Human Geography concepts and are organized separately. Thus, Geography and Environmental Studies are best for you if you are a visual and kinesthetic.

#### **Human Geography Excursions**

##### First Year Level:

*National Heritage and Cultural Studies (NAHECS) and De Beers Art Gallery, University of Fort Hare*



The first-year module Introduction to Human Geographies (GEG111) introduces human geography concepts inclusive of but not limited to culture, society and space relations, local and global exchanges and concepts of political geography. During the first semester, the students visit the National Heritage and Social Studies (NAHECS) and De Beers Gallery at the University of Fort Hare. NAHECS houses significant collections, ranging from the archives of the South African liberation movement, personal activist papers, unique artifacts to contemporary South African Black Art. The students also get taken through the De Beers Art Gallery.



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## UNIVERSITY OF FORT HARE

### Information of Interest for Prospective Students

#### Third Year Level:

*GEG 312-East London Field Site-Economic Geography module focuses on Assessment of the success (or otherwise) of the EL IDZ in terms of the number of new industries established there (post-1994) and the progress made regarding the economic growth and development of BCMM.*



The Discipline (Unit) has diverse research programmes, including rainfall intensity monitoring and associated surface processes, soil erosion control, degradation and rehabilitation, dynamics in rural geographic spaces, and coastal resources and hazards management (application of GIS/RS), to highlight a few.

#### Link to Departmental Webpage

<https://www.ufh.ac.za/faculties/faculty-of-science-agriculture#Departments>

### **Postgraduate**

We stand firm in our conviction to train postgraduate students to understand the relationships between people and the environment. Ensuring that they are always searching for solutions to environmental and social problems for the benefit of society. If you share the same vision, join us on the journey of exploring the unknown and producing new knowledge to realise the goals of sustainable resource management and reduce human impacts on the environment.



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**SOCIETY OF SOUTH AFRICAN GEOGRAPHERS**

## **UNIVERSITY OF JOHANNESBURG**

**Department of Geography, Environmental Management and Energy Studies**

**Dr Thea Schoeman**

**Geographers' Specialisations Within The Department**

<b>Staff</b>	<b>Specialisation(s)</b>
Dr Thea Schoeman	Waste management, recycling, e-waste & teachers training
Prof. Walter Musakwa	Conservation Planning
Prof. Christopher Curtis	Biogeochemistry & Aquatic science
Prof. Gijsbert Hoogendoorn	Tourism Geography
Prof. Kristy Langerman	Air quality, energy transitions, environmental impacts of energy use, domestic energy
Dr Lee-Ann Modley	Environmental Monitoring and management
Prof. Ndidzulafhi Sinthumule	Transfrontier Conservation, Environmental Conservation and Society Border Studies, Environmental Geography, Land Reform and Political Ecology & Traditional ecological knowledge
Prof. Clare Kelso	Climate and Environmental History Rural livelihood vulnerability, Impacts of climate on rural livelihoods, Environmental Ethics and Justice, Historical climatology
Ms Mulalo Rabumbulu	Geomorphology
Prof. Isaac Rampedi	Environmental management
Ms Inge Salo Prins	Urban Studies

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## UNIVERSITY OF JOHANNESBURG

### Geographers' Specialisations Within The Department

Staff	Specialisation(s)
Ms Lindokuhle Mbokane (New)	
Dr Bopaki Phogole	Environmental epidemiology, Environmental Management, Political ecology of Energy.
Prof. Kowiyou Yessoufou (Now at Department of Botany)	Environmental management
Prof. Solomon Tesfamichael	GIS & Remote sensing
Dr Mahlatse Kganyago	Remote sensing of vegetation, Application of Earth observation, GIS and Artificial Intelligence in Precision agriculture and Environmental resource management.
Dr William Mushawemhuka	Tourism & Climate Change, GIS, Remote sensing
Ms Lara Stockigt	Human Geography
Ms Savannalee Hodgkinson	Sustainable consumer behaviour including sustainable fashion, recycling behaviour, and plant-based diets

# SSAG NEWS 2024/25

SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## UNIVERSITY OF JOHANNESBURG

### Exciting Departmental News

Prof Kristy Langerman was interviewed by the Cape Times, Daily Maverick and Radio 786 to provide a view on load shedding, and by the Sunday Times to discuss air quality.

PhD student, Mr Phetoho Rasebechele made history by becoming the first researcher to have his abstract selected twice to be among the top 10 at the Gauteng Environmental Research Symposium.

Mr Phetoho Rasebechele presented his work from his upcoming thesis at the 2024 Southern African Energy Conference and the South African Association of Geographers' biennial conference.

Mr Phetoho Rasebechele represented the department (GEMES) at the South African National Biodiversity's Walter Sisulu National Botanical Garden biodiversity career fair.

Mr Phetoho Rasebechele also appeared on Power 98.7, where he discussed climate mitigation at the local government level.

Prof Curtis was interviewed on SABC on the water & sanitation crisis before the President's 2024 State of the Nation Address: [SONA 2024](#) | [State of SOEs: Prof Christopher Curtis](#)

Dr Schoeman and Ms Rabumbulu presented 1 paper at the International Geographical Congress in Dublin, Ireland as well as another 2 papers at the Royal Geographical Society Conference in London, England during September.

Dr Schoeman and Prof Rampedi are academic partners of the International Solid Waste Association (ISWA) conference that took place for the first time on African soil. They also delivered a paper with their postdoc, Dr Maseki.

Dr Schoeman delivered another paper on e-waste recycling behaviour at the ISWA conference.

Prof Kelso and Dr Schoeman, with their PhD student Dimakatso Machetele, presented a paper on rural waste management at the same conference. Dr Schoeman was also a member of the Youth Committee of the ISWA conference. Later in September Dr Chidzungu (Postdoctoral fellow hosted by Dr Schoeman) will deliver a paper on the training of Geography teachers in mapwork at the Society of South African Geographers' conference in Potchefstroom.



# SSAG NEWS 2024/25

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## UNIVERSITY OF JOHANNESBURG

### Exciting Departmental News

Prof Hoogendoorn presented three papers at the 35th International Geographical Conference in Dublin, Ireland (August 2024) entitled: “Second homes and crisis communication in Sweden: a survey of risk and crisis communication in different spatial settings.” & “The socioeconomic impact of second home tourism in China.” & “Temporary residents and permanent jobs? Second-home tourism and job creation in the construction sector.”

Prof Sinthumule attended two conferences in Europe. The first conference was attended in Dublin (Ireland) from 24 to 28 August in a conference organized by International Geographical Congress. The conference was held at Dublin City University. In this conference, he presented a paper entitled “Traditional taboos: informal and invisible protection of remaining patches of forest in Vhembe District in Limpopo, South Africa.

Prof Sinthumule presented a paper in London (United Kingdom) from the 29 to 30 August in a conference organized by the Royal Geographical Society. The conference was held at Imperial College London. On the 29th of August he presented a paper titled “Local-level commercialisation of mopani worms (*Imbrasia belina*) in Mopani District Municipality, Limpopo Province of South Africa.

Prof Curtis presented a talk on greenhouse gas emissions from small dams in Gauteng at the recent SASAQs 2024 Conference hosted by UJ at Gold Reef City. SAEON Cathedral Peak Long Term Ecological Research platform provides hands-on learning for University of Johannesburg GEMES Honours students: From 30th Aug to 2nd Sept, Prof Curtis of GEMES co-hosted a field trip with the NRF-SAEON Grasslands- Wetlands-Forest Node at Cathedral Peak in the KZN Drakensberg. The Hons Strategic Environmental Planning students received a lecture on the functions and research platforms provided by SAEON before venturing up Mike’s Pass to view state of the art environmental monitoring instrumentation at first hand. This was followed by a day of practical activities in the pristine rivers of the Drakensberg to test out citizen science monitoring methods for water quality and river health. In addition to providing the first ever visit to the Drakensberg for most of the students, the visit provided a stark contrast to their previous field trip to the highly impacted Hartbeespoort Dam and Crocodile River in the first semester.



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## UNIVERSITY OF JOHANNESBURG

### Exciting Departmental News

Prof Curtis and Visiting Prof Neil Rose (UCL and GEMES) recently undertook lake sediment coring fieldwork as part of their UJ FRC-URC funded research fieldwork in Lesotho's Sehlabathebe National Park, in collaboration with the Lesotho Ministry of Environment and Forestry. The GEMES departmental boat came in very handy for coring two of these little studied Afromontane tarns, and sediment samples are currently undergoing radiometric dating and analysis of stable isotopes and trace elements at UCL to reconstruct environmental change and contamination histories in these very remote water bodies of the Drakensberg. As part of the same project, Nzhelele Dam in northern Limpopo Province was also cored for similar analyses. Preliminary results were presented at the international Southern African Mountains Conference held at Champagne Castle in March 2025.

Prof. Kowiyou Yessoufou hosted two inbound PhD students between July and September. Mr Yannick Akin is completing his PhD at the University of Parakou, Benin. He will be visiting for data analysis along with his supervisor, Prof. Orou Gaoue, a UJ visiting Professor. Ms Janet Olabode, from the University of Lagos, Nigeria, is a registered PhD student and will also visit for three months for data analysis. In August 2024, Prof. Kowiyou Yessoufou is invited to collaborate and give seminars at Umaru Yaradua University in Nigeria.

The Department of Geography, Environmental Management and Energy Studies (GEMES) offered a training and subject knowledge enhancement opportunity for Educators involved in the teaching of Geography at Matric level in the various high schools in the Moretele Local Education School Circuit. The training event took place at Motshegoa High School in the village of Makapanstad in the Bojanala District Municipality of the Northwest province. The school circuit is comprised of thirty different high schools and Geography is one of the important school subjects. The training event was attended by 32 Educators who participated in the various training sessions whereby the theoretical and practical aspects of matric Mapwork, Geomorphology, Geographic Information Systems (GIS), and Climatology were taught and illustrated with various teaching aids. Staff members who offered lectures and represented GEMES department: Ms. Mulalo Rabumbulu; Dr Mushawemhuka; Prof Kelso, Prof Tesfamichael, and Prof Rampedi. GEMES department is gratefully acknowledged for the financial support in this school outreach initiative.



# SSAG NEWS 2024/25

## SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

# UNIVERSITY OF JOHANNESBURG

### Exciting Departmental News

Dr Schoeman was interviewed by SABC FullView on the research she has conducted on waste reclaimers and e-waste.

Prof Yessoufou will be hosting an inbound student in July (1-31 July 2024). Mr Yannick Akin is completing his PhD at the University of Parakou, Benin. He will be visiting Prof Kowiyou for data analysis along with his supervisor, Prof. Orou Gaoue who is a UJ visiting Prof. Kowiyou will also be hosting another inbound student in September, Ms Janet Olabode, from the University of Lagos, Nigeria. She is a registered PhD student in Nigeria and will also be visiting him for 3 months for data analysis. Prof Kowiyou is invited for collaboration and seminars presentation at Umaru Yaradua University in Nigeria in August 2024. Mr Bhékani Ntuli Prof Langerman's student is one of the Top 200 Young South Africans. He mentions the value of Prof. Kristy's mentorship.

Prof Hoogendoorn has received the Gold Medal Award from the Society of South African Geographers for his meritorious contribution to Geography in South Africa.

Prof Rampedi has recently been appointed as a member to the new Environmental Assessment Practice Standard Working Group at the Council for Higher Education (CHE) in South Africa.

Dr Schoeman, Prof. Yessoufou and Dr Modley presented the Faculty of Science and the Department of GEMES at the launch of the new short learning programmes (SLPs) on dam siltation. The Water Research Commission (WRC) and the UJ have partnered to launch six short learning programmes to address critical capacity development challenges in dam siltation management in South Africa. The SLPs is a joint programme between GEMES and the Faculty of Engineering and Built Environment.

Prof. Hoogendoorn and Senior Research Fellows, Dr Hammett and Dr Masutha published a piece in the Conversation Africa available here. In January 2024, Prof. Hoogendoorn presented the inaugural lecture of the Geography Lecture Series at the Department of Geography, at the University of South Africa, on the politics of knowledge production in South African human geography.



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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## UNIVERSITY OF JOHANNESBURG

### Exciting Departmental News

Dr Mahlatse Kganyago has received a best PhD thesis award from the premier society in the UK called Remote Sensing and Photogrammetry Society (RSPSoc), sponsored by the UK Space Agency (UKSpace). It is awarded for the best Doctoral thesis, on the subjects of remote sensing and/or photogrammetry, accepted by a University during 2023. The award was conferred at the National Earth Observation Conference organised by RSPSoc annually, which he attended physically. For the first time, the award was awarded to a student from an African university. This award is significant because it indicates the quality of education offered by South African universities and their competitiveness to the top UK universities. Whereas there is no distinction in the PhD examination, awards like this recognize the excellent work done by the students and set them apart. Dr Kganyago hopes this award will inspire more African youth to pursue their interests, realise their potential, give it their all, and dare to succeed against all odds. His PhD thesis focused on extracting relevant information on field variability to support precision agriculture using the new generation satellite data from Sentinel-2 sensors and artificial intelligence. His PhD thesis resulted in about 10 publications in international journals and conferences.

Professor Gijsbert Hoogendoorn's had his professorial inauguration on the 12th of November 2024.

One of his journal papers, part of this PhD thesis, was awarded the Arthur Cracknell Award (formerly the Remote Sensing Letters Award) by Taylor and Francis and RSPSoc. Dr Kganyago is currently a Senior Lecturer and prominent researcher in Geo-informatics at the University of Johannesburg, having been in the industry for nearly a decade working for the South African National Space Agency.

Two GEMES third-year students, Ms. P Mhlabai and Ms. P Ramushu, presented at the Undergraduate Student Research Conference 2024. Ms Mhlabai's presentation focused on "Evaluating Rainwater Harvesting Potential in the Modder River Catchment Using Multi-Criteria Decision Analysis and Random Forest Algorithm", while Ms Ramushu's presentation focused on "Assessment of Annual Trends in Land Degradation Using Multi-Sensor Remote Sensing Data and eXtreme Gradient Boosting Classifier in Modder River Basin, South Africa.". Both were supervised by Dr Mahlatse Kganyago

Prof. Kowiyou Yessoufou is now at the Centre of DNA Barcoding, Department of Botany.



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### 2024/2025 List of Publications

Hodgkinson, S. and Hoogendoorn, G., 2024. Thrifting as a sustainable form of fashion in South Africa. *Journal of Consumer Sciences*, 5. doi: <https://dx.doi.org/10.4314/jfecs.v5i1.1s>

Müller, D.K., Back, A. and Hoogendoorn, G. (2024). Post-pandemic Perspectives on Second Homes and Multilocal Living. *Scandinavian Journal of Hospitality and Tourism*, 24(2), 149-152.

Ferreira, B., Hoogendoorn, G., Back, A. and Xu, Y-H. (2024). Second-home tourism in tropical China: residents' perception of socio-economic impacts. *Scandinavian Journal of Hospitality and Tourism*, 24(2), 199-221.

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## UNIVERSITY OF JOHANNESBURG

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## UNIVERSITY OF JOHANNESBURG

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## UNIVERSITY OF JOHANNESBURG

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## UNIVERSITY OF JOHANNESBURG

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Sinthumule, N. I. (2024). Are Mopani Worms a Mechanism for Mopane Tree (*Colophospermum mopane*) Conservation? An Evaluation of the Villages Around Giyani, Limpopo Province, South Africa. *Tropical Conservation Science*, 17, 19400829241283383.

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### **Book Chapters**

Kgabo Humphrey Thamaga, Mahlatse Kganyago, Mthunzi Mndela, Katlego Mashiane, Chapter 5 - Climate variability and rangeland ecosystems, In: Timothy Dube, Munyaradzi Davis Shekede, Cletah Shoko, Terence Darlington Mushore (Eds), *Remote Sensing of Climate*, Elsevier, 2024, Pages 85-106, ISBN 9780443217319, <https://doi.org/10.1016/B978-0-443-21731-9.00008-9>.

Kgabo Humphrey Thamaga, Mahlatse Kganyago, Chapter 11 - Climate variability and aquatic weed proliferation, In: Timothy Dube, Munyaradzi Davis Shekede, Cletah Shoko, Terence Darlington Mushore (Eds), *Remote Sensing of Climate*, Elsevier, 2024, Pages 241-249, ISBN 9780443217319, <https://doi.org/10.1016/B978-0-443-21731-9.00018-1>.



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## UNIVERSITY OF JOHANNESBURG

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Makwinja, R., Tesfamichael, S.G. and Curtis, C.J. (in press 2025) Does Malawi Need a Wetland Policy to Achieve the Wise Use Policy Under the Ramsar Convention? In: T. Pullaiah (Ed.), *The Wetlands Handbook*. Wiley Online Books.

### **Conference Proceedings**

Portia T Mzimba, Kristy E Langerman, Joanne Calitz, 2024: The Cost Implications of Cycling Coal-fired Power Stations to Support Increased Renewable Energy Generation, 2024 32nd Southern African Universities Power Engineering Conference (SAUPEC)

Brighton Mabasa, Kristy Langerman, and Hartmut Winkler, 2024: Assessment of plane of array irradiance models in South Africa, Southern African Sustainable Energy Conference

Phetoho Rasebechele, Clare Kelso and Kristy Langerman, 2024: Unpacking the Transition Management of the local transition of electricity generation: A case study of the City of Johannesburg, Southern African Sustainable Energy Conference

Schoeman, T., Rampedi, I.T. & Maseki, J. 2024. Appraisal of consumer electronics and e-waste generation in households in Gauteng in South Africa. Proceedings of the 41st International Conference on Chemical, Biological and Environmental Engineering, 21-22 November 2024, Cape Town, South Africa.



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## UNIVERSITY OF JOHANNESBURG

### Masters and Doctoral Graduations and Supervisors

Student	Degree	Title	Supervisor (s)
Mzimba, Portia	MPhil Energy Studies	The implications of operating a coal-fired power plant in a cycling regime	Prof K.E. Langerman & Ms J. Calitz
Chitate, Rodney	MPhil Energy Studies	Residential use of liquid petroleum gas in the metropolitan areas of Gauteng, South Africa	Prof K.E. Langerman
Zwane, M.I.	MSc Geography	Training evaluation of Gauteng waste pickers in the repair of e-waste	T. Schoeman
Bha Masuku	MSc Geography	Identifying environmental factors influencing the concentration, loading and spatial distribution of microplastic pollution in an urban river: A case study of the Klip River, South Africa	Prof Chris Curtis & Dr Neil Griffin (Rhodes Univ.)
Zanele Masombuka	MA Geography	An assessment of water accessibility and availability challenges in the rural areas: A case study of Moteti, Limpopo Province	Prof Clare Kelso & Prof Chris Curtis
Brenton Faulds	MSc Geography	The relationship between water quality and greenhouse gas emissions at the air-water interface in small dams in Johannesburg, Gauteng	Prof Chris Curtis
Savannalee Hodgkinson	MA Geography	Sustainability and behavioural drivers of dietary changes	Prof. Clare Kelso & Prof. Claire Wagner (UP)
Khanyisile Shandu	MSc Geography	Impacts of flood events on SMMEs and informal businesses in Ladysmith, KZN	Prof. Clare Kelso
Sphamandla Hlatswayo	MA Geography	Linking nitrogen dioxide column density to socio-environmental variables using spatial analysis in South Africa: a municipal-level assessment	Prof. Solomon Tesfamichael & Dr Mahlatse Kganyago



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# UNIVERSITY OF JOHANNESBURG

### Information of Interest for Prospective Students

#### **Undergraduate**

The Department of Geography, Environmental Management & Energy Studies at the University of Johannesburg offers interdisciplinary BSc programmes designed to address pressing global environmental challenges. Each programme combines two complementary fields as majors, equipping students with integrated knowledge and practical skills.

- BSc in Life and Environmental Sciences (Geography and Environmental Management)
- BSc in Life and Environmental Sciences (Geography and Zoology)
- BSc in Life and Environmental Sciences (Geography and Geology)
- BSc in Life and Environmental Sciences (Geology and Environmental Management)
- BSc in Life and Environmental Sciences (Environmental Management and Zoology)

#### **Why Choose our Undergraduate Programmes?**

Each degree offers a tailored interdisciplinary approach, blending theory with fieldwork, GIS, and policy analysis. Students gain hands-on experience through South Africa's diverse ecosystems and urban landscapes, positioning them as versatile professionals ready to tackle

sustainability, conservation, and resource management challenges.

#### **Possible Career Opportunities**

Our graduates emerge with expertise to drive solutions in both public and private sectors, thus contributing to a resilient planetary future. Below are some career opportunities our degree programmes can offer students:

Environmental officer roles in conservation NGOs and government agencies, wildlife reserves, environmental education, or policy development, Environmental geology, mining rehabilitation, water resource management, or regulatory compliance roles, Geotechnical engineering, mining sector roles, environmental impact assessment, or disaster management, Wildlife conservation, ecological research, environmental education, park management, Environmental consultancy, urban planning, and sustainability coordination.



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## SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

# UNIVERSITY OF JOHANNESBURG

### Information of Interest for Prospective Students

#### **Postgraduate**

The department offers specialised postgraduate programmes in Geography, Environmental Management, and Energy Studies, designed to empower students to tackle pressing global challenges such as climate change, sustainable development, and energy transitions. From Honours to Doctorate levels, these programmes blend advanced theoretical knowledge with practical research, equipping graduates to lead in academia, industry, or policy sectors.

#### **Honours**

- Information for Geography Honours
- Geography Honours Programme Information
- Energy Studies Honours Programme Information

#### **Masters**

- Master's Dissertation
- Masters Environmental Management
- Master's Energy
- Energy Studies Masters and Doctorate Application

#### **Doctorate**

- Doctorate Geography
- Doctorate Environmental Management
- Doctorate Energy Studies

- Energy Studies Masters and Doctorate Application

#### **Why Choose our Postgraduate Programmes?**

Industry Relevance: Collaborate with NGOs, government agencies, and energy firms through UJ's partnerships (e.g., renewable energy projects, urban planning initiatives).

Research Impact: Address Africa's unique challenges while contributing to global sustainability goals, supported by cutting-edge labs and fieldwork opportunities.

