

STUDENT SUPERVISION RECORD

Graduated or accepted

Doctoral

- Mndela, M. (PhD).** The extent of bush encroachment and its effects on the ecosystem services in Central Mixed Bushveld rangelands in North-West Province, South Africa. The University of Pretoria, Main Supervisor: Dr Casper Ignacio Madakadze (Graduated, August 2020).
- Svinurai, W. (PhD).** Use of remote sensing data in native grass growth modelling to estimate range productivity and animal performance in a tree-shrub savanna in southern Zimbabwe. The University of Pretoria. Main supervisor: Prof. A. Hassen, Dr. Tesfemariam (Graduated, August 2020)
- Masemola, C. (PhD).** Mapping invasive species using remote sensing data, University of South Africa, Main Supervisor, Prof. M. Cho (Graduated October 2019)
- Madonsela S. (PhD).** Spectral diversity for species composition mapping, University of KwaZulu Natal, Main supervisors, Prof. O. Mutanga and Prof. Moses Cho (Graduated, September 2018)
- Mushia N. (PhD),** Stockpiled soil quality assessment and its impact on vegetation using laboratory-based and field spectroscopy, University of Limpopo, co-supervised by Prof. Kingsley Ayisi (Graduated, April 2018).
- Ndou NN (PhD),** Integrated Remote Sensing-GIS Methodology for estimating groundwater trends in the Upper Molopo river catchment, South Africa, University of North West, Main Supervisor: Prof. L.G. Palamuleni (Graduated, April, 2017).

MSc

- Khomola T.J. (MSc).** Fire encroachment into the karoo National Park: remote sensing and modelling approach, main supervisor: Dr. Lesego Kgomo, University of South Africa (*Accepted with revision*, March 2021)
- Zwane, P (MSc).** Precision Agriculture: leaf water content using remote sensing. Co-supervisors: Prof. K.K. Ayisi, Dr. Ramudzuli (*Under examination*, March 2021)
- Mmathapelo Semela (MSc).** Mapping and modelling above-ground biomass in mountainous terrain using multi-source remote sensing and environmental data, University of the Free State, supervisor: Prof. Samuel Adelabu (completed, February 2021)
- Nzuza, P. (MSc).** Assessing land degradation in the Lepellane catchment using remote sensing, GIS and WOCAT, University of KwaZulu Natal, co-supervisors, Dr. J. Mwenge-Kahinda, Dr. J. Odindi. (*Completed*, August 2020)
- De Agrela, R.J. (MSc),** The relationship between multispectral satellite-derived vegetation indices and forage quantity and quality indicators in Mountain Zebra National Park, University of Stellenbosch, supervised by Dr. Emiliano Raffrenato, co-supervised Dr. Angela Gaylard (*Graduated*, December 2019)
- Mashao, F.(MSc).** The estimation and mapping of grass biomass as an indicator of rangeland condition using Landsat 8 data, University of Limpopo, co-supervised by Mr. Inos Dhau (*Graduated, September 2018*)
- Mahlayeye, M. (MSc),** Remote sensing assessment of natural resources change using parametric and no-parametric classifiers in Vhembe District, University of Pretoria, Main supervisor: Dr. Joel Botai (*Graduated, April 2018*)
- Jakavula M. (MSc),** Explaining woodland forest expansion in Amathole mountain range in Eastern Cape, South Africa, University of Pretoria, Main Supervisor: Prof. Paxie WC Chirwa, other co-supervisor, Prof. Moses A. Cho (*Graduated, September 2017*)
- Davhula A. (MSc),** Assessment of vegetation productivity in the Mfolozi catchment using leaf area index (LAI) derived from remote sensing imagery, University of Kwazulu Natal. Main Supervisor: Prof. Onesimo Mutanga, other co-supervisor, Dr. Moses Cho (*Graduated, 2016*)
- Manyasi E.K. (MSc),** Assessment of foliar nitrogen as an indicator of vegetation stress using Remote Sensing: The case study of Waterberg region, Limpopo Province. University of South Africa, Started 2012 and co-supervised by Mr. Maarten Jordaan (*Graduated, 2016*).
- Adedayo A.A. (MSc),** Mapping and assessing impervious surface areas for the City of Tshwane using remote sensing images, University of Pretoria, started 2012. Main supervisor: Dr. Joel Botai (*Graduated, 2015*)

Maya, M. (MSc), Application of hyperspectral remote sensing to assess contamination associated with gold mining in the Witwatersrand Gold Basin, South Africa, Wits University, started 2011, Main Supervisor: Dr. H. Hlanganani (*Graduated, 2014*)

Dlamini L. (2011-2013) (MSc). Determination and Mapping of Standardized Precipitation Index using Remote Sensing, University of Witwatersrand, started 2011, Main supervisor: Dr John Ndiritu (*Graduated-2013*)

Honours

Nkosinathi Sibanyoni. BSc Honours: Land Use and Land Cover Change around Protected Areas, University of Pretoria: Supervisor: Dr. Philemon Tsele

Gouws C. 2012. BSc Honours: Analysis of expansive soils using remote sensing to the North-West of Pretoria, University of Pretoria, (*Graduated, 2012*).

