



ELIZABETH THERON

PROFESSOR IN CIVIL ENGINEERING

CONTACT

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- Central University of Technology, Free State
- www.civilabcut.co.za

PROFESSIONAL PROFILE

A dedicated academic with over 35 years of experience in Civil Engineering, specialising in geotechnical engineering and soil mechanics. A recognised leader in the field, holding a comprehensive record of research, teaching, and community engagement, with a specific focus on foundation problems related to heaving clays and infrastructure maintenance. Recipient of multiple prestigious awards and a registered Professional Engineering Technologist with the Engineering Council of South Africa (ECSA).



EDUCATION

- PhD: Geography** (Urban Water) | University of the Free State (2002)
Thesis: The impact of socio-economic and human behavioral factors on the water of the Fontein Spruit catchment.
- Magister Technologiae:** Engineering (Civil) | Technikon Free State (1997)
- National Higher Diploma:** Engineering (Civil) | Technikon Free State (1988)
- National Diploma:** Engineering (Civil) | Technikon Free State (1986)



PROFESSIONAL REGISTRATIONS

- Professional Engineering Technologist (Pr. Tech Eng.)** | Engineering Council of South Africa (ECSA). Registration Number: 200470002.
- Council Member** | Engineering Council of South Africa (ECSA; 2020-2024).



EMPLOYMENT HISTORY

- Central University of Technology, Free State**
 - Professor: Department of Civil Engineering (2025 - Present)
 - Associate Professor: Department of Civil Engineering (2017 – 2024)
 - Senior Lecturer: Department of Civil Engineering (2006 – 2016)
 - Director: School of Civil Engineering & Built Environment (2001 – 2005)
- Technikon Free State**
 - Lecturer: Department of Civil Engineering (1989 – 2000)
- Vorster, Van der Westhuizen & Partners**
 - Engineering Technician (1987 – 1988)



TEACHING & SUPERVISION

- Teaching Expertise**
 - Undergraduate & Honours:** Soil Mechanics, Geotechnical Engineering I & II, Project Management IV, Research Methodology.
 - Curriculum Development:** Played a pivotal role in the development of the B.Eng.Tech and Dip.Eng.Tech programmes and quality assurance for ECSA accreditation.
 - Postgraduate Supervision**
 - Completed:** Successfully promoted 3 Doctoral degrees and supervised/co-supervised 12 Master's degrees (including 6 Cum Laude).
 - Current:** Supervising 3 Doctoral students.

ELIZABETH THERON

ASSOCIATE PROFESSOR IN CIVIL ENGINEERING



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RESEARCH HIGHLIGHTS & AWARDS

Awards

Sanral National Awards Finalist: Community-Based Project (2024).
VC's Excellence Award: Community Engagement, CUT (2022).
J.E. Jennings Award: Awarded by the South African Institution of Civil Engineering (SAICE) for three consecutive years (2017, 2018, 2019) for outstanding contributions to geotechnical engineering.

Selected External Funding

Pothole Eradication Programme (2023–2026): Grant from the Department of Community Safety, Roads and Transport.

Standardisation of Soil Index Parameters (2021–2023): Funded by the Royal Academy of Engineering.

Integrated Design Procedures for Foundations (2012–2017): Funded by the National Research Foundation (NRF).

SELECTED PUBLICATIONS

Fondjo, A. A., Vanapalli, S. K., Ray, R. P., and Theron, E. (2025).

"Relationships between Shear Strength Parameters with Mineralogy and Index Properties of Compacted, Unsaturated Soils", *Studia Geotechnica et Mechanica*, vol. 47, no. 1, pp. 65–88, 2025. doi:10.2478/sgem-2025-0006.

Bester, D.M., Theron, E., Stott, P.R., & Snyman, J. (2024). A comparative study of real-world vs. small-scale mat foundations on expansive clay soils. *Civil Engineering and Architecture*, 12(5), 3402–3413.

Stott, P.R., Smith, Z. & Theron, E. (2023). Alleviating the problem of cracking of masonry buildings on expansive clay by building flexibility into the masonry. *Journal of the South African Institution of Civil Engineering*, 65(1), 36–44.

Thulo, L., Emuze, F. & Theron, E. (2023). A conceptual quality improvement protocol for Free State public works projects. *Acta Structilia*, 30(1), 1–33.

SERVICE & COMMUNITY ENGAGEMENT

Adjudicator: SANRAL (SAICE) National Awards (2020–2025) and SAICE Barry van Wyk Award (2019 & 2023).

External Moderator/Examiner: Tshwane University of Technology (TUT), University of Cape Town (UCT), and Durban University of Technology (DUT).

Committee Service: Member of the Departmental, Faculty Committees and CUT Senate (2017–Present).