Career Flexibility: Gain skills for diverse roles—from environmental consultancy, GIS/Remote sensing, and energy policy to academia and tech innovation.

Expert Mentorship: Learn from leading researchers in geography, Geoinformatics, environmental governance, and energy systems.

Future-Proof Focus: Align with global trends in sustainability, green energy, and climate adaptation—skills critical for the 21st century.



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## UNIVERSITY OF JOHANNESBURG

### Information of Interest for Prospective Students

#### **Possible Career Opportunities**

Environmental consultancy, GIS specialist, urban planner, academic researcher, Energy analyst, renewable project coordinator, policy advisor, Sustainability manager, environmental policy maker, conservation strategist, Energy project manager, renewable energy consultant, corporate sustainability roles, Researcher, academia, or industry specialist, Director of sustainability, environmental think-tank lead, university faculty, Energy sector CEO, senior policy architect, renewable tech innovator.

#### **Link to Departmental Webpage**

<https://www.uj.ac.za/faculties/science/departments-2/geography-environmental-management-energy-studies/>



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## UNIVERSITY OF KWAZULU-NATAL

School of Agricultural, Earth and Environmental Sciences

### Geographers' Specialisations Within The Department

Name (Title, Initials, Surname)	Area of Specialisation
<b>Dr Ahmed Fathima</b>	Environmental Management & Policy, Coastal Zone Management, and Environmental Conflicts
<b>Dr Bass Orli</b>	Human Geography
<b>Dr Desai Sumaiya</b>	Rural development, Land tenure issues, and Urban Issues
<b>Dr Dube Lawrence</b>	Climatology
<b>Prof Finch Jemma</b>	Palaeoecology
<b>Prof Gebreslasie Michael</b>	Spatial and temporal interaction/changes between the environment's physical, climatic, and biological components, including their impact on human health.
<b>Dr Gumede Amanda</b>	Geography and Environmental Science- Climate change mitigation and community conservation
<b>Prof Hill Trevor</b>	Biogeography
<b>Mr Hlatshwayo Sizwe</b>	GIS and Remote Sensing
<b>Prof Lottering Romano</b>	GIS and Remote Sensing
<b>Dr Lottering Shenelle</b>	Human Geography
<b>Mrs Morris Feroza</b>	Hydrology
<b>Prof Mutanga Onesimo</b>	SARChI Chair on Land use Planning
<b>Prof Narsiah Sagie</b>	Geography of Development, Political economy of South Africa, Political Economy of Basic Services provision, and Social and critical theory
<b>Dr Nel Adrian</b>	Political Ecology
<b>Dr Ngetar Njoya</b>	GIS and Remote Sensing

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## UNIVERSITY OF KWAZULU-NATAL

### Geographers' Specialisations Within The Department

Name (Title, Initials, Surname)	Area of Specialisation
<b>Dr Nhlabathi Sibonakaliso</b>	Urban Studies, Urban Geography, Sustainable Cities, and Tourism Studies
<b>Dr Nkomo Sphumelele</b>	Environmental Management and Natural Resources Management
<b>Prof Odindi John</b>	Land use land cover mapping, Vegetation remote sensing, Remote sensing of urban landscapes and climate change, and Environmental management
<b>Prof Proches Serban</b>	Biogeography, Biodiversity, and Ecology
<b>Dr Pillay Srinivasan</b>	Physical geography, water quality,
<b>Dr Seiben Erwin</b>	Wetland ecosystem services and Landscape ecology
<b>Dr Mthembeni Mngadi</b>	GIS and Remote Sensing

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## UNIVERSITY OF KWAZULU-NATAL

### Exciting Departmental News

Prof M Gebreslasie was awarded a C2 NRF Rating from 2024 – 2029

Prof Romano Lottering was promoted to Associate Professor and was nominated as the chair of SACNASP's Geospatial Science Professional Advisory Committee in 2024.

In 2024 Prof Lottering and Mr Hlatshwayo hosted an In-house GIS refresher training for 93 KZN Department of Economic Development, Tourism and Environmental Affairs officials

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## UNIVERSITY OF KWAZULU-NATAL

### 2024/2025 List of Publications

Hlongwa, N., Nkomo, S.L., Desai, S.A. (2024). Barriers to water, sanitation, and hygiene in Sub-Saharan Africa: a mini review. *Journal for Water, Sanitation & Hygiene for development*, 14(7): 497-510. <https://doi.org/10.2166/washdev.2024.266>.

Mary Lynch, Fiona Harris, Michelle Ierna, Ozayr Mahomed, Fiona Henriquez-Mui, Michael Gebreslasie, David Ndzi, Serestina Viriri, Muhammad Zeeshan Shakir, Natalie Dickinson, Caroline Miller, Nisha Nadesan-Reddy, Fikile Nkwanyana, Llinos Haf Spencer, and Saloshni Naidoo (2025). Warning system for extreme weather events, Awareness Technology for Healthcare, Equitable delivery, and Resilience (WEATHER) Project: A mixed methods research study protocol. *MDRXIV*, <https://doi.org/10.1101/2025.01.14.25320537>

Orlando Bhungeni, Ashadevi Ramjatan, and Michael Gebreslasie (2024) Evaluating Machine-Learning Algorithms for Mapping LULC of the uMngeni Catchment Area, KwaZulu-Natal. *Remote Sensing* 2219. <https://doi.org/10.3390/rs16122219>

Tessnika Sewpersad, Sifiso Xulu, and Michael Gebreslasie (2024) The assessment of soil organic matter in the KwaZulu-Natal province of South Africa and its relationship to spectroscopy data. *Geocarto International*. Volume 39, No 1, 2361702. <https://doi.org/10.1080/10106049.2024.2361702>

Morena Mapuru, Sifiso Xulu, Michael Gebreslasie (2024) Modelling possible habitats for poplar invasion in South Africa. *Koedoe* 66(1), a1783. <https://doi.org/10.4102/koedoe.v66i1.1783>

Eromose E. Ebhuoma, Llewellyn Leonard, Michael Gebreslasie (2024) Envisioning the future in the light of climatic and non-climatic risks: lessons from KwaZulu-Natal, South Africa. *Climate Research*. Vol.92:117-133. <https://doi.org/10.3354/cr01737>

Thandi Kapwata, Nada Abdelatif, Noah Scovronick, Michael T. Gebreslasie, Fiorella Acquavita, Caradee Y. Wright (2024) Identifying heat thresholds for South Africa towards the development of a heat-health warning system. *International Journal of Biometeorology*. <https://doi.org/10.1007/s00484-023-02596-z>

S Xulu, N Mbatha, K Peerbhay, M Gebreslasie, N Agjee (2024) Comparison of different spectral indices to differentiate the impact of insect attack on planted forest stands. *Remote Sensing Applications: Society and Environment*, 33 101087. <https://doi.org/10.1016/j.rsase.2023.101087>



# SSAG NEWS 2024/25

SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## UNIVERSITY OF KWAZULU-NATAL

### 2024/2025 List of Publications

Perry, N.S., Gumede, A. and Munien, S. 2024. A comparative analysis of responses to the COVID-19 tourism disruptions among small, medium and micro enterprises in coastal locations: Case studies of Cape Town and Durban, South Africa. *Development Southern Africa*, 1-16.

Buthelezi, M, Lottering, R., Peerbhay, K. & Mutanga, O. 2025: Exploring Forest rehabilitation and restoration: A brief systematic review. *Trees, Forests and People*.

Peerbhay, K, Devsaran, N, Lottering, R., Agjee, N. & Parag, M. 2025: Mapping commercial forests infected by the novel variant of *Elsinoë masingae*, using unmanned aerial technology in southern Africa. *Forests*.

Gidey, E., Mhangara, P., Birhane, E., Dikinya, O., Lottering, R., Hishe, S., Zenebe, A., Girma, A., Nasir, J., Addisu, A., Asmamaw, D., & Zeleke, T. 2025: Expanding Forest Cover Increased the Ecosystem Service Value of Dry Afromontane Forests in Tigray, Ethiopia. *Land degradation & Development*.

Buthelezi, M, Lottering, R., Peerbhay, K. & Mutanga, O. 2024: Optimising forest rehabilitation and restoration through remote sensing and machine learning: Mapping natural forests in the eThekweni Municipality. *Remote Sensing Applications: Society and Environment*, 36, 101335.

Gidey, E, Mhangara, P, Birhane, E., Dikinya, O., Lottering, R., Hishe, S., Zenebe, A., Girma, A., Nasir, J., Addisu, A., Asmamaw, D., Zeleke, T., 2024: Ecotourism Suitability Mapping and Analysis in the Highlands of Tigray Regional State–Northern Ethiopia. *Journal of Ecotourism*.

Buthelezi, M, Lottering, R., Peerbhay, K. & Mutanga, O., 2024: Predicting land use and land cover change dynamics in the eThekweni Municipality: A machine learning approach with Landsat imagery. *Journal of Spatial Science*.

Buthelezi, M, Lottering, R., Peerbhay, K. & Mutanga, O. 2024: The use of suitability models and remote sensing to map forest suitability: A systematic review. *Southern Forests: Journal of Forest Science*.

Odebiri, O., Mutanga, O., Odindi, J., Slotow, R., Mafongoya, P., Lottering, R., Naicker, R., Matongera, T., & Mngadi, M. 2024: Remote Sensing of Depth-Induced Variations in Soil Organic Carbon Stocks Distribution Within Different Vegetated Landscapes, *Catena*. 108216.



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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## UNIVERSITY OF KWAZULU-NATAL

### 2024/2025 List of Publications

Odebiri, O., Mutanga, O., Odindi, J., Slotow, R., Mafongoya, P., Lottering, R., Naicker, R., Matongera, T., & Mngadi, M. 2024: Mapping sub-surface distribution of soil organic carbon stocks in South Africa's arid and semi-arid landscapes: Implications for land management and climate change mitigation, *Geoderma Regional*, e00817.

Mthembu, N., Lottering, R., & Kotze, H. 2024: Estimating Leaf Area Index of *Eucalyptus dunnii* over the dry and wet seasons using vegetation indices and image texture derived from WorldView-3 imagery. *International Journal of Remote Sensing*. 45 (12), 3871-3896.

Buthelezi, M., Lottering, R., Peerbhay, K. & Mutanga, O. 2024: A machine learning approach to mapping suitable areas for forest vegetation in the eThekweni Municipality. *Remote Sensing Applications: Society and Environment*. 101208.

Matiza, C., Peerbhay, K., Lottering, R., Mutanga, O. 2024: Assessing Aboveground biomass in Reforested Urban Landscapes Using Machine Learning and Remote Sensing Data. *Journal of Spatial Science*.

Vawda, M., Lottering, R., Mutanga, O., Peerbhay, K. & Sibanda, M. 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

Buthelezi, M., Lottering, R., Peerbhay, K. & Mutanga, O. 2024: Assessing the extent of land degradation in the eThekweni Municipality using land cover change and soil organic carbon. *International Journal of Remote Sensing*. 45 (4), 1339 – 1367.

Parag, M., Lottering, R., Peerbhay, K., Agjee, A. & Poona, N. 2024: The Use of Synthetic Aperture Radar Technology for Crop Biomass Monitoring: A Systematic Review. *Remote Sensing Applications: Society and Environment*. 33, 101107.



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# SSAG NEWS 2024/25

SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## UNIVERSITY OF KWAZULU-NATAL

### Masters and Doctoral Graduations and Supervisors

MSc in Geography			
Student Surname & Initials	Full-Dissertation Title	Supervisor	Co-supervisor(s)
PhD Perry N.S	A comparative socio-economic impact assessment of the COVID-19 pandemic on tourism small, medium and micro enterprises (SMMEs) in coastal cities: case studies of Cape Town and Durban, South Africa	Dr S Munien	Dr A Gumede
MSc Orlando Bhungeni	Land Use and Land Cover Change (LULC-C) detection and assess future change using Remote Sensing and Machine Learning Algorithms: A Study of Umgeni River Catchment	M Gebreslasie	
MSc Hlongwa, N.N	Community perceptions regarding challenges associated with water and sanitation: A comparative study of four selected rural communities in Ndwedwe Local Municipality, KwaZulu-Natal.	Dr S.A.Desai	Dr S.L.Nkomo
MSc Mbambo,Z.N-	Caregivers' perception regarding mental health disorders, living conditions and access to psychiatric programs: A case study of KwaXimba, eThekwini Municipality, KwaZulu-Natal, South Africa.	Dr S.L.Nkomo	Dr S.A.Desai

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## SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

### UNIVERSITY OF KWAZULU-NATAL

#### Masters and Doctoral Graduations and Supervisors

MSc in Geography			
Student Surname & Initials	Full-Dissertation Title	Supervisor	Co-supervisor(s)
MSc L.Z.Tenza	Street food vendors perceptions on food safety measures, hygiene practices and sanitary conditions: Case studies of Isipingo and Umlazi, eThekweni Municipality, KwaZulu-Natal, South Africa.	Dr S.A.Desai	Dr S.L.Nkomo
MSc Abdulla, A	Using Lidar data to map tree count in a plantation forest.	Prof Lottering	Dr Peerbhay
MSc Parag, M	The Use of Synthetic Aperture Radar Technology for Crop Biomass Monitoring.	Prof Lottering	Dr Peerbhay Dr Agjee
MSc Shar, A	Investigating the prevalence of wattle rust ( <i>Uromycladium acacia</i> ) in black wattle ( <i>Acacia mearnsii</i> ) plantations using satellite monitoring technology.	Prof Lottering	Dr Peerbhay Dr Agjee Dr S. Lottering
PhD Matiza, C	Forecasting long-term landcover changes and derived regulatory ecosystem services from Remote Sensing.	Dr Peerbhay	Prof Lottering Prof Mutanga
PhD Buthelezi, M	Regionalised forest suitability models & scenario planning for production and health management, using GIS & Remote Sensing.	Prof Lottering	Dr Peerbhay Prof Mutanga

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## SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

# UNIVERSITY OF KWAZULU-NATAL

### Information of Interest for Prospective Students

#### **Undergraduate**

**BSc (LES Stream):** This three-year Bachelor of Science (BSc) degree, is achieved through a general Life and Earth Sciences (LES) stream with Geography and another discipline as major subjects.

**BSc Environmental Science:** This focused, three-year programme leads to a Bachelor of Science (BSc) degree that specialises in Environmental Sciences.

**BSc GIS and Earth Observation:** This focused, three-year programme leads to a Bachelor of Science (BSc) degree that specialises in the field of Geographic Information Systems and Earth Observation (GIS-EO).

#### **Postgraduate**

**Master of Science:** A Master of Science programme is offered, whereby students engage in research under the supervision of an academic staff member. A minimum of a BSc Honours degree or equivalent must be achieved to be considered for this programme. This degree takes a minimum of one year.

**Doctor of Philosophy:** A Doctor of Philosophy programme is offered where students engage in novel research supervised by academic members of staff. This is typically three years of fulltime study and normally follows on from a Master of Science degree.

### **Contact Information**

For more details, reach out to the Department of Geography

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# SSAG NEWS 2024/25

SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## UNIVERSITY OF LIMPOPO

Department Of Geography & Environmental Studies

Izelque Botha

Geographers' Specialisations Within The Department

Name (Title, Initials, Surname)	Area of Specialisation
Prof MR Ramudzuli	Resource Perception and Management, Sustainable Development, Tourism, GIS & Remote Sensing
Prof H Chikoore	Meteorology, Climate, Extreme events
Prof I Dhau	GIS and Remote Sensing Applications
Dr D Klopper	Atmospheric Science (Atmospheric Aerosols, Meteorological Processes & Dynamics); Human-Environment Interactions (Environmental Management, Waste Management)
Dr A De Lange	Atmospheric Science, Meteorology, Climatology, Air Quality, Air pollution Dispersion
Ms MC Mothapo	Risk & Vulnerability Assessments, Aerial Photography, Cartography, GIS & Remote Sensing Applications



# SSAG NEWS 2024/25

SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## UNIVERSITY OF LIMPOPO

### Geographers' Specialisations Within The Department

Name (Title, Initials, Surname)	Area of Specialisation
Mr M Marais	Economic & Real Estate Geography, Environmental Science & Impact Management, Urban Design & Settlement Resilience, Trans-disciplinary Peri-Urban Studies
Ms I Botha	Perceptions around environmental issues, Environmental Impact Assessments & Management, Public Participation, Science Communication, Waste management
Mr MM Sebaiwa	Natural Resources Management, Ecotoxicology, Ecological Risk Assessments, Emerging Pollutants Detection & Quantification
Ms LF Lindeque	Air Quality Management, Sustainable Energy Use, Environmental Impacts on Human Health
Mr FM Mashao	GIS and Remote Sensing Applications
Ms T Mugwena	GIS & Remote Sensing & their Applications in Conservation, Vegetation Monitoring & Social Sciences
Ms D Manyekwane	Waste management
Ms DP Nkuna	GIS and Remote Sensing Applications



# SSAG NEWS 2024/25

SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## UNIVERSITY OF LIMPOPO

### Exciting Departmental News

Prof Hector Chikoore was awarded C2 NRF Rating from 2025 - 2030

We are delighted to inform the SSAG community that Dr. Danitza Klopper has been elected as the new Research & Project Coordinator for Mountain Environmental Watch! Dr. Klopper will be leading efforts to protect the Upper Letaba Catchment in Limpopo Province, one of South Africa's seven vital catchments. This crucial area provides clean water for millions and supports countless ecosystems downstream. Together, we can enhance biodiversity, maintain ecological health, and ensure sustainable water resources for all.

### 2024/2025 List of Publications

Chikoore H, Mbokodo IL, Singo MV, Mohomi T, Munyai RB, Havenga H, Mahlobo DD, Engelbrecht FA, Bopape MM and T Ndarana (2024) Dynamics of an extreme low temperature event over South Africa amid a warming climate. *Weather and Climate Extremes Journal*, <https://doi.org/10.1016/j.wace.2024.100668>

Ndarana T, Rammopo TS, Bopape MM, Hart NCG, Reason CJC and H Chikoore (2024) A quasi-geostrophic analysis of summertime southern African linear-regime westerly waves. *Climate Dynamics*, <https://doi.org/10.1007/s00382-023-07067-0>

Matimolane S, Strydom S, Mathivha FI and H Chikoore (2024) Evaluating the spatiotemporal patterns of drought characteristics in a semi-arid region of Limpopo Province, South Africa. *Environmental Monitoring and Assessment*, 196: 1062, <https://doi.org/10.1007/s10661-024-13217-6>

Mashao FM, Deemoz B, Kifle Y, Klopper D, Chikoore H, Sakai RK, and KK Ayisi (2024) An Appraisal of The Progress in Utilizing Radiosonde and Satellites for Monitoring Upper Air Temperature Profiles. *Atmosphere*, <https://doi.org/10.3390/atmos15030387>

Mohomi T, Mbatha NB, Boshoff DS, Mbokodo IL, Ndarana T, Bopape MM and H Chikoore (2024) Attributing impacts of LULCC on the boundary layer climate of South Africa's eastern escarpment. *Journal of Earth System Science*, 133, 178 (2024). <https://doi.org/10.1007/s12040-024-02388-y>



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## UNIVERSITY OF LIMPOPO

### 2024/2025 List of Publications

Kom Z, Nicolau MD, Uhunamure SE, Mpandeli S, Nethengwe NS, Steyn JN, Shale K, Ramasunga P and H Chikoore (2024) “*Smallholder farmers multinomial choice analysis for climate change and variability in Limpopo Province, South Africa*”. In: *Innovation and Development of Agricultural Systems: Cases from Brazil, Russia, India, China and South Africa (BRICS)*, Springer, [https://doi.org/10.1007/978-981-97-2926-5\\_4](https://doi.org/10.1007/978-981-97-2926-5_4)

Mashao, F.M., Thaba, S.J., Muyambo, N.P., Tjale, C.R., Zwane, P.S.M., Munjonji, L., Nkuna, D., Ayisi, K.K. and Thamaga, K.H., 2024. Exploring laboratory-based spectroscopy for estimating NPK content in the hutton soils of Syferkuil Farmlands, South Africa. *Geocarto International*, 39(1), p.2339289.

Maliehe, T.S., Mavingo, N., Selepe, T.N., Masoko, P., Mashao, F.M. and Nyamutswa, N., 2024. Quantitative Assessment of Human Health Risks Associated with Heavy Metal and Bacterial Pollution in Groundwater from Mankweng in Limpopo Province, South Africa. *International Journal of Environmental Research and Public Health*, 21(11), p.1489.

Maliehe, T.S., Mavingo, N., Selepe, T.N., Masoko, P., Mashao, F.M. and Nyamutswa, N., 2024. Determination of the Quality of Groundwater in Mankweng, Limpopo Province, South Africa, Using the Water Quality Index. *International Journal of Environmental Research and Public Health*, 21(11), p.1444.

Desboeufs, K., Formenti, P., Torres-Sanchez, R., Schepanski, K., Chaboureau, J., Andersen, H., Cermak, J., Feuerstein, S., Laurent, B., Klopper, D., Namwoonde, A., Cazaunau, M., Chevaillier, S., Feron, A., Mirande-Bret, C., Triquet, S., and S.J. Piketh. 2024. *Fractional solubility of iron in mineral dust aerosols over coastal Namibia: a link with marine biogenic emissions?* *Journal of Atmospheric Chemistry and Physics*, 24, 1525–1541, <https://doi.org/10.5194/acp-24-1525-2024>.



