

CIMERA

DSTI-NRF CIMERA
Centre of Excellence for
Integrated Mineral and Energy
Resource Analysis



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DSTI-NRF Centre of Excellence for Integrated Mineral and Energy Resource Analysis (CIMERA) is hosted by the Department of Geology at the University of Johannesburg (UJ), and co-hosted by the School of Geosciences at the University of the Witwatersrand (Wits).

DSTI-NRF CIMERA was launched in 2014 under the Centre of Excellence (CoE) initiative of the National Research Foundation (NRF), a division of the South African Department of Science, Technology and Innovation (DSTI). CoEs are strategic national assets that concentrate research excellence, capacity and resources in order to enhance the pursuit of research excellence and capacity development.

Who is DSTI-NRF CIMERA?

We are an academic research unit facilitating scholarships and research training through collaborative partnerships in geosciences. Our mission is to provide equal opportunities to Geoscience postgraduate students and academic staff at South African universities, enabling relevant geoscience research and to broaden skill sets. Outcomes driven research is grounded on partnerships and teamwork, advancing academic excellence, geoscientific inquiry, and impactful geoscience research.



UNIVERSITY OF THE
WITWATERSRAND,
JOHANNESBURG

DSTI-NRF CIMERA PARTNERSHIPS

DSTI-NRF CIMERA has established a diverse, collaborative, and enabling environment for advanced research in mineral and energy resources, and geoscience for society. The Centre brings together leading academic, postdoctoral and postgraduate geoscientists from across South African universities (Cape Town, Fort Hare, Free State, Johannesburg, Limpopo, Pretoria, Rhodes, Stellenbosch, KwaZulu-Natal, Venda, Western Cape, and Wits). International collaborations extend to the Helmholtz Institute Freiberg for Resource Technology in Germany and University of Patras in Greece. These partnerships are further strengthened through Memoranda of Understanding with the Council for Geoscience, Anglo American, and other stakeholders. CIMERA continues to explore new strategic partnerships to further enhance its research impact.

OUR RESEARCH EXPERTISE

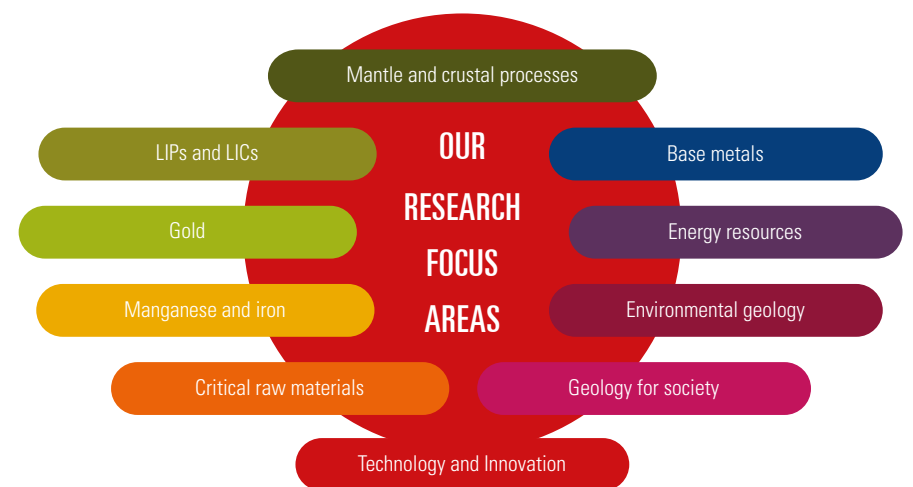
Through our extensive consortium network of geoscientists, DSTI-NRF CIMERA has expertise in many facets of economic geology and geology for society. This includes iron and manganese ore bodies; kimberlite and diamonds; early earth mineral systems; paleogeographic continental reconstructions (paleomagnetic studies); the Bushveld Complex and other large igneous provinces; Witwatersrand and other gold deposits; base and critical metals (including rare earth elements (REE)); base metal deposits; coal, shale gas, oil; advanced analytical equipment; environmental geosciences; as well as geoscience for society. Involvement in the ICDP projects enables the expansion of the understanding of the early Earth's evolution. Completed large co-funded research projects include the Karoo Research Initiative project (KARIN), the Agouron GOE biomarker drilling project, the CHARPHITE (ERA-MIN) project, the South African Au and PGM Resource Atlas (SAMERDI), the EU-funded H2020 AISiCal project, the ICDP Base Moodies project, and more recently the ICDP Bushveld Drilling Project. Multi-university research is ongoing for the Kunene Complex project in collaboration with Anglo American.

Our Impact Since 2015



RESEARCH FOCUS AREAS

Purpose: to guide research direction and provide a forum for networking and discussions within a commodity thrust.



Exploration geomaterials, geophysics, geochemistry and small-scale mining opportunities form part of many of the above focus areas, as does analytical development, 4IR big data processing, and training in the geosciences.

Research is guided by the Steering Committee and the Scientific Advisory Committee, with input from collaborating partners, industry, parastatals, Government, and international organisations.





science, technology & innovation

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Geoscience training and research is imperative in the South African (and global) domain. Modern societies and technology are underpinned by geological raw materials. DSTI-NRF CIMERA provides an enabling platform for strengthening and expanding a scientifically competent population. Outreach projects in groundwater exploration, geoheritage, and geoscience education are supported. Advanced analytical facilities hosted by South African universities are supported, enabling access to world-class facilities. Collaborators participate in and organise local and international conferences, workshops, seminars, and colloquia. Our annual DSTI-NRF CIMERA Research Colloquium is a highlight in our academic calendar; refer to our website for previous and upcoming events.

DSTI-NRF CIMERA is uniquely positioned to address geoscience research needs. We continue to seek synergistic collaborative partnerships along the economic geology value chain, promoting postgraduate education, impacting exploration and resource assessment, policy, and the circular economy, and earth stewardship.

We encourage industry and funding to explore flexible collaborative projects and to support our prestigious scholarship initiative.



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www.cimera.co.za



STRUCTURE AND CONTACT

Directorate
Prof NJ Wagner (UJ) Director
Prof SJ Webb (Wits) Co-Director

CoE Manager
Ms Busisiwe Maphalala (UJ)

Administrative Staff
Ms Viwe Koti
Administrative Assistant (UJ)
Ms Zintle Daraza
Administrative Assistant (Wits)

Marketing and Events Coordinator
Ms Itumeleng Modisha (UJ)

Contact Details
Department of Geology
C1 Lab (3rd Floor)
Auckland Park Kingsway Campus
University of Johannesburg
cimera@uj.ac.za | +27 11 559 4728
www.cimera.co.za

