Communication and Marketing Department
Isebe loThungelwano neNtengiso
Kommunikasie en Bemarkingsdepartement

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

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UCT civil engineering student wins top national award for water project on waterless urinals

With Cape Town experiencing the worst drought in over a century and facing the possibility of Day Zero, a University of Cape Town (UCT) Civil Engineering graduate has won a prestigious award for a project on waterless urinals.

The competition attracted entries from South Africa's top universities and is described as a showcase of the country's best emerging engineers, with the winners reflecting a "new breed of engineer": technically adept and proficient in written and verbal communication.

Tinashe Chipako won the 2018 South African Institution of Civil Engineering (SAICE) National Investigative Project Showdown for South African universities. His project investigated the "feasibility of implementing waterless urinals on UCT's upper campus".

Chipako explained: "Unsurprisingly, it was quite surreal to have conversations with highly regarded personalities in the South African civil engineering community, and I'm truly grateful to have been awarded the opportunity. I'd like to thank the entire Department of Civil Engineering at UCT for the unparalleled support I've been given throughout my studies."

The competition attracts the cream of the country's civil engineering students who present their research projects to an audience and panel of judges.

Chipako, who graduated cum laude, was part of Dr Dyllon Randall's newly established urine research field in the Department of Civil Engineering. He was among a quartet of final-year students working on urine research projects. One of these, Craig Flannagan's fertiliser-from-urine project, won the Greenovate Award in 2017.

The students' assignments demonstrated the benefits of introducing waterless urinals that not only save vast quantities of water, but recover valuable, sustainable resources from what Randall calls 'liquid gold'.

Chipako added: “Being exposed to events such as the SAICE National IP Showdown, and further having the honour to represent UCT, was an amazing experience. Having the community take interest in your research is always a plus as well!”

His research made five key findings:

- First, that UCT uses enough water to fill about eight Olympic-size swimming pools to flush urinals each year.
- Second, that UCT purchases four tons of fertiliser each year, but seven tons of fertiliser could be made from urine collected on campus.
- Third, that 79% of the 500 survey respondents said they would support food grown using urine-derived fertiliser.
- Fourth, that 96% of the respondents said they would support waterless urinals because they conserve water.
- Fifth, that the cheapest option for saving water in urinals would be to simply reduce the number of flushes. (This has already been achieved by placing signage in several bathrooms asking users to not flush).

Chipako scored the highest course mark for his research work (92%) last year as well as the highest poster mark (87%).

Notes to editors

Civil engineering graduate Tinashe Chipako, winner of the 2018 South African Institution of Civil Engineering National Investigative Project Showdown.

To view the “Recycled urine is liquid gold” video click: **here.**

END

Issued by: UCT Communication and Marketing Department

Nombuso Shabalala
Head: Media Liaison

Communication and Marketing Department
University of Cape Town
Rondebosch
Tel: (021) 650 4190
Cell: (076) 473 5882
Email: nombuso.shabalala@uct.ac.za
Website: www.uct.ac.za