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## SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

# UNIVERSITY OF LIMPOPO

### Masters and Doctoral Graduations and Supervisors

MSc in Geography			
Student Surname & Initials	Full-Dissertation Title	Supervisor	Co-supervisor(s)
Choshi TJ	“Monitoring maize streak virus disease at different growth stages using remote sensing data.”	Prof I Dhau	Mr FM Mashao
Mabeba MRA	“Evaluation of community perceptions on outdoor air pollution in Marapong and Onverwacht townships, Lephalale Local Municipality, Limpopo Province South Africa.”	Dr JM Letsoalo	Mr MM Sebaiwa
Mohlala G	“Assessing impacts of climate change extremes and land use/land cover changes on surface water quality in Letaba catchment Limpopo Province South Africa.”	Prof I Dhau	Dr S Mutanga Dr S Nangombe
Molaba JR	“Evaluating the awareness and perception of sorting municipal solid waste: A case study of Lebowakgomo Zone A and F, Lepelle-Nkumpi Local Municipality, Limpopo Province South Africa.”	Dr JM Letsoalo	Prof MHN Mollel
Mothapo K	“Assessing factors limiting water accessibility in portions of the Capricorn District Municipality of Limpopo Province, South Africa.”	Dr RT Akanbi	Dr JM Letsoalo
Mukwevho T	“Land use and land cover changes as an indicator of grassland biomass degradation in Mphanama Village, Limpopo Province, South Africa”	Prof I Dhau	Prof KK Ayisi
Shai T	“Investigating the relationship between land use and landcover changes, climate variability and Ebenezer Dam water levels in the B81A quaternary catchment.”	Dr D Klopper	Mr FM Mashao



# SSAG NEWS 2024/25

## SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

# UNIVERSITY OF LIMPOPO

### Information of Interest for Prospective Students

#### **Undergraduate**

#### Bachelor of Science in Environmental & Resource Studies at the University of Limpopo

**Program Overview:** The BSc in Environmental & Resource Studies focuses on critical areas such as water resources management, biological resource protection, environmental impact assessment, sustainable agriculture, climate change and environmental health and safety. Students develop skills to assess human-environment relationships and understand the impact of economic and political trends on the environment.

**Career Opportunities:** Graduates can pursue careers in:

- Water resources management
- Biological resource protection
- Environmental impact assessment
- Environmental health and safety
- Sustainable agriculture

**Admission Requirements:** Prospective students must meet the university's general admission criteria. Specific requirements for the program can be found on the university's official website or by contacting the admissions office.

The program emphasizes experiential learning and community engagement, particularly in rural communities.

#### **Postgraduate**

**Honours Degree:** The Bachelor of Science Honours in Geography provides advanced academic and research training. Core modules include Research, Philosophy of Geography, and Elements of Environmental Management. Students choose specialist modules such as Applied GIS, Advanced Natural Resource Ecology, and Applied Natural Resource Management. The program is offered full-time over one year.

**Masters Degree:** The Master of Science in Geography focuses on advanced research and specialized knowledge in areas such as climatology, geomorphology, environmental management, GIS application, air quality and urban studies. The interdisciplinary nature of the programme allows masters candidates to study various aspects of human-environment interactions and allows for the adoption of a wide range of methodologies. Students engage in independent research projects. Admission requires a relevant NQF8 four year or Honours degree. The degree is offered as a full-time programme.



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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## UNIVERSITY OF LIMPOPO

### Information of Interest for Prospective Students

#### **Postgraduate**

Doctoral Degree: The Doctor of Philosophy in Geography involves extensive research aimed at contributing new knowledge to the field. Candidates must have a relevant Masters degree and demonstrate sufficient knowledge in their area of study. The program emphasizes original research and the development of innovative solutions to geographical challenges. The degree is offered as a full-time programme.

#### **Contact Information**

For more details, reach out to the Department of Geography & Environmental Studies

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### Link to Departmental Webpage

[Department of Geography and Environmental Studies - University of Limpopo](#)



# SSAG NEWS 2024/25

SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## UNIVERSITY OF PRETORIA

Department of Geography and Environmental Studies

Prof. Rebecca Garland (Acting HOD)

Geographers' Specialisations Within The Department

Title	Surname	Name Initials	Rank Position	Specialisation(s)	E-mail
Dr	Adeleke	Adedayo	Lecturer	Geoinformatics (geodesy, surveying)	<a href="mailto:adedayo.adeleke@up.ac.za">adedayo.adeleke@up.ac.za</a>
Prof	Archer	Emma	Professor	Sustainable agriculture/biodiversity and climate; drylands	<a href="mailto:emma.archer@up.ac.za">emma.archer@up.ac.za</a>
Prof	Beckedahl	Heinz	Extraordinary Lecturer	Geomorphology, wetland studies	<a href="mailto:hbeckedahl@gmail.com">hbeckedahl@gmail.com</a>
Dr	Beraki	Asmerom	Extraordinary Lecturer	Meteorology	<a href="mailto:aberaki@csir.co.za">aberaki@csir.co.za</a>
Dr	Bopape	Mary-Jane	Extraordinary Lecturer	Meteorology	<a href="mailto:mm.bopape@saeon.nrf.ac.za">mm.bopape@saeon.nrf.ac.za</a>
Dr	Botai	Joel	Extraordinary Lecturer	Atmospheric modelling, remote sensing	<a href="mailto:Joel.botai@weather.sa.co.za">Joel.botai@weather.sa.co.za</a>
Prof	Breetzke	Gregory	Associate Professor	Geography of crime (GIS)	<a href="mailto:greg.breetzke@up.ac.za">greg.breetzke@up.ac.za</a>
Dr	Chirima	George	Extraordinary Lecturer	Geoinformatics	<a href="mailto:ChirimaJ@arc.agric.za">ChirimaJ@arc.agric.za</a>
Dr	Claassen	Marius	Extraordinary Lecturer	Environmental science, ecology	<a href="mailto:mclaasse86@gmail.com">mclaasse86@gmail.com</a>



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## UNIVERSITY OF PRETORIA

### Geographers' Specialisations Within The Department

Title	Surname	Name Initials	Rank Position	Specialisation(s)	E-mail
Prof	Coetzee	Serena	Extraordinary Professor	Geoinformatics (spatial data infrastructures)	<a href="mailto:serenacoetzee@gmail.com">serenacoetzee@gmail.com</a>
Dr	Coetzer	Kaera	Senior Lecturer	Environmental science, applied ecology	<a href="mailto:kaera.coetzer@up.ac.za">kaera.coetzer@up.ac.za</a>
Dr	Cooper	Antony	Extraordinary Lecturer	Geographical Information Science (GISc) theory and applications	<a href="mailto:acooper@csir.co.za">acooper@csir.co.za</a>
Prof	Davis	Nerhene	Associate Professor	Human geography (land reform)	<a href="mailto:Nerhene.davis@up.ac.za">Nerhene.davis@up.ac.za</a>
Prof	Dougill	Andy	Extraordinary Professor	Environmental science	<a href="mailto:A.J.Dougill@leeds.ac.uk">A.J.Dougill@leeds.ac.uk</a>
Prof	Dyson	Liesl	Associate Professor	Meteorology	<a href="mailto:Liesl.dyson@up.ac.za">Liesl.dyson@up.ac.za</a>
Dr	Engelbrecht	Christien	Extraordinary Lecturer	Meteorology	<a href="mailto:Christien.Engelbrecht@weather.co.za">Christien.Engelbrecht@weather.co.za</a>
Dr	Feig	Gregor	Extraordinary Lecturer	Environmental science	<a href="mailto:gregor@saeon.ac.za">gregor@saeon.ac.za</a>
Dr	Gregory	JJ	Associate Professor	Urban Geography (urban and neighbourhood change)	<a href="mailto:jj.gregory@up.ac.za">jj.gregory@up.ac.za</a>



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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## UNIVERSITY OF PRETORIA

### Geographers' Specialisations Within The Department

Title	Surname	Name / Initials	Rank / Position	Specialisation(s)	E-mail
Prof	Garland	Rebecca	Associate Professor	Air quality, atmospheric composition, and impacts	<a href="mailto:rebecca.garland@up.ac.za">rebecca.garland@up.ac.za</a>
Dr	Hansen	Christel	Senior Lecturer	Geomorphology, applied GIS	<a href="mailto:christel.hansen@up.ac.za">christel.hansen@up.ac.za</a>
Prof	Hausmann	Natalie	Associate Professor	Bio-geomorphology	<a href="mailto:Natalie.hausmann@up.ac.za">Natalie.hausmann@up.ac.za</a>
Dr	Jordaan	Winifred	Extraordinary Lecturer	Meteorology	<a href="mailto:Winifred.Jordaan@weathersa.co.za">Winifred.Jordaan@weathersa.co.za</a>
Mr	Katumba	Samy	Lecturer	Geoinformatics	<a href="mailto:Samy.katumba@up.ac.za">Samy.katumba@up.ac.za</a>
Mr	Kruger	Andries	Extraordinary Lecturer	Meteorology	<a href="mailto:Andries.kruger@weathersa.co.za">Andries.kruger@weathersa.co.za</a>
Prof	Landman	Willem	Professor	Meteorology	<a href="mailto:Willem.landman@up.ac.za">Willem.landman@up.ac.za</a>
Dr	Loubser	Michael	Lecturer	Geomorphology	<a href="mailto:michael.loubser@up.ac.za">michael.loubser@up.ac.za</a>
Dr	Naidoo	Laven	Extraordinary Lecturer	Geoinformatics	<a href="mailto:laven.naidoo@gcro.ac.za">laven.naidoo@gcro.ac.za</a>



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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## UNIVERSITY OF PRETORIA

### Geographers' Specialisations Within The Department

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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/>

### 2024/2025 List of Publications

#### Journal Articles

- Chia EL, Chirwa PW, Nsubuga FWN (2024). An Analysis of the Behavioural Persistence of Tree-growing Farmers in the Sudano-Sahelian Region of Cameroon. *SMALL-SCALE FORESTRY*, 23 (2024), pp. 295 – 312
- Salvador C, Nieto R, Kapwata T, Wright CY, Reason C, Gimeno L, Vicedo-Cabrera A (2024). Analyzing the effects of drought at different time scales on cause-specific mortality in South Africa. *ENVIRONMENTAL RESEARCH LETTERS*, 19 (5), pp. 1 - 12
- Rybachak O, Du Toit J, Delorme J, Judt J, Bieri M, Midgley G, Mukwashi K, Thau C, Feig G, Lucas-Moffat A (2024). Livestock grazing and biodiversity: Effects on CO<sub>2</sub> exchange in semi- arid Karoo ecosystems, South Africa. *SCIENCE OF THE TOTAL ENVIRONMENT*, 910 (168517), pp. 1 - 20
- Pereira L, Gianelli I, Achieng T, Amon D, Archibald S, Arif S, Castro A,Chimbadzwa T, Coetzer K, Selomane O (2024). Equity and justice should underpin the discourse on tipping points. *EARTH SYSTEM DYNAMICS*, 15 (2), pp. 341 - 366
- Afuye G, Nduku L, Kalumba A, Santos C, Orimoloye I, Ojeh V, Thamaga K, Sibandze P (2024). Global trend assessment of land use and land cover changes: A systematic approach to future research development and planning. *JOURNAL OF KING SAUD UNIVERSITY SCIENCE*, 36 (7), pp. 1 – 10
- Chikoore H, Mbokodo I, Singo M, Mohomi T, Munyai R, Havenga H, Mahlobo D, Engelbrecht F, Bopape M, Ndarana T(2024). Dynamics of an extreme low temperature event over South Africa amid a warming climate. *WEATHER AND CLIMATE EXTREMES*, 44 (100668), pp. 1 – 17
- Mapfumo P, Buthelezi S, Archer E, Swanevelder D, Wilken PM, Creux NM (2024). In-field climatic factors driving Sclerotinia head rot progression across different sunflower planting dates. *PLANT PATHOLOGY*, 73 (5), pp. 1112 - 1126
- Mkhize Y, Madonsela S, Cho MA, Nondlazi B, Main R, Ramoelo A (2024). Mapping weed infestation in maize fields using Sentinel-2 data. *PHYSICS AND CHEMISTRY OF THE EARTH*, 134 (103571), pp. 1 - 8



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Snyman LF, Coetzee SM (2024). Measuring geographic accessibility in data poor rural areas by augmenting the road network with a triangular irregular network – A case study in the O.R. Tambo District Municipality of the Eastern Cape, South Africa. *JOURNAL OF TRANSPORT GEOGRAPHY*, 115 (103808), pp. 1 - 14

Wright CY, Millar DA, Kapwata T, Rodgers G, Batini C, Theron LC (2024). Social-ecological-resilience enablers among youth residing in the air polluted Highveld Priority Area of South Africa. *International Journal of Adolescence and Youth*, 29 (1), pp. 1 – 14

Mahlobo D, Engelbrecht F, Ndarana T, Abubakar H, Olabanji M, Ncongwane K (2024). Analysis of the Hadley cell, subtropical anticyclones and their effect on South African rainfall. *THEORETICAL AND APPLIED CLIMATOLOGY*, 155 (2), pp. 1035 – 1054

Nduku L, Munghemzulu C, Mashaba-Munghemzulu Z, Ratshiedana P, Sibanda S, Chirima JG (2024). Synergetic Use of Sentinel-1 and Sentinel-2 Data for Wheat-Crop Height Monitoring Using Machine Learning. *AgriEngineering*, 6 (2), pp. 1093 - 1116

Nduku L, Munghemzulu C, Mashaba-Munghemzulu Z, Masiza W, Ratshiedana P, Kalumba A, Chirima JG (2024). Field-Scale Winter Wheat Growth Prediction Applying Machine Learning Methods with Unmanned Aerial Vehicle Imagery and Soil Properties. *LAND*, 13 (3), pp. 1 - 25

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Nciphra X, Kruger AC, Sibali L (2024). Interannual Variation of Half-Hourly Extreme Precipitation in Africa: The Assessment of the Warmest Decade (2011-2020) Since the Beginning of Observations. *Earth Systems and Environment*, 8 (2), pp. 207 - 220

Phakula S, Landman WA, Engelbrecht CJ (2024). Probabilistic skill of statistically downscaled ECMWF S2S forecasts of maximum and minimum temperatures for weeks 1-4 over South Africa. *METEOROLOGICAL APPLICATIONS*, 31 (1), pp. 1 – 13

Schutte CE, van der Laan M, van der Merwe BJ (2024). Leveraging historic streamflow and weather data with deep learning for enhanced streamflow predictions. *JOURNAL OF HYDROINFORMATICS*, 26 (4), pp. 835 - 852



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Mogonong B, Twine W, Feig G, van der Merwe H, Fisher J (2024). Influences of Climate Variability on Land Use and Land Cover Change in Rural South Africa. *REMOTE SENSING*, 16 (7), pp. 1 - 27

Maluleke A, Feig G, Brummer C, Rybchak O, Midgley G (2024). Evaluation of Selected Sentinel-2 Remotely Sensed Vegetation Indices and MODIS GPP in Representing Productivity in Semi-Arid South African Ecosystems. *JOURNAL OF GEOPHYSICAL RESEARCH- BIOGEOSCIENCES*, 129 (4), pp. 1 – 22

Theron K, Breetzke GD (2024). What's the safest way home? Mapping safe transport routes in South Africa with (and without) crime data. *Journal of Transportation Security*, 17 (1), pp. 1 - 15

Liesker CG, Dyson LL, Becker E (2024). Characteristics of warm season left-moving supercells over the Highveld of South Africa. *ATMOSPHERIC RESEARCH*, 300 (107234), pp. 1 - 13

Okolie C, Adeleke K, Smit J, Mills J, Ogbeta C, Maduako I (2024). Performance analysis of Bayesian optimised gradient-boosted decision trees for digital elevation model (DEM) error correction: interim results. *ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences / ISPRS Annals*, 10 (2), pp. 179 – 183

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Nkuna B, Chirima JG, Newete S, Nyamugama A, van der Walt A (2024). Developing models to detect maize diseases using spectral vegetation indices derived from spectral signatures. *EGYPTIAN JOURNAL OF REMOTE SENSING AND SPACE SCIENCES*, 27 (3), pp. 597 – 603



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Laldaparsad S, Coetzee SM, Davis NC (2024). A holistic categorisation of address purposes as an analytical entry point to finding solutions for addressing governance in South Africa. *South African Journal of Geomatics (Formerly South African Journal of Surveying and Geo-Information)*, 13 (2), pp. 288 – 303

Tsele PL, Ramoelo A (2024). Hybrid retrieval of grass biophysical variables based-on radiative transfer, active learning and regression methods using Sentinel-2 data in Marakele National Park. *GEOCARTO INTERNATIONAL*, 39 (1), pp. 1 – 25

Ngcobo S, Jewitt G, Hill T, Archer E (2024). An assessment of the vulnerability and adaptation potential of sugarcane production to water stress, southern Africa. *Journal of Agriculture and Food Research*, 18 (101348), pp. 1 – 14

Moreno-Ibanez M, Casado M, Gremion G, Rabanal V, Adojoh O, Anoruo C, Arshad A, Bahar F, Bello C, Hansen CD (2024). Engagement of early career researchers in collaborative assessments of IPCC reports: achievements and insights. *Frontiers in Climate*, 6 (1395040), pp. 1 - 25

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Monadjem A, Reyers B, Selomane O, Dalerum JF, Davies-Mostert H, du Toit JT, Markotter W, Pietersen DW, Somers MJ, Verburg L (2024). The bi4africa dataset of faunal and floral population intactness estimates across Africa's major land uses. *SCIENTIFIC DATA*, 11 (191), pp. 1 - 17

Li X, Wessels K, Armston J, Duncanson L, Urbazaev M, Naidoo L, Mathieu R, Main R (2024). Evaluation of GEDI footprint level biomass models in Southern African Savannas using airborne LiDAR and field measurements. *Science of Remote Sensing*, 10 (100161), pp. 1 – 15

de Villiers C, Mashaba-Munghemezulu Z, Munghemezulu C, Chirima JG, Tesfamichael S (2024). Assessing Maize Yield Spatiotemporal Variability Using Unmanned Aerial Vehicles and Machine Learning. *Geomatics*, 4 (3), pp. 213 – 236

Hayman G, Poulter B, Ghude S, Blyth E, Sinha V, Archibald S, Ashworth K, Barlow V, Fares S, Feig G (2024). Research into land atmosphere interactions supports the sustainable development agenda. *Global Sustainability*, 7 (12), pp. 1 - 9



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### 2024/2025 List of Publications

Klaver M, Currie B, Sekonya J, Coetzer K (2024). Learning through Place-Based Implementation of the UNESCO MAB Program in South Africa's Oldest Biosphere Reserve: A Case Study of the Kogelberg Biosphere Reserve. *LAND*, 13 (4), pp. 1 - 28

Panchal R, Benyon M, Laban T, Kwatala N, Wernecke B, Wright CY, Vande Hey J (2024). Reviewing the methodologies used to assess household PM2.5 air pollution in sub-Saharan Africa. *BUILDING AND ENVIRONMENT*, 266 (112099), pp. 1 - 15

Okolie C, Adeleke K, Mills J, Smit J, Maduako I, Bagheri H, Komar T, Wang S (2024). Assessment of explainable tree-based ensemble algorithms for the enhancement of Copernicus digital elevation model in agricultural lands. *International Journal of Image and Data Fusion*, 15 (4), pp. 430 – 460

Struwig CL, Davis NC, Breetzke GD (2024). Factors impacting urban greenspace usage: new evidence from South Africa. *GeoJournal*, 89 (5), pp. 1 – 17

Katumba KS, Coetzee SM, Stein A, Fabris-Rotelli IN (2024). Spatial prediction of poverty in Gauteng province (South Africa) in- between Censuses using land use datasets. *TRANSACTIONS IN GIS*, 28 (7), pp. 1979 - 2004

Nkuna B, Chirima JG, Newete S, van der Walt A, Nyamugama A (2024). Unraveling the Relationship between Soil Nutrients and Maize Leaf Disease Occurrences in Mopani District Municipality, Limpopo Province, South Africa. *AGRONOMY-BASEL*, 14 (10), pp. 1 - 11

Phakula S, Landman WA, Engelbrecht CJ (2024). Literature survey of subseasonal-to-seasonal predictions in the southern hemisphere. *METEOROLOGICAL APPLICATIONS*, 31 (1), pp. 1 - 16

Klaver M, Currie B, Sekonya J, Coetzer K (2024). Exploring the Implementation of UNESCO's MAB Program in South Africa: A Case Study of the Cape Winelands Biosphere Reserve. *ENVIRONMENTAL MANAGEMENT*, 74 (6), pp. 1207 - 1222

Botai C, Botai OJ, Tazvinga H, Murambadoro M, Nhamo L, Ncongwane K, Mengistu M, Zwane N, Wamiti E, Mpandeli S (2024). Assessment of rural livelihoods, health and wellbeing in Vhembe District Municipality, South Africa and Narok County, Kenya: A water-energy- food nexus perspective. *ENVIRONMENTAL SCIENCE & POLICY*, 159 (103817), pp. 1 - 17



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Wright CY, Kapwata T, Naidoo N, Asante K, Arku R, Cisse G, Simane B, Atuyambe L, Berhane K (2024). Climate Change and Human Health in Africa in Relation to Opportunities to Strengthen Mitigating Potential and Adaptive Capacity: Strategies to Inform an African "Brains Trust". ANNALS OF GLOBAL HEALTH, 90 (1), pp. 1 - 21

Tod B, Whitaker D, Visser W, Isaacs T, Jacobs T, Wiid K, Dlova N, Wright CY (2024). Integrated sun protection advice for the South African population. INTERNATIONAL JOURNAL OF DERMATOLOGY, 63 (3), pp. 277 - 287

Newete S, Abutaleb K, Chirima JG, Dabrowska-Zielinska K, Gurdak R (2024). Phenology-based winter wheat classification for crop growth monitoring using multi-temporal sentinel-2 satellite data. EGYPTIAN JOURNAL OF REMOTE SENSING AND SPACE SCIENCES, 27 (4), pp. 695 - 704

Rapiya M, Ramoelo A, Truter WF (2024). Seasonal monitoring of biochemical variables in natural rangelands using Sentinel-1 and Sentinel-2 data. INTERNATIONAL JOURNAL OF REMOTE SENSING, 45 (14), pp. 4737 - 4763

Kai-Sikhakhane R, Scholes M, Piketh S, van Geffen J, Garland RM, Havenga H, Scholes R (2024). Assessing Nitrogen Dioxide in the Highveld Troposphere: Pandora Insights and TROPOMI Sentinel-5P Evaluation. ATMOSPHERE, 15 (10), pp. 1 - 29

