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Young innovator to represent UCT at Falling Walls Lab finals in Germany



Doctoral candidate Emma Horn

Photo: Lerato Maduna/UCT

University of Cape Town (UCT) PhD candidate Emma Horn is set to contest at the [Falling Walls Lab](#) world finals in Berlin in November. Horn's 'green' bio-tile innovation won the South African finals of the competition. Her research into bio-tiles is set to shake up the fossil-fuel-reliant ceramic tile and construction industries.

UCT recently hosted the Cape Town Falling Walls Lab with other universities winners competing for first place, which include a R10 000 purse. The Friedrich Naumann Foundation for Freedom (South Africa) sponsored the local competition and event. The top three spots were won by UCT, with PhD candidates Michelle Mukonyora in second place and Julian Kanjere in third place.

The Falling Walls Lab is an international network and forum for young innovators in science, technology, medicine and other fields. It includes top academic institutions from more than 60 countries and is a platform for creative thinkers to introduce their "breaking walls" ideas to the public. The link is to the Berlin Wall, which fell in 1989 after separating East and West Berlin for nearly 28 years.

Horn's winning presentation, "Breaking the Wall of Sustainable Tile Manufacturing", underpins her goal of developing innovative, energy-efficient tile production methods that have a minimal environmental impact. That three-minute presentation also clinched the opportunity of a lifetime for the young Future Water Institute-based researcher.

Horn hopes to repeat her win at the world finals during the Falling Walls Science Summit in Berlin from 7 to 9 November and is relishing the opportunity to meet 100 other finalists. Each will present their three-minute pitches to an audience of their peers and a high-calibre jury from academia, business and the public.

"Winning the Cape Town Falling Walls Lab means I'm one step closer towards getting my research realised and making tangible change," said Horn. "Making a positive impact has been my life goal since I can remember. It still hasn't quite sunk in that I'll be going to Berlin for the first time and meeting some of the most innovative minds of my generation. This is a phenomenal opportunity."

Among those who will be rooting for her are Associate Professor Dyllon Randall of the Department of Civil Engineering and Dr Rob Huddy from UCT's Research Office, her co-supervisors.

Commenting on Horn's win Associate Professor Randall said, "I think Emma's work is really pushing the boundaries of sustainable building manufacturing and I see so much potential with this technology. We have only scratched the surface."

Jury chairperson and UCT's director of environmental sustainability, Manfred Braune, added, "Falling Walls is an excellent opportunity for these young innovative minds to present their ground-breaking (and wall-breaking) research in a challenging context where they are required to translate their research into a three-minute pitch, which is really hard. Well done to all the participants this year who presented some fascinating work, and all the best to Emma for her presentation in Berlin."

Other great ideas

Second-place winner Mukonyora's presentation, "Breaking the Wall of Gestational Diabetes", focused on diabetes diagnosed for the first time during pregnancy. Mukonyora's goal is to develop a point-of-care diagnostic tool that predicts the onset of gestational diabetes by tracking metabolic changes in the mother's hair during gestation.

She too was chuffed by the opportunity to present her work at this prestigious forum. "This opportunity has given me more confidence to pursue my goal of developing a point-of-care hair diagnostic tool for gestational diabetes. Low-resource communities are often overlooked when developing innovative diagnostic tools. My goal is to change that, and to use cutting-edge research to better serve our communities."

Third-place winner Julian Kanjere's idea, "Breaking the Wall of Smallholder Farmer Poverty", has won several other competitions. The low-technology FoodPrint Farmer Platform chatbot gives these farmers access to real-time information about markets and services.

"Falling Walls is easily the most diverse and interdisciplinary pitch competition I have participated in," he said. "As an innovator, I am always seeking out opportunities to network, put my ideas out there and get some feedback, all of which Falling Walls provided. Although I did not emerge as the overall winner, I am excited that Emma will represent UCT in Berlin at the finals. Thank you to the Friedrich Naumann Foundation for Freedom (South Africa) and UCT for hosting the event."

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