In progress

PhD

David Sengani. Integration of readily available medium-resolution optical sensors with Synthetic Aperture Radar (SAR) imagery to detect and map land degradation and sustainable land management in Eastern Karoo, Semi-Arid, South Africa, University of Pretoria, Main supervisor: Prof. Emma Archer

Ernest Daemane. Spatio-temporal assessment of plant communities using conventional vegetation field- based and remote sensing techniques in the grassland biome, University of the Free State, Supervisor: Prof. Samuel Adelabu

Qabaqaba Mcebisi. Investigate methods for large scale mapping of woody cover, changes and uncertainties using optical and radar imagery, University of Pretoria, supervisors: Drs. Laven Naidoo, Philemon Tsele and Prof. Moses Cho.

Madodomzi Mafanya. Synergy of GIS and remote sensing methods for monitoring the impact of invasive alien plants and assessment of the efficacy of control interventions at a national level, Supervisors: Dr. Philemon Tsele and Dr. Tsungai Dzengeya (SANBI)

Kablan A. Effossou. Land acquisition of agribusiness in the highlands of North-West Cameroon, University of Pretoria, Supervisor: Prof. Moses Cho

Reuben Sebego. Spatial analysis of factors affecting the distribution of *Colophospermum mopane* in eastern Botswana, University of Pretoria, Dr. Philemon Tsele

Mziwanda Mangwana. Drivers of bush encroachment at multiple scales, University of Pretoria, supervisors: Dr. Casper Madagadze, and Dr. Julius Tjelele.

Ngoako Lucas Letsoalo. Farmer strategies to combat land degradation and drought within the different farming systems and biomes of South Africa, University of Western Cape, Supervisors: Julius Tjelele

Henry Nuwarinda. Competing claims on natural resources: biophysical, socioeconomic and remote sensing approach, University of Free State, co-supervisor: Dr. Samuel Adelabu

Katlego Mashiane. Grass species-specific nutrients estimation using remote sensing, co-supervisor: University of the Free State, co-supervisor: Dr. Samuel Adelabu

Adeniyi A. Adeyemi. Assessment of the impact of impervious surface areas on surface temperature variability in Pretoria, South Africa using remote sensing data and in situ measurements, University of South Africa, co-supervisor: Prof. Moses A. Cho.

Patricia D. Sebola. Assessment of biological and economic productivity and spatial distribution of soil nutrients of no till and intercropped maize under diverse aridity zones, University of Limpopo, Main Supervisors: Prof. K. Ayisi and Prof S. van Passel.

MSc

Simphiwe W. Mdluli. Understanding synthetic aperture radar sensitivity to bush encroachment and woody structure changes using LiDAR time series, University of Pretoria, supervisors: Drs. Laven Naidoo, Philemon Tsele.

Charity Tseka. Estimation of grass nutrients using Sentinel-2 data, University of Pretoria, co-supervisor: Dr. Philemon Tsele

Modibe Rachamose. The effect of disturbances on woody plant encroachment at Loskop farm, South Africa. University of Pretoria. Supervisors: Dr. Julius Tjelele, Dr. Philemon Tsele

Adolf Malatji. Mapping of tillage practices using Sentinel-2 and supervised machine learning algorithms in South Africa, University of Pretoria, Supervisor: Dr. Philemon Tsele

Ngcolisi Nasiphi. Application of Remote Sensing in estimating grass quality (leaf nitrogen concentration) using Sentinel-2 data sets, University of Pretoria, co-Supervisor: Dr. Philemon Tsele

Wongaletu Silwana. Inversion of radiative transfer model (PROSAIL) in estimating leaf chlorophyll and nitrogen as indicators of rangeland quality, University of Pretoria, Supervisor: Dr. Philemon Tsele.

Honours

Phumzile Masupyo (BSc honours), Integrating optical data and SAR for monitoring and mapping woody vegetation cover change in semi-arid savannas, University of Pretoria, Supervisors: Dr. Philemon Tsele, Mcebisi Qabaqaba, Dr. Laven Naidoo

Itumeleng Ngwatwane (BSc honours), Assessing the impact of conversion of natural vegetation to impervious surface areas in Tshwane using Landsat 8 imagery. University of Pretoria, Supervisor: Dr. Philemon Tsele

Afika Singano (BSc Honours). Assessing the relationship between long-term vegetation and temperature changes using NDVI and meteorological data in the Waterberg region, University of Pretoria, Supervisor: Dr. Philemon Tsele