Kapwata T, Abdelatif N, Scovronick N, Gebreslasie M, Acquavotta F, Wright CY (2024). Identifying heat thresholds for South Africa towards the development of a heat-health warning system. INTERNATIONAL JOURNAL OF BIOMETEOROLOGY, 68 (2), pp. 381 - 392

Meyer R, Wright CY, Rother H (2024). Assessment of SADC Countries' National Adaptation Planning Health Impacts Inclusion: A Thorough Review. ANNALS OF GLOBAL HEALTH, 90 (1), pp. 1 - 20

Schwarz M, Peters A, Stafoggia M, de'Donato F, Sera F, Bell M, Guo Y, Honda Y, Huber V, Garland RM (2024). Temporal variations in the short-term effects of ambient air pollution on cardiovascular and respiratory mortality: a pooled analysis of 380 urban areas over a 22-year period. LANCET PLANETARY HEALTH, 8 (9), pp. 657 - 665

Buthelezi M, Mentz G, Wright CY, Phaswana S, Garland RM, Naidoo R (2024). Short-term, lagged association of airway inflammation, lung function, and asthma symptom score with PM2.5 exposure among schoolchildren within a high air pollution region in South Africa. Environmental Epidemiology, 8 (6), pp. 1 - 10



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### 2024/2025 List of Publications

Mendes J, Zwane N, Mabasa B, Tazvinga H, Walter K, Morcrette C, Botai OJ (2024). An Analysis of the Effects of Clouds in High-Resolution Forecasting of Surface Shortwave Radiation in South Africa. *JOURNAL OF APPLIED METEOROLOGY AND CLIMATOLOGY*, 63 (2), pp. 227 – 244

Mashiane K, Ramoelo A, Adelabu S (2024). Prediction of species richness and diversity in sub-alpine grasslands using satellite remote sensing and random forest machine-learning algorithm. *APPLIED VEGETATION SCIENCE*, 27 (2), pp. 1 - 11

Botai C, de Wit J, Botai OJ (2024). Temporal Variability of Hydroclimatic Extremes: A Case Study of Vhembe, uMgungundlovu, and Lejweleputswa District Municipalities in South Africa. *WATER*, 16 (20), pp. 1 - 21

Garland RM, Altieri K, Dawidowski L, Gallardo L, Mbandi A, Rojas N, Touré N (2024). Opinion: Strengthening research in the Global South - atmospheric science opportunities in South America and Africa. *ATMOSPHERIC CHEMISTRY AND PHYSICS*, 24 (10), pp. 5757 – 5764

Ndarana T, Rammopo T, Bopape MM, Hart N, Reason C, Chikoore H (2024). A quasi-geostrophic analysis of summertime southern African linear-regime westerly waves. *CLIMATE DYNAMICS*, 62 (5), pp. 3321 - 3336

Maruping-Mzileni N, Bezuidenhout H, Ferreira S, Ramoelo A, Mapuru M, Munyai L, Erusan R (2024). Implications of Ecological Drivers on Roan Antelope Populations in Mokala National Park, South Africa. *DIVERSITY-BASEL*, 16 (6), pp. 1 – 15

Shamaoma H, Chirwa PW, Zekeng J, Ramoelo A, Hudak A, Handavu F, Syampungani S (2024). Exploring UAS-lidar as a sampling tool for satellite-based AGB estimations in the Miombo woodland of Zambia. *PLANT METHODS*, 20 (88), pp. 1 - 15

Dunn R, Herold N, Alexander L, Donat M, Allan R, Bador M, Brunet M, Cheng V, Ibadullah W, Kruger AC (2024). Observed Global Changes in Sector-Relevant Climate Extremes Indices-An Extension to HadEX3. *EARTH AND SPACE SCIENCE*, 11 (4), pp. 1 – 22

Wernecke B, Langerman K, Howard A, Wright CY (2024). Fuel switching and energy stacking in low-income households in South Africa: A review with recommendations for household air pollution exposure research. *ENERGY RESEARCH & SOCIAL SCIENCE*, 109 (103415), pp. 1 - 14



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Mohomi T, Mbatha N, Boshoff D, Mbokodo I, Ndarana T, Bopape M, Chikoore H (2024). Attributing impacts of LULCC on the boundary layer climate of South Africa's eastern escarpment. *JOURNAL OF EARTH SYSTEM SCIENCE*, 133 (4), pp. 1 - 24

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Auffret A, Ladouceur E, Haussmann NS, Daouti E, Elumeeva T, Kacergyte I, Knape J, Kotowska D, Low M, Onipchenko V (2024). A global database of soil seed bank richness, density, and abundance. *ECOLOGY*, 105 (11), pp. 1 - 2

Chen G, Guo Y, Yue X, Xu R, Yu W, Ye T, Tong S, Gasparrini A, Bell M, Garland RM (2024). All-cause, cardiovascular, and respiratory mortality and wildfire-related ozone: a multicountry two-stage time series analysis. *LANCET PLANETARY HEALTH*, 8 (7), pp. 452 – 462

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Sadiki MM, van Deventer H, Hansen CD (2024). Assessing the extent to which African wetland inventories can report to the global targets on biodiversity, including Goal A of the Global Biodiversity Framework. *AFRICAN JOURNAL OF AQUATIC SCIENCE*, 49 (3), pp. 254 – 261

Domingo N, Fiore A, Lamarque J, Kinney P, Jiang L, Gasparrini A, Breitner S, Lavigne E, Madureira J, Garland RM (2024). Ozone-related acute excess mortality projected to increase in the absence of climate and air quality controls consistent with the Paris Agreement. *ONE EARTH*, 7 (2), pp. 325 - 335

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Brink N, Lakhoo D, Solarin I, Maimela G, von Dadelszen P, Chersich M, Chikandiwa A, Nakstad B, Wright CY,

Harden L (2024). Impacts of heat exposure in utero on long-term health and social outcomes: a systematic review. *BMC PREGNANCY AND CHILDBIRTH*, 24 (344), pp. 1 - 24

Daemane M, Adelabu S, Ramoelo A (2024). Assessing species richness, diversity and assemblage of forest patches within a grassland matrix in the Afrotemperate ecosystems. *PHYTOCOENOLOGIA*, 52 (1), pp. 87 - 95

Bennett E, Reyers B (2024). Disentangling the complexity of human-nature interactions. *PEOPLE AND NATURE*, 6 (2), pp. 402 – 409

Hossain M, Garland RM, Horowitz H (2024). Quantifying the impacts of marine aerosols over the southeast Atlantic Ocean using a chemical transport model: implications for aerosol- cloud interactions. *ATMOSPHERIC CHEMISTRY AND PHYSICS*, 24 (24), pp. 14123 – 14143

Nikraftar Z, Mbuva R, Sadegh M, Landman WA (2024). Impact-Based Skill Evaluation of Seasonal Precipitation Forecasts. *EARTH'S FUTURE*, 12 (11), pp. 1 - 16

Sadiki MM, Greve M, Hansen CD (2024). Predicting mire distribution using species distribution models: a case study of the sub-Antarctic Prince Edward Islands. *ANTARCTIC SCIENCE*, 36 (6), pp. 487 – 499 *Research Notes*, 17 (1), pp. 1 – 7

Kapwata T, Breetzke GD, Wright CY, Marcus TS (2024). The identification and spatial distribution of hotspots of tuberculosis occurrence in South Africa. *BMC Research Notes*, 17 (1), pp. 1 – 7

Ochai SO, Snyman LF, Dolfi A, Ramoelo A, Reilly B, Botha J, Dekker E, van Schalkwyk OL, Archer E, van Heerden H (2024). Roles of host and environment in shift of primary anthrax host species in Kruger National Park. *PLOS ONE*, 19 (12), pp. 1 - 20



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### **Journal Articles (Others)**

Mahlangeni N, Kapwata T, Laban T, Wright CY (2024). Health risks of exposure to air pollution in areas where coal-fired power plants are located: protocol for a scoping review. *BMJ OPEN*, 14 (3), pp. 1 - 5

Wright CY, Jaca A, Kapwata T, Naidoo N, Awokola B, Bainomugisha E, Berhane K, Blesic S, Kehbila A, Naidoo R (2024). Identifying globally relevant learnings from Africa's challenges and solutions to climate change and air pollution-related health impacts: a data science scoping review protocol. *BMJ OPEN*, 14 (5), pp. 1 - 6

Atuyambe L, Arku R, Naidoo N, Kapwata T, Asante K, Cissé G, Simane B, Wright CY, Berhane K (2024)

(2024). The Health Impacts of Air Pollution in the Context of Changing Climate in Africa: A Narrative Review with Recommendations for Action. *ANNALS OF GLOBAL HEALTH*, 90 (1), pp. 1 - 18

### **Chapter in Book**

Salehi M, Bekker A, Arashi M (2024). A kernel scale mixture of the skew-normal distribution. Edition:1st In H. Doosti (ed.), *Flexible nonparametric curve estimation*, Switzerland, Cham: Springer Nature. (pp. 269-278). 978-3-031-66501-1

### **Conference Contribution**

Ramoelo A, Tsele PL (2024). Estimating nitrogen and biomass interactions as an indicator of forage condition in rangelands with remote sensing-derived variables. *IEEE International Geoscience and Remote Sensing Symposium (IGARSS 2024)*, 07-Jul-2024 - 12-Jul-2024

Masiza W, Chirima JG, Hamandawana H, Kalumba A, Magagula H (2024). A satellite-based crop insurance that compensates for rainfall deficit. *IEEE International Geoscience and Remote Sensing Symposium (IGARSS 2024)*, 07-Jul-2024 - 12-Jul-2024.



# SSAG NEWS 2024/25

SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## UNIVERSITY OF PRETORIA

### 2024/2025 List of Publications

Tsele PL, Ramoelo A (2024). Integrating active learning and regression methods for estimation of grass LAI over a mountainous region using Sentinel-2 satellite data. IEEE International Geoscience and Remote Sensing Symposium (IGARSS 2024), 07-Jul-2024 - 12-Jul-2024

Qabaqaba M, Naidoo L, Tsele PL, Ramoelo A, Cho M (2024). Multi-temporal assessment of woody canopy cover changes in South Africa; products and analysis based on GEDI, Sentinel-1 and 2 data. IEEE International Geoscience and Remote Sensing Symposium (IGARSS 2024), 07-Jul-2024 - 12-Jul-2024

Mugeru M, Garland RM (2024). Assessing the ability of global modelling products to simulate air pollution levels during a cold front passage in Gauteng, South Africa. 38th Annual Conference of the South African Society for Atmospheric Sciences (SASAS 2024): Exploring the novel integration of tools to understand our changing environment, 29-Oct-2024 - 30-Oct-2024

Tsele PL, Ramoelo A, Qabaqaba M (2024). Evaluation of Sentinel-2 spectral reflectance and indices to estimate grass LAI and CCC in heterogeneous grassland. Space and Geospatial Technologies for the Africa We Want: 13th International Conference of the African Association of Remote Sensing of the Environment, 24-Oct-2022 - 28-Oct-2022

Silwana W, Ramoelo A, Tsele PL, Mantlana B, Mokotedi O (2024). Analysis of land use and land cover change dynamics and its impacts on WEF nexus resources over a 30-Year period (1990–2020) in Mpumalanga, South Africa. Space and Geospatial Technologies for the Africa We Want: 13th International Conference of the African Association of Remote Sensing of the Environment, 24-Oct-2022 - 28-Oct-2022

Heyneke E, Dyson LL, van Schalkwyk L (2024). Comparative analysis of two squall lines: A case study. 38th Annual Conference of the South African Society for Atmospheric Sciences (SASAS 2024): Exploring the novel integration of tools to understand our changing environment, 29-Oct-2024 - 30-Oct-2024

Kornelius G, Forbes PBC, Garland RM (2024). Tier 2 greenhouse gas emission factors for South African solid fuels. Proceeding of the Annual Conference of the National Association for Clean Air (NACA 2024): Air quality evolution: Reflecting on 20 years of progress and charting future paths, 04-Sep-2024 - 06-Sep-2024



# SSAG NEWS 2024/25

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## UNIVERSITY OF PRETORIA

### Masters and Doctoral Graduations and Supervisors

Doctor of Philosophy				
Student Surname & Initials	Thesis	Degree	Supervisor	Co-supervisor(s)
Chia, E.L.	The human dimension of restoring degraded forests and lands: Case of Cameroon	PhD (Environmental and Society)	Nsubuga, F.W.N.	Chriwa, W.P.
Loubser, M.J.	Rock weathering and ultrasonic pulse velocity: an analysis using South African cemeteries as time-series laboratories	PhD (Geography)	Bumby, A.J.	Sumner, P.D.
McBride, C.M.	Historical and future changes in climate records and extremes in South Africa	PhD (Geography)	Kruger, A.C.	Dyson, L.L.
Miller, D.A.	Exploring the relations between ambient air pollution and health among adolescents in South Africa	PhD (Air Quality Management)	Wright, C.Y.	Garland, R.M.
Shamaoma, H.	Exploring the potential of using unmanned aerial system imageries in managing the Miombo woodlands of Zambia	PhD (Environmental Management)	Ramoel, A.	Chriwa, W.P. Syampungani, S.
Siebritz, L-A.	Proposal for a South African spatial data infrastructure (SASDI) stakeholder collaboration framework, informed by the case of geospatial data for the municipal land use application process	PhD (Geoinformatics)	Serena, S.M.	
Warneck, B.	Fuel use patterns, air pollution and health in low-income communities in South Africa	PhD (Air Quality Management)	Wright, C.Y.	Langerman, K.E. (University of Johannesburg)



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## UNIVERSITY OF PRETORIA

### Masters and Doctoral Graduations and Supervisors

Master of Science				
Student Surname & Initials	Dissertation	Degree	Supervisor	Co-supervisor(s)
Carr, D.	Temperature and environmental health risks in inland and coastal low-income communities in South Africa	MSc (Geography)	Wright, C.Y.	
de Kock., N.A.	Automating exploratory spatial data analysis (ESDA) for vector and raster data: development and evaluation of the autoESDA Python library	MSc (Geoinformatics)	Rautenbach, V-J.	Fabris-Rotelli, I.
Fourie, C.	Event-based fog climatology for O. R. Tambo International Airport	MSc (Meteorology)	Dyson, L.L.	
Makungo, K.	Automatic building footprint extraction using remote sensing data within the City of Cape Town	MSc (Geoinformatics)	Adeleke, A.K.	
Maliage, M.	Dust storms over South Africa: synoptic weather patterns and evolution of meteorological variables associated with significant dust storm events	MSc (Meteorology)	Garland, R.M	Dyson, L.L.
Nunu, M.G.	Site selection for rainwater harvesting: a case of KwaZulu-Natal, South Africa	MSc (Geoinformatics)	Adeleke, A.K	
Nxumalo, M.P.	Analysis of tropical temperate trough-induced rainfall onset and the impact on maize yield over the Maize Triangle in South Africa	MSc (Environmental Management)	Ndarana, T	



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### Masters and Doctoral Graduations and Supervisors

Master of Science				
Student Surname & Initials	Dissertation	Degree	Supervisor	Co-supervisor(s)
Sempe, N.P.S.	A risk assessment framework for public health responses: a case study of Melusi, an informal settlement in Gauteng, South Africa.	MSc (Environmental Management)	Davis, N.C.	Coetzee, S.M. Rautenbach, V.
Silwana, W.	Developing a Water-Energy-Food (WEF) nexus-based approach for sustainable climate change adaptation interventions: a case study of Mpumalanga Province, South Africa	MSc (Geoinformatics)	Ramoelo, A.	Tsele, P.L. Mantlana, K.B. (CSIR) Mokotedi, M.E.O. (CSIR)
Schmidhuber, B.E.	Phytoremediation potential and growth response of pasture species used in the revegetation of coal mine substrates	MSc (Environmental Management)	Truter, W.F.	
Smit, M.	Improved trail usability and information accessibility for the nature reserves of Tshwane – a geoinformation science approach	MSc (Geoinformatics)	Hansen, C.D.	
Theron, K.R.	Finding the safest paths in Khayelitsha township, Western Cape province, South Africa	MSc (Geoinformatics)	Breetzke, G.D.	

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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## UNIVERSITY OF PRETORIA

### Information of Interest for Prospective Students

#### Undergraduate

Geography studies the relationship between people and places, focusing on environmental impacts and vice versa. It includes field trips, lab work, and experiments, connecting to ecology, anthropology, zoology, and botany. Environmental Science examines human impacts like resource use, pollution, and climate change, seeking sustainable living methods. Environmental Scientists ensure compliance with laws and develop strategies to minimize damage. Key topics covered in the BSc Geography and Environmental Sciences degree include human-environmental interactions, theories of human geography, environmental geomorphology, GIS, environmental sciences, city structure, process geomorphology, introductory GIS, geographic data analysis, and remote sensing. Students can choose from seven majors, five in natural sciences and two in social sciences.

Geoinformatics, geographic information science or geospatial data science, focuses on collecting, storing, processing, analyzing, visualizing, interpreting, and distributing geospatial information. This data is captured remotely via satellites or drones using photography or radar. Students learn programming, spatial analysis, machine learning, visualization, data ethics, and governance, and training with state-of-the-art technology for future careers.

With advancing geospatial technologies and increasing data volumes, job opportunities are abundant. Key topics include geographical information systems, geoinformatics, spatial analysis, remote sensing, geometrical and space geodesy, and geoinformatics projects. The BSc Geoinformatics programme is accredited by the South African Geomatics Council (SAGC). BSc Geoinformatics graduates meet the academic requirements for registration as a Geomatics Technologist in GISc (GTg GISc).

Meteorology studies atmospheric phenomena over various time scales, focusing on the atmosphere's physics, chemistry, and dynamics. It examines the atmosphere's effects on the earth's surface, oceans, and life, aiming to understand, simulate, and predict these phenomena. Meteorology provides crucial information for weather and climate impact mitigation, benefiting society, the economy, and the environment. Key areas include severe weather warnings, applications in aviation, maritime industries, and climate change predictions. During our undergraduate degree, students...



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### Information of Interest for Prospective Students

...will be exposed to topics ranging from programming to physical, dynamic, satellite, mid-latitude, polar, and tropical meteorology.

For more information:

<https://www.up.ac.za/geography-geoinformatics-and-meteorology/article/20918/academic-programmes>

### **Postgraduate**

Geography and Environmental Science graduates from UP find employment in various organizations, including environmental consulting agencies, universities, CSIR, ARC, DFFE, the Council for GeoSciences, SANBI, SANAP, WWF, EWT, South African National Parks, private reserves, EMI - Green Scorpions, high schools, and SAEON. In addition to a research project, students focus on topics ranging from environmental assessments to applied geomorphology, environmental change, advanced GIS, and advanced remote sensing. Lecturers specialize in sustainable agriculture, biodiversity, climate, drylands, environmental science, ecology, human geography, urban geography, bio-geomorphology, applied AI, and physical computing.

Students enrolled in the BScHons Geoinformatics programme must complete a research project, and are exposed to topics ranging from spatial statistics and geodesy, advanced geospatial data, and advanced GIS to geospatial data and services and advanced remote sensing. Lecturers specialize in geoinformatics, the geography of crime, GIS theory and applications, remote sensing, earth observation, cartography, databases, human-computer interaction, applied AI, physical computing, geomorphology, and freshwater ecosystems. The BScHons Geoinformatics programme is accredited by the South African Geomatics Council (SAGC). BScHons Geoinformatics graduates meet the academic requirements for registration as Geomatics Professional in GISc (GPr GISc). Many South African government tenders and job descriptions require such professional registration.

Graduates of the BScHons Meteorology conform to all the requirements for a meteorologist according to the definition of the World Meteorological Organization (WMO) Technical Regulations.



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## UNIVERSITY OF PRETORIA

### Information of Interest for Prospective Students

The curriculum covers seasonal climate modelling, numerical modelling applications, radar and mesoscale meteorology, climate change, and a research project. Students can specialize in dynamic meteorology, boundary layer meteorology, cloud dynamics, advanced weather forecasting, atmospheric composition and air quality. Lecturers specialize in air quality, atmospheric composition and impacts, seasonal forecasting, severe events, and dynamic meteorology modelling.

