

# Soapbox Science



Visitors to Cape Town's Victoria & Alfred Waterfront may have been a little surprised to find a bunch of women in white coats standing on their 'soapboxes'\* and holding forth on a range of scientific topics, but they soon gathered round to hear what they had to say. The occasion was the first Soapbox Science event to be held in South Africa, and it took place on a sunny day on the last Saturday in September, when the waterfront was abuzz with people.

Soapbox Science started in 2011 in London – inspired by Speakers' Corner in Hyde Park – but has now spread around the world, with 42 events held in 2019. It's a novel platform for promoting women scientists and the science they do, while also fulfilling a public outreach function. Events take place over three hours, with each group of speakers taking to their soapboxes for an hour to share their science and interact with bystanders in a fun but informative way.

The Cape Town event was coordinated by Dr Lucia Marchetti, a postdoctoral astronomy researcher in a joint position at the University of Cape Town (UCT) and the University of the Western Cape (UWC). She participated in a Soapbox Science event in London in 2015, and enjoyed it so much that she wanted to share the experience. Nine speakers took part on the day, drawn from more than 50 applications from around South Africa.

Dr Edina Amponsah-Dacosta, a postdoctoral researcher at UCT, used a creative roadmap to show what a vaccinologist does, how vaccines are made, and the long and winding road in bringing a new vaccine to market, involving diverse stakeholders. "I discussed how vaccines work to protect individuals and communities from contracting potentially fatal diseases, and how this has led to a remarkable decline in the burden of several of these diseases – such as polio and measles – globally, over time. My core message, however, was on the importance of viewing the decision to vaccinate as a matter of social solidarity or ubuntu." She explained that this is because the more people are vaccinated, the better chance we have of reducing the spread of vaccine-preventable diseases, in so doing protecting the most vulnerable populations within our community from the devastating effects of these diseases.

\* A soapbox refers to a raised platform on which one stands to make a speech. The term originates from the days when speakers would elevate themselves to be seen in a crowd by standing on a wooden crate, previously used as packaging for transporting soap or other goods from the manufacturers. The term is also used in situations when someone expresses strong opinions about a particular subject. The concept was popularised at Hyde Park's Speakers' Corner, where people have gathered since the mid-1800s for speeches and debates on politics, religion and other topics.



Associate Professor Liesl Zühlke had plenty of volunteers for an on-the-spot echocardiogram. She is the Director of the Children's Heart Disease Research Unit and a Paediatric Cardiologist at Red Cross War Memorial Children's Hospital in Cape Town. "My research is to improve outcomes of children with heart disease by conducting family-centred and community-accountable research," she explains. "Congenital heart disease is the number one birth defect, the most common cause of death under a year in developed countries, and it kills more children than all childhood cancers combined. It is about 1:100 children and can be treated and managed in over 95% of cases, if diagnosed in time."



Edith Phalane, a PhD candidate at North-West University, gave new meaning to the expression 'wearing your heart on your sleeve' when she spoke about her research work on cardiovascular health, using an innovative method of display. "I shared with the public on how to keep your heart happy and keep the doctor away," she says, pointing out that it starts with living a healthy lifestyle by eating more fruits and vegetables, reducing fatty food and salt intake, avoiding tobacco use, as well as exercising. "It is important for the public to be informed and make the right choices," she says.



Mieke du Plessis, a PhD candidate at UCT, spoke on 'Bugs and brains: how your microbes influence your mind'.



Dr Kerry Warren, a postdoctoral researcher in archaeology at UCT, related her experiences as an 'underground astronaut', excavating out the fossil remains of *Homo naledi* in the Rising Star cave system in the Cradle of Humankind. She explained the challenges of reaching the Dinaledi Chamber, which requires crawling through narrow rock passages and negotiating a steeply sloping chute, and discussed the size and shape of hominin skulls, as well as what they reveal about intelligence, diet and locomotion.



Dr Natasha Ross from UWC's Department of Chemistry noted that her area of expertise is electroanalytical chemistry, and her research focuses on finding more cost-effective and efficient photovoltaic cells and lithium ion batteries. She highlighted the sustainability of renewable energy sources like solar and wind energy, as well as their role in meeting targets to reduce greenhouse gas emissions that contribute to climate change. She used a simple model to explain how photovoltaic cells in solar panels generate electricity.