



Communication and Marketing Department
Isebe loThungelwano neNtengiso
Kommunikasie en Bemakingsdepartement

Private Bag X3, Rondebosch 7701, South Africa
Welgelegen House, Chapel Road Extension, Rosebank, Cape Town
Tel: +27 (0) 21 650 5427/5428/5674 Fax: +27 (0) 21 650 5628

www.uct.ac.za

10 June 2025

Using technology ethically can support equitable land reform and spatial justice – UCT lecture



Professor Jennifer Whittal

Photo: Lerato Maduna

University of Cape Town's (UCT) Professor Jennifer Whittal's recent inaugural lecture was not just an academic exercise but a deeply personal reflection on how land boundaries – both literal and conceptual – shape identity, power and opportunity.

Titled: "Beyond Boundaries", the lecture wove together centuries of colonial legacy, cutting-edge technology, and African legal pluralism to illustrate the complex realities that continue to define land administration and social equity today.

"We must ask ourselves whether our systems serve the people they are meant to serve," said Professor Whittal, a professor in the [Department of Civil Engineering](#).

Using a rich tapestry of historical documents, geographic information systems (GIS) and fieldwork, Professor Whittal traced the origins of Cape Town's southern suburbs back to the

17th century. Remarkably, some of the original land boundaries, beacons and survey marks laid down by early Dutch settlers like Pieter Potter remain intact today. One such beacon, known as "Beacon F", rests at the corner of a wall and a tree, silently marking a boundary set over 350 years ago.

The ancient markers tell a story of exclusion, colonial conquest and the erasure of indigenous land rights. "In South Africa, boundaries are not just physical features. They have shaped our physical and social landscapes," Whittal noted.

In 1659, settlers planted a hedge of wild almond trees as a formal racial boundary to separate themselves from indigenous Khoikhoi communities, denying them access to vital resources.

Through geomatics – the science of measuring and managing spatial data – Whittal and her students have reconstructed the geographic DNA of Cape Town's colonial past. One remarkable discovery was the Hen and Chickens rock formation near Wynberg Hill, believed to be South Africa's oldest surviving pedestrian beacon. Early surveyors used it as a vantage point to lay out farms.

"Geomatics can build a more just society. By acknowledging history and using technology ethically, we can support equitable land reform and spatial justice," she revealed.

The lecture also examined contemporary challenges, such as defining the high-water mark, the legally contested boundary between public coastal land and private beachfront property.

Legal pluralism a framework for justice

The lecture also explored the concept of legal pluralism, where multiple legal systems coexist within one country. South Africa's Constitution, for instance, recognises African customary law as equal in status to the state legal system. This legal pluralism challenges the dominance of Western legal frameworks that traditionally view land rights through an individualistic, static lens.

By contrast, many African communities understand land ownership as a living, intergenerational stewardship, embedded in family lineages and collective responsibility.

"Alternative normative legal systems, such as customary, indigenous, informal and religious law, continue to thrive across the continent. They are resilient, adaptive and deeply embedded in social practices and institutions."

"In truly plural legal contexts, it is a fallacy to claim these systems exist in parallel. Their relationships are complex, overlapping and often nested," she noted. Understanding how people choose between legal systems in different scenarios is key to designing more inclusive and functional land administration interventions.

This perspective is politically urgent, especially in efforts to decolonise land administration and broaden access to land rights for the poor and marginalised.

Investing in Africa's future

Whittal's career exemplifies a commitment to building capacity and leadership in surveying and geomatics across Africa.

She mentors young African surveyors through annual programmes and serves on the International Federation of Surveyors (FIG) Foundation Board, helping secure scholarships and opportunities for emerging professionals from developing countries. Looking forward, she will chair the technical committee for the FIG Congress 2026, to be held in Cape Town – a major global event uniting experts across surveying, construction economics and geoinformation sciences.

Whittal shared candid reflections on the challenges shaping her academic journey, including balancing early motherhood, heavy teaching loads, a cancer diagnosis, and a divorce. These personal experiences deepened her empathy and commitment to research that foregrounds people's realities.

Her co-authorship of a new, comprehensive textbook on South African cadastral systems, an overdue update since the last one written in 1973, is an essential resource for students, practitioners, and policymakers.

The lecture concluded with a reminder that geomatics is not neutral. While it provides the tools to measure and map land, it must be to empower informal settlements, support equitable urban planning and challenge exclusionary systems rooted in colonial history.

Story by: Myolisi Gophe, UCT News

Ends

Issued by: UCT Communication and Marketing Department

Thami Nkwanyane

Media Liaison and Monitoring Officer

Communication and Marketing Department

University of Cape Town

Rondebosch

Tel: (021) 650 5672

Cell: (072) 563 9500

Email: thami.nkwanyane@uct.ac.za

Website: www.uct.ac.za