### Link to Departmental Webpage

<https://www.up.ac.za/geography-geoinformatics-and-meteorology> or [www.up.ac.za/ggm](http://www.up.ac.za/ggm)



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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## UNIVERSITY OF SOUTH AFRICA

Department of Geography

Dr S.C. Nenwiini

Geographers' Specialisations Within The Department

Name (Title, Surname, Initials)	Rank Position	Specialisation(s)	Qualification	E-mail
Prof Gunter, A	Professor	Economic Geography Geography of Education	D.Phil.	<a href="mailto:gunteaw@unisa.ac.za">gunteaw@unisa.ac.za</a>
Prof Hedding, DW	Professor	Geomorphology	PhD	<a href="mailto:heddidw@unisa.ac.za">heddidw@unisa.ac.za</a>
Prof Nicolau, MD	Professor	Post development Geography, Sustainable, community development, SDGs in the global South	PhD	<a href="mailto:nicolmd@unisa.ac.za">nicolmd@unisa.ac.za</a>
Prof Schmitz, PMU	Professor	Forensic geography, GIS, Crime mapping and analysis	PhD	<a href="mailto:Schimpmu@unisa.ac.za">Schimpmu@unisa.ac.za</a>
Prof Smit, HAP	Professor	Military geography, Environmental studies	PhD	<a href="mailto:esmitha@unisa.ac.za">esmitha@unisa.ac.za</a>
Prof Du Plessis, A	Associate Professor	Integrated water management	PhD	<a href="mailto:duplea@unisa.ac.za">duplea@unisa.ac.za</a>
Dr De Jager, AE	Senior Lecturer	Urban Geography, Sense of place, Teaching and learning in Geography.	PhD	<a href="mailto:djageae@unisa.ac.za">djageae@unisa.ac.za</a>
Dr Dirsuweit, T	Senior Lecturer	Food security, Urban studies, Gender and city	PhD	<a href="mailto:dirtsutc@unisa.ac.za">dirtsutc@unisa.ac.za</a>
Dr Nenwiini, SC	Senior Lecturer	Physical geography, Climate change, rainfall variability	PhD	<a href="mailto:nenwisc@unisa.ac.za">nenwisc@unisa.ac.za</a>
Dr Pewa, M	Senior Lecturer	Human geography	PhD	<a href="mailto:Pewamkp@unisa.ac.za">Pewamkp@unisa.ac.za</a>

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## SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

# UNIVERSITY OF SOUTH AFRICA

### Geographers' Specialisations Within The Department

Name (Title, Surname, Initials)	Rank Position	Specialisation(s)	Qualification	E-mail
Dr Radingoana, MP	Senior Lecturer	Food security, Water security and climate change, Greywater reuse, waste management	PhD	<a href="mailto:Radinmp@unisa.ac.za">Radinmp@unisa.ac.za</a>
Dr Anderson, RL	Lecturer	Geomorphology	PhD	<a href="mailto:anderrl@unisa.ac.za">anderrl@unisa.ac.za</a>
Dr Carow, S	Lecturer	GIS Education	MSc	<a href="mailto:sanetpc@unisa.ac.za">sanetpc@unisa.ac.za</a>
Dr Greyling, AC	Lecturer	Geomorphology	PhD	<a href="mailto:egryl1@unisa.ac.za">egryl1@unisa.ac.za</a>
Dr Tshabalala, S	Lecturer	Infrastructure development and sustainability	MSc	<a href="mailto:Tshabas1@unisa.ac.za">Tshabas1@unisa.ac.za</a>
Mrs. Coetzee, R	Lecturer	Environmental management	MA	<a href="mailto:coetZR@unisa.ac.za">coetZR@unisa.ac.za</a>
Mrs. Khotoo, A	Lecturer	Energy studies, sustainability	MSc	<a href="mailto:khotoa@unisa.ac.za">khotoa@unisa.ac.za</a>
Ms Lombard, A	Lecturer	Renewable energy, rural development	MA	<a href="mailto:Lombael@unisa.ac.za">Lombael@unisa.ac.za</a>
Mrs. Mashau, SJ	Lecturer	Gender, Poverty, Indigenous Knowledge	MSc	<a href="mailto:todansj@unisa.ac.za">todansj@unisa.ac.za</a>
Ms Motene, S	Lecturer	Environmental geomorphology GIS	MSc	<a href="mailto:motens@unisa.ac.za">motens@unisa.ac.za</a>
Ms Mulibana, L	Lecturer	Urban planning/development	MA	<a href="mailto:mulibl@unisa.ac.za">mulibl@unisa.ac.za</a>

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## SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

# UNIVERSITY OF SOUTH AFRICA

### Geographers' Specialisations Within The Department

Name (Title, Surname, Initials)	Rank Position	Specialisation(s)	Qualification	E-mail
Ms Pienaar, R	Lecturer	Physical geography, Geography of education	BSc (Hons)	<a href="mailto:pienar@unisa.ac.za">pienar@unisa.ac.za</a>
Mr Schoeman, R	Lecturer	Urban Geography	MSc	<a href="mailto:Eschoerc@unisa.ac.za">Eschoerc@unisa.ac.za</a>
Mr. Ramasunga, P	Junior Lecturer	Rural settlements and land use	BSc (Hons)	<a href="mailto:ramasp@unisa.ac.za">ramasp@unisa.ac.za</a>
Ms Lotz, CE	Technical Assistant	Environmental degradation Rehabilitation	BSc (Hons)	<a href="mailto:potgice@unisa.ac.za">potgice@unisa.ac.za</a>

### Contract

Name (Title, Surname, Initials)	Rank Position	Specialisation(s)	Qualification	E-mail
Dr van Vuuren, L	Lecturer	Urban Geography	PhD	<a href="mailto:dvriel@unisa.ac.za">dvriel@unisa.ac.za</a>
Mr Mbhamali, TW	Lecturer	Atmospheric Sciences	MSc	<a href="mailto:mbhamtw@unisa.ac.za">mbhamtw@unisa.ac.za</a>
Ms Mothapo, MV	Lecturer	GIS, Environmental management, Nature Conservation	MSc	<a href="mailto:emothamv@unisa.ac.za">emothamv@unisa.ac.za</a>
Mr Mukhuba, F	Lecturer	Political geography, Municipal demarcation	MSc	<a href="mailto:makhufa@unisa.ac.za">makhufa@unisa.ac.za</a>

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## SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

# UNIVERSITY OF SOUTH AFRICA

### Geographers' Specialisations Within The Department

Postdoctoral				
Name (Title, Surname, Initials)	Rank / Position	Specialisation(s)	Qualification	E-mail
Dr B Duri	Postdoc Fellow	Urban Transport		
Dr Z Kom	Postdoc Fellow			
Academic Associate				
Name (Title, Surname, Initials)	Rank / Position	Specialisation(s)	Qualification	E-mail
Dr Markus Breines	Academic Associate	Migration Studies	PhD	
Prof Elri Liebenberg	Honorary Professor	Cartography	PhD	
Prof Rudi Pretorius	Honorary Professor	Sustainable Development, SDGs in the Global South, ODeL in Geography and Environmental Studies.	PhD	<a href="mailto:thatrudiguy@gmail.com">thatrudiguy@gmail.com</a>
Administration				
Name (Title, Surname, Initials)	Rank / Position			E-mail
Ms Maepe, M	Administrative Officer			maepem@unisa.ac.za
Mrs Manala, B	Administrative Officer			ginibp@unisa.ac.za
Mr Thenga, L	Secretary			thengla@unisa.ac.za

# SSAG NEWS 2024/25

SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## UNIVERSITY OF SOUTH AFRICA

### Exciting Departmental News

**The following staff completed qualifications in 2024:**

- Dr Anderson completed a PhD at UFS
- Dr Carow completed a PhD at UNISA
- Dr Tshabalala completed a PhD at UNISA
- Dr van Vuuren completed a PhD at UNISA

The development of these mostly younger staff will deepen the academic expertise and increase capacity in the department going forward.

### **Promotions**

Prof P Schmitz was promoted to a full Professor

### **Inauguration Lecture**

Prof P Schmitz presented an inaugural lecture on Geoforensics and forensic geography at the University of South Africa on 25 February 2025

### **New Staff**

Prof. H. Smit joined UNISA as a full professor from the Military Academy of the University of Stellenbosch

### **Retirement**

Prof R Pretorius retired in December 2024 and was appointed as an Honorary Professor for the period 20250301 to 20280229.

### **Grant**

Prof A Gunter: AHRC Network+ Grant (UK): 2020 -2024 - Value: R4,500,000 Lancaster University Seed Funding: 2024 – 2025: R400 000

### **Awards**

Prof A Gunter was awarded a NRF C1 rating.

Prof R Pretorius is awarded Germany (DAAD) – Funding for 2022-2025 for an international collaborative project on digital learning for the SDGs (DiTTS), with Prof Pretorius as the Unisa project leader. DiTTS – “Digital Introduction to the Sustainable Development Goals in higher education teaching – regional aspects in implementing the SDGs from Brazil and South Africa”.

### **Events**

Prof R Pretorius: International Student Symposium on the SDGs (18-19 Nov 2024), and Research in progress workshop (20 Nov), hosted by the Department of Geography of Unisa in participation with the other two DiTTS project partners, namely the Hamburg University of Applied Sciences (HAW, Germany) and the University of Passo Fundo (UPF, Brazil).

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## SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

# UNIVERSITY OF SOUTH AFRICA

### Exciting Departmental News

#### Conference Presentations

Carow, S.P., Pretorius, R.W., & Nicolau, M.D., 2024, "Ruimtelike burgerskap en bemagtiging van Suid-Afrikaanse Geografie studente om tot bereiking van die volhoubare ontwikkelingsdoelwitte by te dra – 'n kritiese perspektief". Paper read at the Annual Symposium of the Suid-Afrikaanse Akademie vir Wetenskap en Kuns, 19-20 September. Suid-Afrikaanse Akademie vir Wetenskap en Kuns, Pretoria.

Leal Filho, W., Brandli, L.L., & Pretorius, R.W., 2024, "Digital Introduction to the Sustainable Development Goals in higher education teaching – regional aspects in implementing the SDGs from Brazil and South Africa". Paper read at– Project Leader Conference 'Educating tomorrow 's leaders to pioneer sustainable development – the role of academia' Dar Es Salaam, Tanzania. 22–24 July 2024

Nicolau, MD, 2024: "Empowering Communities for Sustainable Development: Lessons from Rural South Africa" 35th IGC Conference to be held in Dublin, Ireland from 24 August to 30 August 2024.

Vermeulen, J.H., Hedding, D.W. and Letsatsi, N., 2024: Forecasting extreme hourly rainfall in South Africa for disaster risk reduction: thresholds and return periods, *Water SA*, 50(4), 330-344. DOI: 10.17159/wsa/2024.v50.i4.4111.

### 2024/2025 List of Publications

Li, L., Li, G.K., Chen, J., Hedding, D.W. and Li, G., 2024: Tectonic and erosional controls of sediment residence time in small catchments draining an active mountain range: Evidence from uranium comminution age, *Geochimica et Cosmochimica Acta*, 381, 12-24. DOI: 10.1016/j.gca.2024.07.031

Li, L., Li, G.K., Zhang, R., Zhang, W., Hedding, D.W., Chen, J. and Li, G., 2024: Uranium isotope constraints on the pre-deposition time of Asian dust to the North Pacific Ocean: Implications for provenance and iron supply, *Geophysical Research Letters*, 51, e2023GL107820. DOI: 10.1029/2023GL107820

Monsanto, D.M., Hedding, D.W., Durand, S., Parbhu, S.P., Adair, M.G., Emami-Khoyi, A., Teske, P.R. and Jansen van Vuuren, B., 2024: The effect of terrain on the fine-scale genetic diversity of sub-Antarctic Collembola: A landscape genetics approach, *Ecology and Evolution*, 14(6), e11519. DOI: 10.1002/ece3.11519

Anderson, R.L., le Roux, J., van der Waal, B., Rowntree, K and Hedding, D.W., 2024: Assessing the short-term inter-annual growth of the largest documented gully network in South Africa using UAV and SfM methodology, *Physical Geography*, 45(3), 284-306. DOI: 10.1080/02723646.2023.2234178

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### 2024/2025 List of Publications

Rudolph, E.M., Hedding, D.W., Fabel, D., Hodgson, D.A., Gheorghiu, D.M., Shanks, R. and Nel, W., 2024: A glacial chronology for sub-Antarctic Marion Island from MIS 2 and MIS 3, *Quaternary Science Reviews*, 325, 108485. DOI: 10.1016/j.quascirev.2023.108485

Li, L., Robinson, L.F., Li, G.K., Hedding, D.W., Xian, F., Xu, Z., Li, L., Ouyang, S., Li, T., Li, G., 2024: Multi-isotopic constraints on the impacts of landslide on weathering and erosion in an active mountain range, *Earth and Planetary Science Letters*, 626, #118527. DOI: 10.1016/j.epsl.2023.118527

McKay, T. J. M., Duri, B., & Gunter, A., 2024: Navigating the challenges of public transport and urban mobility in Thohoyandou, South Africa. *Journal of Transport and Supply Chain Management*, 18, 1054.

Cin, F. M., Süleymanoğlu-Kürüm, R., Walker, C., Truter, L., Doğan, N., Gunter, A., 2024: The politics of co-production and inclusive deliberation in participatory research. *International Journal of Social Research Methodology*, 1–16.

Cin, F. M., Walker, C., Süleymanoğlu-Kürüm, R., Gunter, A., Doğan, N., Truter, L., 2024: Political participation of refugee and host community youths: Epistemic resistance through artistic and participatory spaces. *Journal of Youth Studies*, 1–18.

Raghuram, P., Breines, M. R., & Gunter, A., 2024: De-migranticizing as methodology: Rethinking migration studies through immobility and liminality. *Comparative Migration Studies*, 12(1), 24.

Gunter, A., Breines, M. R., Cin, F. M., & Raghuram, P., 2024: Revisiting access in debates on internationalisation: Transnational rights? In *Internationalization in Higher Education and Research: Perspectives, Obstacles, Alternatives* (pp. 161–180). Springer.

Leal Filho, W., Wall, T., Salvia, A. L., Vasconcelos, C. R., Abubakar, I. R., Minhas, A., Mifsud, M., Kozlova, V., Lovren, V.O., Azadi, H., Sharif, A., Kovaleva, M., LeVasseur, T., Luetz, J., Velazquez, L., Singh, P., Pretorius, R., Mohammed Akib, A.N., Savelyeva, T., Brandli, L., Muthu, N., & Lombardi, P., 2024: The impacts of the COVID-19 lockdowns on the work of academic staff at higher education institutions: an international assessment, *Environment, Development and Sustainability*, 1-27

Carow, S., & Pretorius, R., 2024: A critical reflection on the inclusion of spatial thinking in undergraduate Geography modules: A case study of selected South African universities, *Journal of Geography Education in Africa*, 7, 17-40.

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## UNIVERSITY OF SOUTH AFRICA

### 2024/2025 List of Publications

Carow, S., & Pretorius, R.W., 2024: The spatiality of geography assessment questions: a case study of selected South African universities, *South African Geographical Journal*, 1-21.

Kom, Z., Z. Nicolau, M.D. & Nenwiini, S.C. 2024: The use of indigenous knowledge Systems practice to enhance food security in Vhembe District, South Africa. *Agricultural Research*, 13, 599-612. <https://doi.org/10.1007/s40003-024-00716-8>

### **Book Chapters**

Prof Schmitz: Geoforensics and Forensic Geography. In Horne, J., Zinn, R and Dintwe, S. (Eds) *Forensic Investigation. Legislative principles and investigative practice* (2nd Edition).

Prof Nicolau and Mr Ramasunga: Smallholder Farmers Multinomial Choice Analysis for Climate Change and Variability in Limpopo Province, South Africa. In *Innovation and Development of Agricultural Systems: Cases from Brazil, Russia, India, China and South Africa*.

Zongho-Kom; Melanie D Nicolau, Solomon E Uhumamure; Sylvester Mpandeli: Nthaduleni S Nethengwe; Jacobus N Steyn: Karabo Shale; Pindulo Ramasunga; Hector Chikoore. (2024). *Smallholder Farmers Multinomial Choice Analysis for Climate Change and Variability in Limpopo Province, South Africa*. In:

Maponya, P., Tshikovhi, N., Netswera, F. (eds) *Innovation and Development of Agricultural Systems. Sustainable Development Goals Series*. Palgrave Macmillan, Singapore. [https://doi.org/10.1007/978-981-97-2926-5\\_4](https://doi.org/10.1007/978-981-97-2926-5_4)

Dzawanda, B., Matsa, M., & Nicolau, M. (2024). *Sustainable Development Goals in Zimbabwe: Setbacks Encountered During the COVID-19 Pandemic*. In *SDGs in Africa and the Middle East Region* (pp. 1451-1475). Cham: Springer International Publishing.

### **Editing**

Leal Filho, W., Abubakar, I.R., da Silva, I., Pretorius, R., & Tarabieh, K. (Eds.), 2024, *SDGs in Africa and the Middle East Region*. (Part of the series: “Implementing the UN Sustainable Development Goals – Regional Perspectives”). Springer, Cham. (1596 pp)

Brandli, L., Dalla Rosa, F., Pretorius R., Avila, L., & Leal Filho, W. (Eds), 2025, *The Contribution of Life Cycle Analyses and Circular Economy to the Sustainable Development Goals*. (“World Sustainability Series”). Springer, Cham. (390 pp)

# SSAG NEWS 2024/25

SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## UNIVERSITY OF SOUTH AFRICA

### Masters and Doctoral Graduations and Supervisors

Candidate	Qualification	Topic	Supervisor
	<b>MSc and PhD in Geography</b>		
G. Olivier	MSc	Spatio-temporal variability of maize crop evapotranspiration using satellite imagery in a high-density weather station network: A case study of the Mooi River catchment, South Africa	Prof. D.W. Hedding
A. Mkonde	MSc	An assessment of the classification soft rock slopes in surface mining: A case study in South Africa	Prof. D.W. Hedding
S. Tshabalala	PhD	Amalgamated municipalities: An investigation into spatial, economic and political transformation of amalgamated municipalities, focusing on Ekurhuleni, South Africa.	Prof A. Gunter
L Van Vuuren	PhD	'Borrowing' parks: An analysis of organised events and attachment to urban parks, Johannesburg	Prof A. Gunter
N Ramakokobo	MSc	Investigating the socio-economic impacts of undocumented Zimbabwean immigration in the informal sector in Matswale, Musina.	Ms L. Mulibana & Prof A. Gunter

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## SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

# UNIVERSITY OF SOUTH AFRICA

### Undergraduate and Postgraduate Strengths

#### Undergraduate

The Department of Geography at UNISA offers a dynamic and flexible undergraduate programme designed for students across South Africa and beyond through our comprehensive Open Distance e-Learning (ODEL) model. Our undergraduate curriculum blends foundational geographic theory with practical skills in spatial thinking, sustainability, environmental analysis, and urban development. Students are introduced to both physical and human geography, allowing for a broad understanding of the interrelationships between people, places, and the environment.

A key strength lies in our commitment to contextual relevance. Our modules incorporate African case studies and themes, equipping students with knowledge that is both globally informed and locally grounded. We prepare graduates to critically analyse challenges such as urbanisation, climate change, resource management, and sustainable development. Students benefit from the integration of GIS (Geographical Information Systems) tools throughout the programme, building skills that are increasingly in demand across government, NGO, and private sectors. Our teaching emphasises analytical and research capabilities, supported by innovative assessment and online support.

UNISA's inclusive access model allows students from rural and urban contexts to study at their own pace, supported by experienced academic staff and digital learning platforms. This makes our undergraduate geography programme a compelling option for students seeking flexibility without compromising academic rigour.

Number of Undergraduate Registrations 2025	24457
Number of Honours Registrations 2025	328

#### Postgraduate

Our postgraduate programmes offer rich opportunities for advanced study in geography, with a focus on African issues and global relevance. Honours, master's, and doctoral degrees allow students to deepen their expertise in areas such as urban development, environmental change, geomorphology, education geography, spatial analysis, migration, rural development, and sustainability.

# SSAG NEWS 2024/25

SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## UNIVERSITY OF SOUTH AFRICA

### Undergraduate and Postgraduate Strengths

#### **Postgraduate**

A defining strength of postgraduate geography at UNISA is our strong research ethos. Students are guided by experienced supervisors who are actively engaged in internationally recognised research. Our projects are often embedded in real-world contexts, encouraging critical inquiry, methodological innovation, and policy relevance.

We welcome students from diverse academic and professional backgrounds, and our distance learning format offers the flexibility needed for working professionals or those in remote locations. UNISA fosters independent scholarship while providing structured academic support, workshops, and access to digital research resources.

Our department has a strong record of supervision and publication, with many of our postgraduates contributing to national and international research outputs. Our graduates emerge with strong analytical, writing, and project management skills that are valued in academia, government, civil society, and industry.

UNISA's postgraduate geography programme provides a supportive and stimulating environment to explore these topics.

Number of MSc	18
Number of PhD	16

#### Link to Departmental Webpage

<https://www.unisa.ac.za/sites/corporate/default/Colleges/Agriculture-&-Environmental-Sciences/Schools,-departments,-centres-&-units/School-of-Ecological-and-Human-Sustainability/Department-of-Geography>

# SSAG NEWS 2024/25

SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## UNIVERSITY OF THE FREE STATE

Department of Geography

Dr Adriaan van der Walt

Geographers' Specialisations Within The Department

Name (Title, Name, Surname)	Rank / Position	Specialisation(s)
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 Jay Le Roux	Professor	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 tools, GIS and remote sensing techniques from catchment to national scale.
Prof Abraham Matamanda	Professor	Climate change adaptation and planning, environmental planning, applied systems analysis, human settlements planning and management.
Prof Tom Okello	Professor	Biogeography, Health and Medical Geography, Economic Geography, Tourism Geography, Regional Geography, Environmental Planning / Environmental Impact Assessments, and Climate Change
Dr Adriaan Van der Walt	Senior Lecturer, Academic Head of Department	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 Melissa Hansen	Senior Lecturer, Subject Head Qwaqwa	Political ecology, environmental politics, conservation, spatial development, development studies, sustainability science, society and environment and environmental governance.

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## SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

# UNIVERSITY OF THE FREE STATE

### Geographers' Specialisations Within The Department

Name (Title, Name, Surname)	Rank / Position	Specialisation(s)
Dr Elizabeth Rudolph	Senior 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 periglacial geomorphology in particular sub-Antarctic Antarctic and high mountain environments. Education and communication in Geography, including the use of Virtual Reality technology.
Dr Marike Stander	Lecturer	Sediment provenance, sediment geochemistry, environmental management and monitoring.
Dr Pulu Mahasa	Lecturer	Water demand management, medical waste management and aeolian geomorphology.
Dr Sanele Mbambo	Lecturer	Sustainable human settlements and Urban development and Transformation.
Dr Katlego Mashiane	Lecturer	Biodiversity conservation, Geospatial analytics and spatial modelling.
Ms Eldalize Kruger	Lecturer	Environmental management and monitoring, environmental awareness and education.
Ms Tobeka Mehlohlakulu	Lecturer	Township development studies, land issues and sustainable rural livelihoods.
Ms Ntebohiseng Sekhele	Lecturer	Climate change, montane rural communities and conservation conflicts.
Ms Kholeka Sikhosana	Lecturer	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.

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## SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

# UNIVERSITY OF THE FREE STATE

### Geographers' Specialisations Within The Department

Name (Title, Name, Surname)	Rank / Position	Specialisation(s)
Ms Moleboheng Pherane	Lecturer	Environmental humanity, Urban ecology and societal dynamics, human and migration flows, human marginalisation, wetland degradation, and indigenous knowledge systems.
Mr Solomon Zondo	Lecturer	Vegetation ecology, mountain environment, climate change, natural resource management, rangeland science and landscape.

### Exciting Departmental News

Dr Katlego Mashiane attended the Earth Observation Symposium for Africa in Italy, Frascati, at the European Space Agency (ESA). At this symposium, Dr Mashiane presented a poster on predicting and estimating species richness and diversity of grasslands using Earth Observation tools by ESA.

Dr Elizabeth Rudolph was elected as the South African Representative for the International Geographical Union and International Association of Geomorphologists Joint Commission on Geomorphology and Society.

Dr Marike Stander, Dr Adriaan Van der Walt, and Dr Melissa Hansen attended the 35th International Geographical Congress at the Dublin City University (DCU) in Dublin, Ireland.

The department also appointed Ms Moleboheng Pherane as a New Generation of Academics Programme (nGAP) lecturer during the 2024 academic year.

Ms Kholeka Sikhosana attended Africa's 1st Climate and Health Africa Conference (CHAC) hosted in Harare, Zimbabwe. Here, she presented her poster titled "Investigating Climate Variability in the City of Johannesburg and the Potential Role of Urban Ecological Infrastructure in Mitigating its Effects."

The Department of Geography has undertaken a curriculum renewal to enhance graduate employability and align academic offerings with industry needs, supporting the university's Vision 130. This renewal introduces three updated programmes: BSc Environmental Geography, BSc Geography Specialisation, and BA with Specialisation in Geography. Key innovations include a third-year excursion module, providing students with hands-on experience in both physical and human geography research. The curriculum...

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## UNIVERSITY OF THE FREE STATE

### Exciting Departmental News

...now features expanded GIS and Remote Sensing modules, alongside a newly introduced Geographical Ethics module designed to equip students with the skills to navigate ethical challenges in geographical contexts.

### 2024/2025 List of Publications

#### Journal Articles

- Bhanye J, Kloeffel T, Beyers M, Mabaso M, Rajadurai K, Winklmaier J, Matamanda A. 2024. Decentralised water-energy-food (WEF) systems in Africa. Space analysis, least cost modelling of sack farming and establishment of renewable energy technologies in the Diepsloot slums of Johannesburg, South Africa. *Discover Global Society*, 2(1), 1-17.
- Daemane, M.E., Adelabu, S. and Ramoelo, A., 2024. Assessing species richness, diversity and assemblage of forest patches within a grassland matrix in the Afrotemperate ecosystems. *Phytocoenologia*, 52(1).
- Gcayi, S.R., Adelabu, S.A., Nduku, L. and Chirima, J.G., 2024. A bibliometric analysis for remote sensing applications in bush encroachment mapping of grassland and savanna ecosystems. *Applied Geomatics*, 16(4), pp.881-896.
- Kalaoane RC, Matamanda AR, Bhanye JI. 2024. The complex web of land use planning, legislation and urban mobility in Maseru, Lesotho. *Discover Sustainability*, 5(1), 40.
- Kruger, J.A., Roffe, S.J. and Van der Walt, A.J., 2024. AgERA5 representation of seasonal mean and extreme temperatures in the Northern Cape, South Africa. *South African Journal of Science*, 120(3-4), pp.1-13.
- Mashiane, K., Ramoelo, A. and Adelabu, S. (2024) 'Prediction of species richness and diversity in sub-alpine grasslands using satellite remote sensing and random forest machine-learning algorithm', *Applied Vegetation Science*, 27(2). Available at: <https://doi.org/10.1111/avsc.12778>.
- Mofokeng, O.D., Adelabu, S.A. and Jackson, C.M., 2024. An Integrated Grassland Fire-Danger-Assessment System for a Mountainous National Park Using Geospatial Modelling Techniques. *Fire*, 7(2), p.61.
- Mofokeng, O.D., Adelabu, S.A., Durowoju, O.S. and Adagbasa, E.A., 2024. Grass curing-driven fire danger index in a protected mountainous grassland using fused MODIS and Sentinel-2. *International Journal of Remote Sensing*, 45(16), pp.5359-5384.

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## UNIVERSITY OF THE FREE STATE

### 2024/2025 List of Publications

Nel, W., Hodgson, D. A., Hedding, D. W., Whittle, A., & Rudolph, E. M. (2024). Twenty-thousand-year gap between deglaciation and peat formation on sub-Antarctic Marion Island attributed to climate and sea level change. *Journal of Quaternary Science*, 1–8. <https://doi.org/10.1002/jqs.3642>

Nkuna, B.L., Chirima, J.G., Newete, S.W., Nyamugama, A. and van der Walt, A.J., 2024. Developing models to detect maize diseases using spectral vegetation indices derived from spectral signatures. *The Egyptian Journal of Remote Sensing and Space Sciences*, 27(3), pp.597-603.

Nkuna, B.L., Chirima, J.G., Newete, S.W., Van der Walt, A.J. and Nyamugama, A., 2024. Unraveling the Relationship between Soil Nutrients and Maize Leaf Disease Occurrences in Mopani District Municipality, Limpopo Province, South Africa. *Agronomy*, 14(10), p.2237.

Ramogwebo T, Hlongwane JS, Bhanye J, Matamanda AR. 2024. Doing fieldwork among hard-to-reach populations: an account of local female researchers studying foreign migrants in downtown Bloemfontein, South Africa. *International Journal of Qualitative Methods*.

Rudolph, E. M., Hedding, D. W., Hodgson, D. A., Fabel, D., Gheorghiu, D. M., Shanks, R., Nel, W. (2024). A glacial chronology for sub-Antarctic Marion Island from MIS 2 and MIS 3. *Quaternary Science Reviews*, 325, 108485.

Shackleton CM, Brom P, Gwedla N, Matamanda AR, Sardeshpande M, Kumar-Nair S. 2024. Embedding opportunities for poverty alleviation in urban green infrastructure design and management using South Africa as a case example. *Cities*, 155, 105442

Thamaga, K.H., Kganyago, M., Mandela, M. and Mashiane, K., 2024. Climate variability and rangeland ecosystems. In *Remote Sensing of Climate* (pp. 85-106). Elsevier.

### **Books/Book Chapters**

Baade, J., Aucamp, I., Collett, A., Eckardt, F., Funk, R., Glotzbach, C., von Holdt, J., Kestel, F., Knot, J., Lombard, A. and Morgenthal, T., Msipa, A., and Le Roux, J.J., 2024. Soil Erosion Research and Soil Conservation Policy in South Africa. In *Sustainability of Southern African Ecosystems under Global Change: Science for Management and Policy Interventions* (pp. 335-368). Cham: Springer International Publishing.

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## UNIVERSITY OF THE FREE STATE

### 2024/2025 List of Publications

Chikukwa M, Matamanda AR. 2024. Encroachment of the Harare central business district boundary into bordering suburban areas: implications for spatial policy. In, Chirisa I & Matamanda AR, Urban infrastructure in Zimbabwe: Departures, divergences and convergences. Springer Nature: Cham. pp. 33-52.

Chirisa I, Matamanda AR. 2024. Urban infrastructure in Zimbabwe: Departures, divergences and convergences. Springer Nature: Cham. <https://doi.org/10.1007/978-3-031-45568-1>.

Chirisa I, Mubvami T, Mavhima B, Matamanda AR, Moyo T. 2024. Urban development and the financing of low-income housing in Zimbabwe, post-2000. In, Chirisa I & Matamanda AR, Urban infrastructure in Zimbabwe: Departures, divergences and convergences. Springer Nature: Cham. pp. 17-32.

Chirisa I, Mukarwi L, Matamanda AR, Moyo T. 2024. Conversion of "Bachelor" into family hostels in Mbare, Harare: Lessons from South Africa. In, Chirisa I & Matamanda AR, Urban infrastructure in Zimbabwe: Departures, divergences and convergences. Springer Nature: Cham. pp. 143-160.

Chirisa, H., Van Der Walt, A. and Matamanda, A.R., 2024. Informal Settlements Under the Impact of Climate Change and the Community Health Factor in Mangaung Metropolitan Municipality, South Africa. In Sustainable Development Goals and Urban Health: Strides, Challenges and Way Forward for Poor Neighborhoods (pp. 117-130). Cham: Springer Nature Switzerland.

Kalaoane RC, Matamanda AR. 2024. Women in the urban informal economy and pathways towards inclusive cities. In Andres L, Bryson JR, Ersoy A, Reardon L, Pandemic Recovery? Edward Elgar, pp. 78-93

Maisiri, M., Pherane, M., Ayantokun, P.B., Matoane, L.S., Dunn, M. and Matamanda, A.R., 2024. No Hunger SDG and Urban Health in Mangaung. In Sustainable Development Goals and Urban Health: Strides, Challenges and Way Forward for Poor Neighborhoods (pp. 33-48). Cham: Springer Nature Switzerland.

Olusola, A., Ogunjo, S.T. and Adelabu, S., 2024. Threshold identification using daily stream flow records for two stations along the Niger River, West Africa. In River Flow 2022 (pp. 960-966). CRC Press.

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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## UNIVERSITY OF THE FREE STATE

### Masters and Doctoral Graduations and Supervisors

Master's Graduations				
Student Name	Title	Degree	Supervisor	University
Phaswana, Mabosha	Environmental impacts of sand mining on the morphology of Nzhelele river	MSc Geography	Dr Elizabeth Rudolph	University of the Free State
Pherane, Moleboheng	Stakeholder perceptions of the use and value of urban wetlands: case of the Seven Dams Conservancy (SDC), Bloemfontein, South Africa	MA Geography	Prof Abraham Matamanda Dr Elizabeth Rudolph	University of the Free State
Doctoral Graduations				
Kowanai Mhlanga	Political economy of urban settlement demolitions and state power in Zimbabwe: A case study of Harare Metropolitan Province since 2013	PhD	Dr Melissa Hansen	
Wisdom Sibanda	Participation of women Refugees in Water, Sanitation and hygiene programmes: Reflection on the experiences of refugee women in the Tongogara Refugee Camp, Zimbabwe.	PhD		
Ryan Anderson	Medium to long-term impacts of rainfall events on large gully networks in the Eastern Cape, South Africa	PhD	Prof Jay Le Roux	

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## SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

# UNIVERSITY OF THE FREE STATE

### Information of Interest for Prospective Students

Our undergraduate and postgraduate students are exposed to the following:

#### **Cutting-Edge Programmes**

Offers diverse qualifications — BSc Environmental Geography, BSc Geography Specialisation, and BA with Specialisation in Geography. Postgraduate studies explore fields like Urban Geography, Environmental Sustainability, Urban Ecology, and Climate Adaptation and Resilience.

#### **Real-World Experience**

A third-year excursion module takes students out of the classroom, offering hands-on exposure to both physical and human geography research. Fieldwork opportunities prepare students for careers in research, policy-making, and environmental management.

#### **Tech-Driven Skills**

Strong focus on Geographic Information Systems (GIS) and Remote Sensing — essential tools for environmental analysis, urban planning, and disaster management. Access to modern software and technologies used by industry leaders.

#### **Ethics and Impact**

The Geographical Ethics module equips students to tackle real-world ethical dilemmas, fostering responsible research and practice.

#### **Research Opportunities**

Postgraduate students engage in impactful research projects, such as climate change adaptation, urban inequalities, and the role of ecological infrastructure in cities like Bloemfontein and Johannesburg. Strong focus on comparative climate governance studies between metropolitan municipalities.

#### **Industry and Community Links**

Collaborations with local municipalities, environmental organizations, and NGOs ensure research has practical, real-world applications. Opportunities for students to work on projects addressing community-specific environmental and social issues

#### **Support and Development**

A dynamic teaching and research environment with one-on-one postgraduate supervision. Skills development workshops and academic writing support tailored to both undergraduate and postgraduate students.

#### **Link to Departmental Webpage**

<http://www.ufs.ac.za/geography>

# SSAG NEWS 2024/25

## SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

# UNIVERSITY OF THE WESTERN CAPE

### Department of Geography, Environmental Studies & Tourism

### Dr Mandy Carolissen

### Geographers' Specialisations Within The Department

Name (Title, Name, Surname)	Rank / Position	Specialisation(s)
Prof Bradley Rink	Associate Professor	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 specialises in GIScience and Earth Observation Data Applications. He is an NRF-rated researcher with 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 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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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## UNIVERSITY OF THE WESTERN CAPE

### Geographers' Specialisations Within The Department

Name (Title, Name, Surname)	Rank / Position	Specialisation(s)
Dr Mandy Carolissen	Lecturer (Department Chairperson 2025-2027)	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.
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 Erin Torkelson	Lecturer	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, Who Owe's What to Whom, 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.



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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## UNIVERSITY OF THE WESTERN CAPE

### Geographers' Specialisations Within The Department

Name (Title, Name, Surname)	Rank / Position	Specialisation(s)
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.
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' Specialisations Within The Department

Name (Title, Name, Surname)	Rank / Position	Specialisation(s)
Ms Faeza Fortune	Associate Lecturer	Faeza is a physical geographer passionate about rivers and wetlands in dryland environments. Her current research focus is understanding how geomorphic processes influence valley-bottom wetland formation, and how anthropogenic drivers influence these processes, which has implications for our understanding of ecosystem service delivery and rehabilitation strategies. Her research techniques include spatial analysis such as GIS and Remote Sensing, numerical morphodynamic modelling and fieldwork. Faeza serves on the board of trustees for the South African Wetland Society and on the steering committee for the Western Cape Wetlands Forum.
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.
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. 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.
Dr Tinashe P. Kanosvambira	Honorary Research Fellow	Tinashe is an honorary research fellow in the department. An urban geographer by training, his research interests span 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. He has previously served as a Teaching Assistant and Lecturer in the department.



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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## UNIVERSITY OF THE WESTERN CAPE

### Geographers' Specialisations Within The Department

Name (Title, Name, Surname)	Rank / Position	Specialisation(s)
Prof Jonathan Crush	Extraordinary Professor	More details on Jonathan and his research can be found here: <a href="https://www.balsillieschool.ca/jonathan-crush">https://www.balsillieschool.ca/jonathan-crush</a>
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 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.



# SSAG NEWS 2024/25

SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

## UNIVERSITY OF THE WESTERN CAPE

### Exciting Departmental News

Mbulisi Sibanda attained a C2 NRF rating.

### 2024/2025 List of Publications

- Kapari, M., Sibanda, M., Magidi, J., Mabhaudhi, T., Mpandeli, S. and Nhamo, L., 2025. Assessment of the Maize Crop Water Stress Index (CWSI) Using Drone-Acquired Data Across Different Phenological Stages. *Drones*, 9(3), p.192.
- Maphanga, T., Dube, T., Shoko, C., Sibanda, M. and Gxokwe, S., 2025. Using multisource remotely sensed data and cloud computing approaches to map non-native species in the semi-arid savannah rangelands of Mpumalanga, South Africa. *South African Geographical Journal*, 107(1), pp.88-111.
- Maphanga, T., Shoko, C., Sibanda, M., Kavhu, B., Coetsee, C. and Dube, T., 2025. Bush encroachment with climate change in protected and communal areas: A species distribution modelling approach. *Ecological Modelling*, 503, p.111056.
- Ngwenya, N., Bangira, T., Sibanda, M., Kebede Gurmessa, S. and Mabhaudhi, T., 2025. UAV-based remote sensing of chlorophyll-a concentrations in inland water bodies: a systematic review. *Geocarto International*, 40(1), p.2452246.
- Crush, J. and Tawodzera, G. (2024). Informal Pandemic Precarity and Migrant Food Enterprise in South Africa During COVID-19. *Global Food Security* 43: 100804
- Sibanda, M. and Bacela, E., 2024. A Systematic Review of Literature on Remote Sensing Tomato Crops Productivity. *Physics and Chemistry of the Earth, Parts A/B/C*, p.103759.
- Pillay, S.J., Bangira, T., Sibanda, M., Kebede Gurmessa, S., Clulow, A. and Mabhaudhi, T., 2024. Assessing Drone-Based Remote Sensing for Monitoring Water Temperature, Suspended Solids and CDOM in Inland Waters: A Global Systematic Review of Challenges and Opportunities. *Drones*, 8(12), p.733.
- Masenyama, A., Mutanga, O., Sibanda, M. and Dube, T., 2024. A critical review of literature on remote sensing grass quality during the senescence phenological stage. *International Journal of Applied Earth Observation and Geoinformation*, 134, p.104211.
- Ndlovu, H.S., Odindi, J., Sibanda, M. and Mutanga, O., 2024. A systematic review on the application of UAV-based thermal remote sensing for assessing and monitoring crop water status in crop farming systems. *International Journal of Remote Sensing*, 45(15), pp.4923-4960.



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SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

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### 2024/2025 List of Publications

Mpakairi, K.S., Dube, T., Sibanda, M. and Mutanga, O., 2024. Remote sensing crop water productivity and water use for sustainable agriculture during extreme weather events in South Africa. *International Journal of Applied Earth Observation and Geoinformation*, 129, p.103833.

Gokool, S., Mahomed, M., Brewer, K., Naiken, V., Clulow, A., Sibanda, M. and Mabhaudhi, T., 2024. Crop mapping in smallholder farms using unmanned aerial vehicle imagery and geospatial cloud computing infrastructure. *Heliyon*, 10(5).

Gokool, S., Mahomed, M., Clulow, A., Sibanda, M., Kunz, R., Naiken, V. and Mabhaudhi, T., 2024. Exploring the potential of remote sensing to facilitate integrated weed management in smallholder farms: A scoping review. *Drones*, 8(3), p.81.

Kapari, M., Sibanda, M., Magidi, J., Mabhaudhi, T., Nhamo, L. and Mpandeli, S., 2024. Comparing machine learning algorithms for estimating the maize crop water stress index (CWSI) using UAV-acquired remotely sensed data in smallholder croplands. *Drones*, 8(2), p.61.

Vawda, M.I., Lottering, R., Mutanga, O., Peerbhay, K. and Sibanda, M., 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), p.1051.

Maphanga, T., Shoko, C., Sibanda, M., Thamaga, K.H. and Dube, T., 2024. Understanding the spatio-temporal distribution of bush encroachment in savannah rangelands, South Africa. *Geocarto International*, 39(1), p.2366515.

Ndlovu, H.S., Odindi, J., Sibanda, M., Mutanga, O., Clulow, A., Chimonyo, V.G. and Mabhaudhi, T., 2024. Use of unmanned aerial vehicle-derived multi-spectral data for the early detection of multi-temporal maize leaf equivalent water thickness and fuel moisture content for the improved resilience of smallholder maize farming. *Journal of Applied Remote Sensing*, 18(1), pp.014520-014520.

Ahmed, Z, Crush, J, Owuor, S and Onyango, E. (2024). Disparities and Determinants of Somali Refugee Food Security in Nairobi, Kenya. *Global Food Security*, 43: 100808.

Song, Y. Si, Z, Zhong, T, Crush, J. and Huang, X. (2024). Exploring a Novel Approach to Enhancing Urban Food Affordability: Assessing Subsidy Policies for Food Retailers in China. *Cities* 155: 105403.



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Nickanor, N, Kazembe, L. and Crush, J. (2024). "Wild and Indigenous Foods and Urban Food Security in Urbanizing Namibia." *Urban Forum*, 35:101-120.

Ramachandran, S, Chikanda, A. and Crush, J. (2024). "Refugee Entrepreneurship and Entrepreneurial Economies in South Africa" In N. Ranabahu, H. de Vries and R. Hamilton (Eds.), *Refugee Entrepreneurship: A Research Companion* (Abingdon: Routledge), pp.164-179.

Ramachandran, S, Crush, J, Tawodzera, G, and Onyango, E. (2024)., "Pandemic Precarity, Crisis-Living and Food Insecurity of Female Zimbabwean Migrants in South Africa" In M. McAuliffe and C. Bauloz (Eds.), *Research Handbook on Migration, Gender and COVID-19* (Cheltenham: Edward Elgar), pp. 180-195.

Ramachandran, S, and Crush, J. (2024) "Migrant Remittances, Social Protection and the SDGs" In N. Piper and K. Datta (Eds.), *Handbook on Migration and the Sustainable Development Goals* (Cheltenham: Edward Elgar), pp. 179-193.

Crush, J, and Ramachandran, S. (2024). "Mapping the Linkages Between Food Security, Inequality, Migration, and Development in the Global South" In H. Crawley and J. Teye (Eds.), *Palgrave Handbook of South-South Migration and Inequality* (London: Palgrave Macmillan), pp. 567-584.

Rink, B. (2025). For slow teaching: courageous and compassionate pedagogy in times of change. *South African Geographical Journal*, 1–16. <https://doi.org/10.1080/03736245.2025.2472651>

Rink, B., Porter, G., Maskiti, B., Clark, S., Barber, C., with peer researchers Ashitey, J., Evans, A., Jucwa, S., Malangabi, B., Mpiliso, S., Ntozini, S., Pulickal Abdul Azeez, A., Siyatha, T., Sosanti, B., Uddin, R., Watson, D. (2025). A Curated Walk with Peer Researchers and their Communities: Engaging a Research Journey Toward Meaningful Impact. *Gateways: International Journal of Community Research and Engagement*, 18:1, 1–15. <https://doi.org/10.5130/ijcre.v18i1.9217>

Porter, G., Rink, B., Maskiti, B., Clark, S., & Barber, C. (2025) Young men's daily mobility needs and practices in two low-income neighbourhoods of Cape Town: reflections on first mile experiences, using an innovative community peer research methodology, *African Transport Studies*, 3, 100033, <https://doi.org/10.1016/j.aftran.2025.100033>.



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Goeiman, J., and Rink, B. (2024). Waste work in the global South: Exploring activity theory as a framework for understanding distributed roles of intermediaries in Cape Town's urban waste economy. *Urban Forum*, <https://doi.org/10.1007/s12132-024-09518-1>

Bock, Z., Mnyaka, P., Oyowe, O., and Rink, B. (2024). What makes for a 'good university': Dialogue from a southern faculty. In M. Ralarala, S. Pillay, Z. Bock, & R. Kaschula (Eds) *Unlocking the chains of knowledge: Understanding the challenges, remaking pedagogies and curriculum renewal*. Stellenbosch: African Sun Media Publications, pp. 83-102.

Paulsen, A., and Rink, B. (2024). The Practice of Sharing: Mapping Food Networks in Delft, South Africa. In: K. Bohn and M. Tomkins, eds., *Urban Food Mapping Making Visible The Edible City*. New York: Routledge, pp.142–151.

Schnittfinke T, Greiving S, Nyamai DN, Scholz W, Schramm S, Behrens R, Zuidgeest M, Rink B, Momm S, Travassos L, Brauer B, Fischer L. (2024) Criticality assessment and cascading effects: impacts of COVID-19 disruptions in public transport on marginalized groups in Dortmund, Germany, São Paulo, Brazil, and Cape Town, South Africa. *Journal of Surveillance, Security and Safety*, 5(3): 140-159.  
<http://dx.doi.org/10.20517/jsss.2024.11>

Rink, B., Gumede, S., Moubachir, I., Seebach, N., & Widmer, P. (2024). Sonic urbanism(s): listening to the city. *Cultural Geographies*, 0(0).  
<https://doi.org/10.1177/14744740241293102>

Sarmiento, J., Rink, B. (2024). Africa Tourism. In: Jafari, J., Xiao, H. (eds) *Encyclopedia of Tourism*. Springer, Cham, Switzerland.  
[https://doi.org/10.1007/978-3-319-01669-6\\_230-5](https://doi.org/10.1007/978-3-319-01669-6_230-5)

Dyssel, M. (2024). A social-ecological analysis of geoheritage resource uses and livelihoods concerns of villagers in the Cederberg Mountains, Western Cape, South Africa. In K. Matshusa, L. Leonard (Eds) *Geotourism for social and ecological justice in Sub-Saharan Africa – Unlocking the potential*. Routledge, pp. 27-46.

Makhathini, S & Kanosvambira, T. (2025). Cafés of Connection: Exploring the Social Role of Third Places in Global South Universities. *South African Geographical Journal*, DOI: 10.1080/03736245.2025.2481859



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### 2024/2025 List of Publications

Kanosvamhira, T. (2024). Roots of Resilience: A qualitative exploration of youth driven gardens in Cape Town, South Africa. *Qualitative Research Journal* DOI: 10.1108/QRJ-05-2024-0108

Kanosvamhira, T. (2024). Exploring Urban Community Gardens as 'Third Places': Fostering Social Interaction in Distressed Neighborhoods of Cape Town, South Africa. *Leisure Studies*. DOI: 10.1080/02614367.2024.2383481

Kanosvamhira, T., Tevera., D. (2024). Unveiling Quiet Activism: Urban Community Gardens as Agents of Food Sovereignty. *Geographical Research*. <https://doi.org/10.1111/1745-5871.12661>

Kanosvamhira, T., (2024). Sustainable Urban Agriculture: Unlocking the Potential of Home Gardens in Low-Income Communities. *The Professional Geographer*. <https://doi.org/10.1080/00330124.2024.2355179>

Kanosvamhira, T., (2024). How to get the community gardening: an exploration of gardener insights through a mixed-methods approach in Cape Town, South Africa. In *Sage Research Methods: Diversifying and Decolonizing Research*. SAGE Publications, Ltd., <https://doi.org/10.4135/9781529691276>

Kanosvamhira. T.P. (2024). Cultivating Food Justice: Redefining Harvest Sales for Sustainable Urban Agriculture in Low-Income Cape Town Post-COVID-19. *International Journal of Urban and Regional Research*. 48(2): 280-292. DOI: 10.1111/1468-2427.13224



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### Masters and Doctoral Graduations and Supervisors

Master of Arts			
Surname, Initials	Title	Supervisor	Co-Supervisor(s)
Kamteni, YO.	Assessing the spatial variability of Neglected and Underutilized crop Species (NUS) leaf and canopy chlorophyll content in KwaZulu-Natal smallholder farms using Unmanned Aerial Vehicle (UAV)-based High-Throughput phenotyping	Mbulisi Sibanda	Prof O Mutanga Prof J Odidndi - UKZN
Bija, N.	Mapping the change in spatial extent and Leaf Area Index of selected wetland species in wetlands of the Western Cape province using remotely sensed data	Mbulisi Sibanda	<a href="#">Mandy Carolissen</a>
Jacobs, A.	Domestic space and the performance of identity: The role of house parties in shaping sexuality and space in Cape Town	Bradley Rink	
Malubane, B.	Negotiating Beitbridge: The politics of mobility in cross-border trade and labour between South Africa and Zimbabwe	Bradley Rink	
Rhodes, H.	The place of food: A relational analysis of the food environment and sense of place in Khayelitsha	Bradley Rink	
Sitshi, T.	Reimagining Urban Public Space: The Impacts of Urban Renewal in the case of Voortrekker Road Corridor Improvement District in Bellville, Cape Town	Bradley Rink	
Ontong, A.	An analysis of crayfish street trading challenges in Paternoster	Michael Dyssel	
Pretorius, J.	Sand mining challenges in the Western Cape: The case of the Tormin Mineral Sands and MaccSand Mining and Quarrying Mines	Michael Dyssel	
Thys, C.	Remote sensing of inundation dynamics in select coastal lakes of the Western Cape, South Africa	Mandy Carolissen	Mark Boekstein



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### Information of Interest for Prospective Students

### Link to Departmental Webpage

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

#### **Undergraduate**

The Department of Geography, Environmental Studies and Tourism is a dynamic teaching and research department with a wide range of expertise in human and physical geography, GIScience, environmental management, and tourism. The Department ranks proudly among the oldest and most established at UWC. Located in the Faculty of Arts and Humanities, the Department provides students with insights into the key social and environmental issues of the day.

The Department is proud of its multicultural and multinational group of students and academic staff whose teaching, research, and publications are internationally recognised. The Department offers undergraduate degrees (BA) with majors in 1) Geography and Environmental Studies and 2) Tourism.

#### **Postgraduate**

The Department is building a reputation for thoughtful, cutting-edge geographical research, across human geography, physical geography, and tourism. Our department offers three postgraduate programmes for Honours, Master's and PhD degrees in Geography and Environmental Studies. For further enquiries, contact either the Faculty of Arts Postgraduate Office or Dr Erin Torkelson, our Departmental Postgraduate coordinator (email: [etorkleson@uwc.ac.za](mailto:etorkleson@uwc.ac.za))



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## UNIVERSITY OF THE WITWATERSRAND

Department of Geography, Archaeology and Environmental Studies

Prof Paida Mhangara

Geographers' Specialisations Within The Department

Staff	Specialisation(s)
Dr 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 Tumelo Mathe	GIS and remote sensing applications
Dr Simoné Dahmns-Verster	Ecotoxicology, environmental science, water pollution, freshwater ecology, zoology, water science, land contamination.
Dr Cletah Shoko	Remote sensing, GIS, Geospatial modelling, Surface hydrology, Spatial ecology
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 Raeesa 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
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



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### Geographers' Specialisations Within The Department

Staff	Specialisation(s)
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
Wendy Phillips	Cartographer
Natanya Alexander	Senior Administrative Officer
Sindiswa Tilane	Postgraduate Administrator
Khanyo Ngubo	Finance Officer
Mpho Thobejane	Procurement Officer
Thandizwe Nsimbi	Senior Technician

### Exciting Departmental News

Dr Mahlatse Kganyago, supervised at Wits by Prof Paida Mhangara, received the award for the best Remote Sensing PhD Thesis at the Remote Sensing and Photogrammetry Society's Annual National Earth Observation Conference in the UK.

Dr Raesa Moolla was awarded a research grant in collaboration with ETH Zurich, from the Swiss National Foundation, worth 3 million Euros for a study of Air Quality Perceptions, across four LMICs in the Global South, granting 45 internship positions to recent graduates from Wits, UJ and UP.

Dr Simoné Dahms-Verster was selected for and enrolled in the SAJS Associate Editor Mentorship Programme 2024 in the field of Organismal Biology, and elected as the SASAQs Executive Committee Member 2024-2025



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### Exciting Departmental News

Dr Ariel Prinsloo qualified with her PhD and started a University of the Witwatersrand Centennial Postdoctoral Fellowship in the School of Geography, Archaeology and Environmental Studies.

Prof Jennifer Fitchett (PI and Dr Simoné Dahms-Verster, together with Dr William Mushawemhuka (UJ), Dr Adriaan van der Walt (UFS), Dr Sarah Roffe (ARC) and Mercia Southon (UWC) received an NRF ESSRP Grant to explore heat risk across sectors.

Prof Jennifer Fitchett was awarded the National Science and Technology Forum (NSTF) Communications Award

### 2024/2025 List of Publications

Adom, R.K. and Simatele, M.D., 2024. Overcoming systemic and institutional challenges in policy implementation in South Africa's water sector. *Sustainable Water Resources Management*, 10(2), p.69.

Adom, R.K., Mukoki, P., Ngwenya, N. and Simatele, M.D., 2024. Exploring the complications of climate change funding in Sub-Saharan African countries. *Mitigation and Adaptation Strategies for Global Change*, 29(6), p.58.

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., 2024. Enhancing climate change adaptation governance through transforming institutions in Kwa-Zulu Natal Province, South Africa. *International Journal of Climate Change Strategies and Management*, 16(4), pp.413-438.

Birhane, E., Negash, E., Getachew, T., Gebrewahed, H., Gidey, E., Gebremedhin, M.A. and Mhangara, P., 2024. Changes in total and per-capital ecosystem service value in response to land-use land-cover dynamics in north-central Ethiopia. *Scientific reports*, 14(1), p.6540.

Birhane, E., Negash, E., Getachew, T., Gebrewahed, H., Gidey, E., Gebremedhin, M.A. and Mhangara, P., 2024. Changes in total and per-capital ecosystem service value in response to land-use land-cover dynamics in north-central Ethiopia. *Scientific reports*, 14(1), p.6540.



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### 2024/2025 List of Publications

Bollati, I.M., Masseroli, A., Al Kindi, M., Cezar, L., Chrobak-Žuffová, A., Dongre, A., Fassoulas, C., Fazio, E., Garcia-Rodríguez, M., Knight, J. and Matthews, J.J., 2024. The IGCP 714 Project “3GEO–Geoclimbing & Geotrekking in Geoparks”–Selection of Geodiversity Sites Equipped for Climbing for Combining Outdoor and Multimedia Activities. *Geoheritage*, 16(3), p.79.

Chidzingu, T. and Wafer, A., 2024. Can Social Impact Assessments (SIAs) be a sustainable strategy to address the skills development gap and community sustainability challenges in Just Energy Transition (JET) policy decision-making? Evidence from the South African mining communities of Kriel and Carolina in Mpumalanga. *South African Geographical Journal*, 106(1), pp.89-108.

Cloete, D., Shoko, C., Dube, T. and Clarke, S., 2024. Remote sensing based land use land cover classification for the Heuningness Catchment Cape Agulhas South Africa.

Curtis, C.J., Rose, N.L., Yang, H., Turner, S., Langerman, K., Fitchett, J., Milner, A., Kabba, A. and Shilland, J., 2024. Contamination of depression wetlands in the Mpumalanga Lake District of South Africa near a global emission hotspot. *Science of the Total Environment*, 938, p.173493.

Dalziel, A.B. and Evans, M., 2024. Conservation corridors and ecological networks in South Africa: Shortcomings of environmental legislation and policies. *South African Geographical Journal*, 106(1), pp.1-20.

Fitchett, J., Waja, M., Holtz, C., Earnest, T., Kganane, C. and Prinsloo, A., 120 years of earth and environmental sciences in the South Africa journal of Science, *South African Journal of Science*, 120, pp. 1-4

Fitchett, J.M., Holmes, J.A., Dahms-Verster, S., Curtis, C.J. and Mackay, A.W., 2024. Spatial variability in stable isotopes from Lesotho surface waters: insights into regional moisture transport. *Climate Dynamics*, 62(5), pp.3417-3430.

Fitchett, J.M., Prinsloo, A., Motlogeloa, O., Mnguni, Z., Meyer, C., Mokgehele, D., Jones, S., Waja, M., Mansoor, Y., Marinaki, A. and Raines, K., 2024. Giving feedback on oral presentations: Critically considering the line between constructive criticism and unhelpful feedback. *South African Journal of Science*, 120(7-8), pp.1-3.



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### 2024/2025 List of Publications

Gadu, S.E., Adom, R.K. and Simatele, M.D., 2024. Mind the gap: The fissure between aspirations and actions in climate change governance at a local government level: A study of the Eastern Cape Province of South Africa. *Climate Resilience and Sustainability*, 3(2), p.e72.

Gololo, M.G.D., Nyathi, C.W., Boateng, L., Nkadameng, E.K., Mckenzie, R.P., Atif, I., Kong, J., Mahboob, M.A., Cheng, L. and Mellado, B., 2024. Review of IoT Systems for Air Quality Measurements Based on LTE/4G and LoRa Communications. *IoT*, 5(4), pp.711-729.

Grab, S.W. and Nash, D.J., 2024. A new flood chronology for KwaZulu-Natal (1836–2022): The April 2022 Durban floods in historical context. *South African Geographical Journal*, 106(4), pp.476-497.

Grenfell, M.C., Evans, M. and Grenfell, S.E., 2024. Controls on sediment transfer dynamics at a tributary–trunk transition in the Little Karoo, with implications for interpreting the landscape response to environmental change. *South African Geographical Journal*, 106(4), pp.446-475.

Hishe, S., Gidey, E., Zenebe, A., Bewket, W., Lyimo, J., Knight, J. and Gebretekle, T., 2024. The impacts of armed conflict on vegetation cover degradation in Tigray, northern Ethiopia. *International Soil and Water Conservation Research*, 12(3), pp.635-649

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.

Keli, Z., Mhangara, P. and Shikwambana, L., 2024. Monitoring the trends in emissions from coal-fired power stations in Lephalale (Limpopo) during the 2010-2022 period using remotely sensed data. *Clean Air Journal*, 34(2), pp.1-10.

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), p.2309174.

Kganyago, M., Adjorlolo, C., Mhangara, P. and Tsoeleng, L., 2024. Optical remote sensing of crop biophysical and biochemical parameters: An overview of advances in sensor technologies and machine learning algorithms for precision agriculture. *Computers and Electronics in Agriculture*, 218, p.108730.



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Khoshakhlagh, A.H., Mohammadzadeh, M., Ghobakhloo, S., Cheng, H., Gruszecka-Kosowska, A. and Knight, J., 2024. Health risk assessment from inhalation exposure to indoor formaldehyde: a systematic review and meta-analysis. *Journal of Hazardous Materials*, p.134307.

Knight, J. and Abd Elbasit, M.A., 2024. Spatial and Temporal Patterns of Rainfall Erosivity in Southern Africa in Extreme Wet and Dry Years. *Atmosphere*, 15(11), p.1283.

Knight, J. and Bollati, I.M., 2024. rock climbing sites as locations for geoheritage and geoscience engagement in mountains. *Geology Today*, 40(6), pp.223-227.

Knight, J. and Evans, M., 2024. Flood dynamics on the upper Letaba River, South Africa, deduced from luminescence dating. *South African Geographical Journal*, 106(4), pp.423-445.

Knight, J. and Grab, S.W., 2024. Vulnerability of geoheritage sites in South Africa to climate change: Examples from the Eastern Cape Province. *Geomorphology*, 457, p.109246.

Knight, J., 2024. Nature-based solutions for coastal resilience in South Africa. *South African Geographical Journal*, 106(1), pp.21-50.

Knight, J., 2024. The Green Infrastructure of sandy coastlines: A Nature-Based Solution for mitigation of climate change risks. *Sustainability*, 16(3), p.1056.

Knight, J., Burningham, H., Madoc-Jones, J. and O'Driscoll, L., 2024. Controls on coastal sediment stratigraphy and morphodynamics in northwest Ireland. *Quaternary International*, 706, pp.7-20.

Knight, J., Evans, M. and Mugwabana, T., 2024. Sediment source areas and the role of floods in sediment mixing on the Letaba River, South Africa. *South African Geographical Journal*, 106(4), pp.368-398.

Mabuda, M.O., Shoko, C., Dube, T. and Mazvimavi, D., 2024. An analysis of the effects of changes in land use and land cover on runoff in the Luvuvhu catchment, South Africa. *Remote Sensing Applications: Society and Environment*, 33, p.101144.

Makobe, B., Mhangara, P., Gidey, E. and Kganyago, M., 2024. Monitoring the invasion of *Campuloclinium macrocephalum* (less) DC plants using a novel MaxEnt and machine learning ensemble in the Cradle Nature Reserve, South Africa. *Environmental Systems Research*, 13(1), p.24.



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### 2024/2025 List of Publications

Mangoro, N., Kubanza, N.S. and Simatele, M.D., 2024. Exploring wetland change in the Gauteng Province, South Africa. *Environmental Research*, 259, p.119520.

Manqele, N.M., Moolla, R. and Frost Ramsay, L., 2024. A Mid-Tier Approach to Estimating Durban's Port Marine Mobile Emissions: Gauging Air Quality Impacts in South Durban. *Atmosphere*, 15(10), p.1207.

Manqele, N.M., Moolla, R. and Ramsay, L.F., 2024. The health and economic impacts of exposure to marine mobile emissions from ships in Durban port, South Africa. *Atmospheric Environment: X*, 23, p.100277.

Manyakaidze, P., Musavengane, R. and Simatele, M., 2024. Groundwater development and management constraints in drought prone Chiredzi and Zvishavane Districts, Zimbabwe. *Climate Services*, 34, p.100467.

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Marinaki, A.M. and Fitchett, J.M., 2024. Classifying moisture sources associated with snowfall in the mountains of Lesotho. *Journal of Mountain Science*, 21(6), pp.1941-1953.

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Matyukira, C. and Mhangara, P., 2024. Advances in vegetation mapping through remote sensing and machine learning techniques: a scientometric review. *European Journal of Remote Sensing*, 57(1), p.2422330.

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### 2024/2025 List of Publications

Mbazima, S.J., Moolla, R. and Joseph, J.S., 2024. Release and health outcomes of exposure to chalk particles in classrooms: a systematic literature review. *International Journal of Environmental Health Research*, 34(10), pp.3515-3539.

Mhangara, P., Gidey, E. and Manjoo, R., 2024. Analysis of urban sprawl dynamics using machine learning, CA-Markov chain, and the Shannon entropy model: a case study in Mbombela City, South Africa. *Environmental Systems Research*, 13(1), p.17.

Mhangara, P., Sintayehu, E. and Manjoo, R., 2024. Analysis of Urban Sprawl Dynamics using machine learning CA-Markov Chain and the Shannon Entropy model a case study in Mbombela City South Africa.

Mlalazi, N., Chimuka, L. and Simatele, M.D., 2024. Synergistic effect of compost and moringa leaf extract biostimulants on the remediation of gold mine tailings using *chrysopogon zizanioides*. *Scientific African*, 26, p.e02358.

Mlambo, L., Adam, E., Shekede, M.D. and Odindi, J., 2024. The influence of biophysical characteristics on elephant space use in an African savanna. *Ecological Informatics*, 82, p.102724.

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### 2024/2025 List of Publications

Mqingwana, P., Shoko, C., Gxokwe, S. and Dube, T., 2024. Monitoring and assessing the effectiveness of the biological control implemented to address the invasion of water hyacinth (*Eichhornia crassipes*) in Hartbeespoort Dam, South Africa. *Remote Sensing Applications: Society and Environment*, 36, p.101295.

Mtyobila, V. and Shoko, C. 2024. Modelling *lantana camara* invasion in the Inkomati catchment in Mpumalang , South Africa . *Physics and Chemistry of the Earth*, 135: 1-8

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Mushawemhuka, W., Fitchett, J.M. and Hoogendoorn, G., 2024. Climate change and adaptation in the Zimbabwean nature-based tourism industry. *Anatolia*, 35(1), pp.97-108.

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Netsianda, A., Mhangara, P. and Gidey, E., 2024. Grassland biome fragmentation analysis using sentinel-2 images and support vector machine learning model in South Africa. *Discover Sustainability*, 5(1), pp.1-15.

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Okunola, O.H., Simatele, M.D. and Daramola, O., 2024. To live or to die: cultural and social factors influencing flood preparedness in Nigerian cities. *African Geographical Review*, 43(4), pp.573-587.

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Pillay Gonzalez, S., 2024. Latent State Infrastructure and Financialisation: Insight from a Post-Apartheid Public Pension Fund and Real Estate. *Antipode*, 56(2), pp.603-627.

Prinsloo, A.S. and Fitchett, J.M., 2024. Quantifying climatic suitability for tourism in Southwest Indian Ocean Tropical Islands: Applying the Holiday Climate Index to Réunion Island. *International Journal of Biometeorology*, 68(9), pp.1717-1728.

Rabbani, F.Q., Wafer, A. and Moolla, R., 2024, October. Social Networks within the City: Remaking the City through Movement and Collecting Materials in Johannesburg, South Africa. In *Urban Forum* (pp. 1-17). Dordrecht: Springer Netherlands.

Rielly, A., Dahms-Verster, S. and Greenfield, R., 2024. Biomarker responses in *Danio rerio* following an acute exposure (96 h) to e-waste leachate. *Ecotoxicology*, 33(8), pp.859-874.

Roshan, G., Ghanghermeh, A., Sarli, R. and Grab, S.W., 2024. Environmental impacts of shifts in surface urban heat island, emissions, and nighttime light during the Russia-Ukraine war in Ukrainian cities. *Environmental Science and Pollution Research*, 31(32), pp.45246-45263.

Roshan, G., Sarli, R., Grab, S.W., Nasiri, V. and Socha, J., 2024. Elevational trends of land surface temperature in the Alborz Mountains within the context of global warming. *Stochastic Environmental Research and Risk Assessment*, 38(5), pp.1721-1739.

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.

Sheridan, C., 2024. Water insecurity in Johannesburg (and beyond?). *South African Journal of Science*, 120(11/12), pp.1-3

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Sibiya, S.S., Mhangara, P. and Shikwambana, L., 2024. Seasonal and trend variation of methane concentration over two provinces of South Africa using Sentinel-5p data. *Environmental Monitoring and Assessment*, 196(8), p.713.



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### 2024/2025 List of Publications

Sigopi, M., Shoko, C. and Dube, T., 2024. Advancements in remote sensing technologies for accurate monitoring and management of surface water resources in Africa: an overview, limitations, and future directions. *Geocarto International*, 39(1), p.2347935.

Smith, J., Sheridan, C., van Dyk, L. and Harding, K.G., 2024. Classification of grasses in the Mpumalanga coalfields region and assessment of their suitability to increase the pH of acid mine drainage, for potential use in passive acid mine drainage remediation systems. *Ecological Engineering*, 209, p.107424.

Thatcher, A., Biyela, P., Field, T.L., Hildebrandt, D., Kidd, M., Nadan, S., Petrik, L., Sheridan, C. and Topkin, J., 2024. Contextualising urban sanitation solutions through complex systems thinking: A case study of the South African sanitation system. *Journal of Cleaner Production*, p.142084.

Thomas, G., Sheridan, C. and Holm, P.E., 2024. Co-cropping vetiver grass and legume for the phytoremediation of an acid mine drainage (AMD) impacted soil. *Environmental Pollution*, 341, p.122873.

Thomas, G., Sheridan, C. and Holm, P.E., 2024. Rare earth element (REE) and arsenic mobility in acid mine drainage (AMD) impacted soil. *Geoderma*, 443, p.116817.



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### Masters and Doctoral Graduations and Supervisors

Student	Degree	Title	Supervisor (s)
Nomfundo Mngadi	MSc Environmental Science CWRR	The impact of the uMsunduzi River Catchment on eutrophication in the Inanda Dam.	
Sibusiso Manxiwana	MSc Environmental Science CWRR	A decade of faecal pollution: Assessing faecal pollution trends in major South African Rivers.	Dr S Dahms-Verster
Takalani Malivhadza	MSc Environmental Science CWRR	The perceptions of Moretele residents of small-scale agriculture: the case of Ga-Moeka village in the North-West Province.	
Zahn van Wyngaard	MSc Environmental Sciences CWRR	The effects of land use change on water quality in the Uper Berg and Breede River Catchments. Western Cape, South Africa.	
Amelia Dikotla	MSc GIS and Remote Sensing CWRR	Assessing the performance of different machine learning algorithms in detecting different parameters	Dr C Shoko & Dr S Dahms-Verster
Bongayi Kudoma	MSc GIS and Remote Sensing CWRR	Assessing the spatiotemporal variability of urban heat island and thermal comfort in greater Francistown city.	
Cathrine Muriva-Makombe	MSc GIS and Remote Sensing CWRR	Integrating Landsat and Sentinel-2 for the assessment of rangelands vegetation dynamics.	Dr C Shoko
Funani Tshivhashe	MSc GIS and Remote Sensing CWRR	Monitoring and evaluating urban landuse cover change using machine learning classification techniques: a case study of Polokwane municipality.	
Kebarileng Molefe	MSc GIS and Remote Sensing CWRR	GIS-based location-allocation modelling of school accessibility in the Bojanala Platinum District Municipality, South Africa.	



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### Masters and Doctoral Graduations and Supervisors

Student	Degree	Title	Supervisor (s)
Logan Woolfson	MSc GIS and Remote Sensing CWRR	Detecting disease in citrus trees using multispectral UAC data and deep learning algorithm.	
Molebogeng Mmangoedi	MSc GIS and Remote Sensing CWRR	Investigating the impact of land reform policy on land use and land cover changes in Ngaka Modiri Molema district of the Northwest Province.	
Muchelene Peplouw	MSc GIS and Remote Sensing CWRR	Spatiotemporal characteristics of surface water in Sua Pan, Botswana, using Earth observation data: 1992-2022.	
Phemelo Mahamuza	MSc GIS and Remote Sensing CWRR	Assessing and comparing the performance of different machine learning regression algorithms in predicting Chlorophyll-a concentration in the Vaal Dam, Gauteng.	
Precious Makaringe	MSc GIS and Remote Sensing CWRR	Modelling for rainwater harvesting structures using geospatial techniques.	
Sambulisiwe Maseko	MSc GIS and Remote Sensing CWRR	Watershed delineation and runoff estimation using GIS and HEC-HMS model in the Gwayi Catchment, Zimbabwe.	
Samukelisiwe Ngubane	MSc GIS and Remote Sensing CWRR	Modelling and analysis of COVID-19 outbreak at micro-levels using spatial autocorrelation: Case of eThekweni.	
Theophilis Asante-Manteaw	MSc GIS and Remote Sensing CWRR	GIS-Based dynamic flood modelling along Jukskei River, Johannesburg, South Africa.	
Wendy Sorour	MSc GIS and Remote Sensing CWRR	Determining the spatial variations of evapotranspiration rates in a semi-arid region.	Dr C Shoko



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### Masters and Doctoral Graduations and Supervisors

Student	Degree	Title	Supervisor (s)
Aaliyah Mohamed	MSc Geography (research)	The influence of climate change on the speed of movement of tropical cyclones in the South Indian Ocean.	Prof J Fitchett
Charné Meyer	MSc Geography (research)	The extent of the inclusion and consideration of extreme climate events and health in South African policies; the case of eThekweni.	Prof J Fitchett & Dr C Wright (SAMRC)
Daniella Kristensen	MSc Geography (research)	Holiday Climate Index: Applicability and Suitability in the South African Context.	Prof J Fitchett
John Gilfillan	MSc Geography (research)	Does public participation facilitate the development of a comprehensive social impact assessment process in South Africa? A study of the Carolina town community in Mpumalanga.	Prof S Grab
Muhammad Luqman	MSc Geography (research)	Development of a GIS system for mining data management and integration for proactive decision making.	
Mukhtaar Waja	MSc Geography (research)	Exploring perceived relationships between weather, climate and mental health: From the perspective of healthcare practitioners	Prof J Fitchett
Nicholas Stylianou	MSc Geography (research)	Bayesian belief networks and score-based network construction for intrate and nitrite level prediction in water quality testing of the Vaal River in South Africa.	
Ntswaki Mokhethi	MSc Geography (research)	An assessment of beauty waste management practices: a case study of Rustenberg beauty salons.	



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### Masters and Doctoral Graduations and Supervisors

Student	Degree	Title	Supervisor (s)
Puseletso Mofokeng	MSc Geography (research)	Study of the influence of gust fronts and topographical features in the development of severe thunderstorms across South Africa.	
Rachel Haupt	MSc Geography (research)	Optically stimulated luminescence dating of Kalundu and Urewe tradition ceramics.	Prof M Evans
Vasti de Jager	MSc Geography (research)	Assessment of disposal methods of construction and demolition waste: a case-study of south-eastern industrial and residential areas in Johannesburg, South Africa.	Dr S Kubanza
Zandizoloyiso Mnguni	MSc Geography (research)	Assessing the validity of the exclusion of night-time thermal comfort in tourism climate indices.	Prof J Fitchett
Altayeb Obaid	PhD Geography	Capability of multi-remote sensing satellite data in detecting and monitoring cyanobacteria and algal blooms in the Vaal Dam, South Africa.	Prof E Adam & Prof K Ali
Charles Matyukira	PhD Geography	Multi-temporal analysis of land cover and evaluation of landscape influences on vegetation dynamics using remote sensing data and machine learning in a karst environment: a case study of the Cradle Nature Reserve.	Prof P Mhangara
Gregory Landwehr	PhD Geography	The wind energy potential of South Africa's Eastern Cape Province in a changing climate.	Prof F Engelbrecht & Dr C Lennard
Mohammed Altoom	PhD Geography	Mapping and monitoring the impact of climate variability on rainfed agriculture in Semiarid North Darfur, Sudan.	Prof E Adam



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### Masters and Doctoral Graduations and Supervisors

Student	Degree	Title	Supervisor (s)
Mohamed Khalfan Mohamed	PhD Geography	Remote sensing-based assessment of mangrove forest changes and related regulatory frameworks for the sustainability and conservation of coastal ecosystems in Zanzibar Island, Tanzania-East Africa.	Prof E Adam
Motshwaedi Sepeng	PhD Geography	Constructed wetlands: additional heterogenous configurations on existing infrastructures in Silvertown, Alexandra Township, Johannesburg.	Prof A Thatcher (Psychology)
Mthulisi Ngwenya	PhD Geography	Modelling to determine optimal water availability scenarios under drought conditions in agricultural environments: a study of the Western Cape Province, South Africa.	Prof M Simatele
Ngonidzashe Mangoro	PhD Geography	A geographical analysis of the impacts of construction and demolition waste on wetland functionality in South Africa: a study of Gauteng Province.	Prof M Simatele & Dr S Kubanza
Nkosinathi Michael Manqele	PhD Geography	Evaluating methodologies for monitoring the impact of marine mobile emissions, for use as air quality assessment tools, in South Africa".	Dr. R Moolla & Prof L Frost Ramsay (UKZN)
Ogone Motlogeloa	PhD Geography	Assessing the inter-annual and inter-seasonal climate-induced variation in case load of respiratory disease.	Prof J Fitchett & Dr N Sweijd (CSIR)
Steriah Simooya	PhD Geography	Assessing the impacts of urbanisation on land use change in Zambia: a study of Lusaka urban district.	Prof M Simatele & Dr S Kubanza
Yingisani Chabalala	PhD Geography	Integrating Sentinel-1/2 and machine learning models for mapping fruit tree species in heterogenous landscapes of Limpopo	Prof E Adam



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## UNIVERSITY OF THE WITWATERSRAND

### Information of Interest for Prospective Students

#### **Undergraduate**

We offer both a BA and a BSc in Geography and in Environmental Studies, and a BSc in Geospatial Sciences.

#### **Postgraduate**

We offer research masters (by dissertation) and PhDs in Geography. We also have two taught masters programmes of interest – MSc in GIS and Remote Sensing, and MSc in Environmental Science.

### Link to Departmental Webpage

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



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## UNIVERSITY OF VENDA

Department of Geography and Environmental Studies

Dr. FM Murungweni

Geographers' Specialisations Within the Department

Name (Title, Initials, Surname)	Area of Specialisation
Dr FM Murungweni (HOD)	Geoinformation and RS applications, Ecological restoration & Climate change impacts.
Dr. NV Mudau	Development geography & Waste management
Dr. MJ Mokgoebo	Biogeography and conservation, Water quality & Disaster risk reduction
Dr. KH Netshisaulu	Population and demography, GIS and Remote Sensing, Climate adaptation
Dr. F Dondofema	GIS, Remote sensing, Spatial Ecology, Terrestrial Ecology, Aquatic Ecology, Water Resources Management, Rangeland ecology
Ms. MG Maponya	Geoinformatics (applied in ecology, agriculture, and disaster risk reduction).
Dr. E Kori	Geomorphology (soil erosion, geodiversity, and geomorphological mapping).



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## UNIVERSITY OF VENDA

### Geographers' Specialisations Within the Department

Name (Title, Initials, Surname)	Area of specialisation
Dr. T Nelwamondo	Economic geography (focusing on the spatial distribution of economic activities, informal activities, and their impacts on the environment), Tourism geography (sustainable tourism and development), Settlement geography (Dynamics within both rural and urban settlement systems).
Mr. MS Muthige	Climate Sciences
Ms. M Tshikosi	GIS, Remote sensing, Project management and data analysis, GIS software's integration, Demographic and population

### Exciting Departmental News

Kagiso Moteke MSc student under the supervision of Dr FM Murungweni and Dr F Dondofema, won a Water Research Commission Award for Best Student Poster Presentation at the National Wetlands Indaba in 2024. Her Masters's research is on "Evaluating the effectiveness of different satellite sensors for monitoring the land use/land cover of a subtropical Ramsar site in Limpopo Province, South Africa."



[https://www.linkedin.com/search/results/all/?fetchDeterministicClustersOnly=true&heroEntityKey=urn%3Ali%3Afsd\\_profile%3AACoAACxbId4B3bzbhq49pCeH9Wv6AIRxqsSuaMU&keywords=kagiso%20moteke&origin=RICH\\_QUERY\\_SUGGESTION&position=0&searchId=e722307b-e2ee-4db3-bcb2-cd0429be6818&sid=Yu%40&spellCorrectionEnabled=false](https://www.linkedin.com/search/results/all/?fetchDeterministicClustersOnly=true&heroEntityKey=urn%3Ali%3Afsd_profile%3AACoAACxbId4B3bzbhq49pCeH9Wv6AIRxqsSuaMU&keywords=kagiso%20moteke&origin=RICH_QUERY_SUGGESTION&position=0&searchId=e722307b-e2ee-4db3-bcb2-cd0429be6818&sid=Yu%40&spellCorrectionEnabled=false)



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## UNIVERSITY OF VENDA

### Exciting Departmental News

Dr. KH Netshisaulu graduated with her PhD in Science with Geography and Environmental Management from the North-West University, Potchefstroom campus, in May 2024. Her topic was 'A climate resilient livelihoods framework for communities in Vhembe District, South Africa', supervised by Professors Hector Chikoore and James Chakwizira. Dr Dondofema graduated with his PhD in Environmental Science from the University of Venda during the spring graduation of 2024. Research Topic - Modelling the spatial distributions and water use of Mauritius thorn (*Caesalpinia decapetala*) and river red gum (*Eucalyptus camaldulensis*) using remote sensing and geographic information system techniques in the Vhembe Biosphere Reserve. The following research grants were awarded to Dr. Dondofema:

- Co-Project Leader - Assessment of Patterns, Distributions and Impacts of Microplastics Between Terrestrial and Aquatic Ecosystems. National Research Foundation Thuthuka Grant. 2022–2025.
- Co-Investigator - Innovative Exploitation of Underutilized Finger Millet Genetic Diversity to Improve Household Livelihoods in Northern Semi-Arid Areas in South Africa 2024–2026.
- Co-Investigator – From Mountains to Confluence – Plastic Pollution along the Luvuvhu and Crocodile River Systems in the time of Climate Change 2024–2026.

From December 10 to December 22, 2024, Dr F. Dondofema, a senior technician, visited Beihang University (Beijing and Hangzhou Campuses). His visit was to receive training on a computer program to utilise data generated from satellite information installed at the experimental farm. He also engaged in collaborative research on the BeiDou Satellite Navigation System and Remote Sensing Applications, part of the China-Africa Joint Laboratory initiative. This collaboration will include the exchange of students and staff.

Dr. MJ Mokgoebo and Dr. T Nelwamondo received 30-year-long service awards, while Dr. Murungweni received a 10-year service award from the University of Venda in December 2024



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### 2024/2025 List of Publications

**Netshisaulu, K.H., Chikoore, H., Chakwizira, J. and Kom, Z., 2025.** Sustainable Livelihood Options Adopted by Rural Communities in Response to Climate Change Dynamics: A Case Study Approach in Vhembe District, South Africa. *Sustainability*, 17(3), 1284.

**Mutshekwa, T., Mulaudzi, F., Maiyana, V.P., Mofu, L., Munyai, L.F. and Murungweni, F.M., 2025.** Atmospheric deposition of microplastics in urban, rural, forest environments: A case study of Thulamela Local Municipality. *PloS one*, 20(3), p.e0313840.

**Munyai, L.F., Liphadzi, T., Mutshekwa, T., Mutoti, M.I., Mofu, L. and Murungweni, F.M., 2024.** Water and Sediment Chemistry as Drivers of Macroinvertebrates and Fish Assemblages in Littoral Zones of Subtropical Reservoirs. *Water*, 16(1), p.42

**Mungenge, C.P., Wasserman, R.J., Cuthbert, R.N., Dondofema, F. and Dalu, T., 2024.** Salinisation of arid temporary pools alters crustacean hatching success but not phenology dynamics. *Hydrobiologia*, 851(1), pp.181-193. <https://doi.org/10.1007/s10750-023-05325-0>

**Keates, C., Wasserman, R.J., Conradie, W., Dondofema, F., Munyai, L., Riddell, E. and Dalu, T., 2024.** Frogs of the Makuleke Contractual Park, northern Kruger National Park. *Koedoe*, 66(1), pp.1-9.

**Dalu, T., Chiloane, C., Dondofema, F., Dube, T., Leshaba, E.N., Masina, F.M. and Munyai, L.F., 2024.** Application of remote sensing techniques to monitor climate variability effects on groundwater-dependent ecosystems. *Remote Sensing of Climate*, pp.133-157.

**Bassey, O.J., Gumbo, J.R., Mujuru, M., Adeyemi, A. and Dondofema, F., 2024.** Comparative analysis of cyanotoxins in fishponds in Nigeria and South Africa. *Microbiology Research*, 15(2), pp.447-456.

**Munyai, L.F., Mugwedi, L., Wasserman, R.J., Dondofema, F., Riddell, E., Keates, C. and Dalu, T., 2024.** Water and sediment chemistry drivers of chlorophyll-a dynamics within a Ramsar declared floodplain pan wetland system. *Environmental Science and Pollution Research*, 31(19), pp.28549-28563.

**Mpakairi, K.S., Muthivhi, F.F., Dondofema, F., Munyai, L.F. and Dalu, T., 2024.** Chlorophyll-a unveiled: unlocking reservoir insights through remote sensing in a subtropical reservoir. *Environmental Monitoring and Assessment*, 196(4), p.401.



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# SSAG NEWS 2024/25

SOCIETY OF SOUTH AFRICAN GEOGRAPHERS

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### 2024/2025 List of Publications

Mutshekwa, T.T., Mugwedi, L., Wasserman, R.J., **Dondofema, F.**, Cuthbert, R. and Dalu, T., 2024. Aquatic macroinvertebrate community colonisation and succession in macadamia orchard and communal area reservoirs: a case study of Luvuvhu River valley, South Africa. *Water SA*, 52(2), pp.137-147.

Mashamba, R., Dalu, M.T., Cuthbert, R.N., **Dondofema, F.** and Dalu, T., 2024. Human perceptions and reports of pro-environmental behaviours in the context of plastic pollution in rural communities within a UNESCO subtropical biosphere reserve. *Journal of Environmental Studies and Sciences*, pp.1-13.

Bute, T.F., Wyness, A., Wasserman, R.J., **Dondofema, F.**, Keates, C. and Dalu, T., 2024. Microbial community and extracellular polymeric substance dynamics in arid-zone temporary pan ecosystems. *Science of The Total Environment*, 932, p.173059.

Mabadahanye, K., Dalu, M.T., Munyai, L.F., **Dondofema, F.** and Dalu, T., 2024. Institutional arrangements and roles within water and wastewater treatments in the Vhembe District, South Africa. *Sustainability*, 16(19), p.8362

Dalu, T., Themba, S.T., **Dondofema, F.**, Wu, N. and Munyai, L.F., 2024. Assessing microplastic abundances in freshwater fishes in a subtropical African reservoir. *Discover Sustainability*, 5(1), p.360.

Dalu, T., Themba, S.T., **Dondofema, F.**, Wu, N. and Munyai, L.F., 2024. Assessing microplastic abundances in freshwater fishes in a subtropical African reservoir. *Discover Sustainability*, 5(1), p.360.

Themba, N.N., **Dondofema, F.**, Cuthbert, R.N., Munyai, L.F. and Dalu, T., 2024. Abundance and distribution of microplastics in benthic sediments and Cladocera taxa in a subtropical Austral reservoir. *Integrated Environmental Assessment and Management*, 20(6), pp.2256-2270.

Mutanga SS, Mantlana BK, Mudavanhu S, **Muthige MS**, Skhosana FV, Lumsden T, Naidoo S, Thambiran T, John J. Implementation of water energy food-health nexus in a climate constrained world: a review for South Africa. *Frontiers in Environmental Science*. 2024 Mar 25;12:1307972.



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### Masters and Doctoral Graduations and Supervisors

Mudzanani RT, Supervisors: Dr FM Murungweni (Main) and Prof H Chikoore (Co-supervisor), Title: Assessing climatic and non-climatic impacts on smallholder maize production around Mutshedzi Dam, Limpopo Province

Dr. Dondofema Co-supervised an MSc student who graduated during the September 2024 graduation: Daswa. S.S., Research Topic: GIS-based spatio-temporal analysis of crime prevalence in Thulamela Local Municipality.

Dr. NV Mudau co-supervised a PhD student who graduated during the September 2024 graduation: Masipa MJ, Thesis title: Indigenous solid waste management practices for a sustainable environment: a case of Thalahane village, Limpopo Province South Africa.

### Link to Departmental Webpage

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



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SCHOOL OF EDUCATION, UNIVERSITY OF KWAZULU-NATAL

Dr Gavin Heath

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Highlights (Presenting at Two International Conferences & One National Symposium)

Presenter	Year	Title	Conference	Place	Date
Gavin Heath	2024	Climate Change in the Drakensberg Mountain Range: Observations and Adaptations of South African Mountain Guides  DOI:10.13140/RG.2.2.10616.25609	American Meteorological Society 21st Conference on Mountain Meteorology	Boise, USA	22-26 July 2024 (virtual)
Gavin Heath	2024	An assessment of the relationship between recreationists, wildlife and climate change in the uKhahlamba-Drakensberg Park  DOI:10.13140/RG.2.2.32789.54242	International Geographical Congress	Dublin, Ireland	25-30 August 2024
Gavin Heath	2024	The sense of place in the Cederberg poems of Stephen Watson  DOI:10.13140/RG.2.2.27145.15209	Heritage Association of South Africa 23rd Annual Symposium	Clarens, South Africa	22-24 October 2024



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## Highlights

Another highlight was being granted a year-long sabbatical and doing fieldwork in Italy (the Abruzzo and Molise regions) after the conference in Dublin. The fieldwork was to do with environmental challenges escaped Allied POWs faced in the two regions. Thanks to the Italian Alpine Club, the fieldwork proceeded very well and I even ended up being interviewed by a regional TV station.

## List of Publications & Graduated Students From 2024:

Heath, G., & McKay, T. J. M. (2024). Communication as power in South Africa: the proposed Northern KwaZulu-Natal cableway. *South African Geographical Journal*, 107(2), 135–152.

<https://doi.org/10.1080/03736245.2024.2349302>

Naidoo, S. and Heath, G. (2024). Representation of Climate Change Adaptation in Geography Education Modules at the University of KwaZulu-Natal (UKZN). *The Journal of Geography Education in Africa*, 7(1), 41-61.

<https://doi.org/10.46622/jogea.v7i1.4991>

Heath, G. (2024). The sense of place in the Cederberg poems of Stephen Watson. *English Academy Review*, 41(2), 103-112.

<https://doi.org/10.1080/10131752.2024.2365555>



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