



**delivered...**

# FALLING WALLS LAB VICTORIA

Monday, 16 August 2021

3.00pm – 4.30pm [AEST]

Register [here](#) to attend the live-stream event

# FALLING WALLS LAB

## JURY

**Laureate Professor Emeritus Andrew Holmes AC FAA FRS**

*Chair of Falling Walls Lab Victoria, The University of Melbourne;  
Immediate past-President of the Australian Academy of Science, and  
Inaugural **veski** innovation fellow*

**Dr Danielle Burns**

*Principal  
Phillips Ormonde Fitzpatrick*

**Ms Rohini Kappadath**

*General Manager  
Immigration Museum*

**Dr Selina Lo**

*Executive Director  
Australian Global Health Alliance*

**Ms Janice Munt**

*Board Director  
**Veski***

**Dr Fabio Spadi**

*Minister-Counsellor and Deputy Head for the European Union's  
Delegation to Australia*

**Mr Andrew Wear**

*Director, Economic Development & International  
City of Melbourne*

## PRESENTERS

- 1 Dr Mahdokht Shaibani, Monash University**  
*Breaking the wall of battery metal shortage*  
Dr Mahdokht Shaibani is an energy storage researcher, inventor, and solution provider at Monash University. She has expertise in materials synthesis, engineering, and scale-up for next-generation batteries, where five patents have been filed to date. She has a focus on the development of green energy storage solutions to fight climate change.
- 2 Dr Lars Esser, CSIRO**  
*Breaking the wall of the brain to cure brain cancers*  
Dr Lars Esser is a nanoscientist in the Voelcker Lab at Monash University and CSIRO where he develops new theranostic strategies to diagnose and treat brain cancers. He has a background in the development of nanoparticles for applications in diagnostics (MRI and PET) and drug delivery. Lars carried out his PhD at the Monash Institute of Pharmaceutical Sciences in Melbourne. Previously, he completed master's and bachelor's degrees in biomedical engineering at Eindhoven University of Technology in The Netherlands.
- 3 Dr Anushi Rajapaksa, Murdoch Children's Research Institute**  
*Breaking the wall of lifesaving vaccine and therapeutic access*  
Dr Anushi Rajapaksa holds combined degrees with a Bachelor of Science and Electrical and Computer Systems Engineering and a PhD in Biomedical Engineering. Anushi's PhD developed a new platform for "inhaled DNA vaccines", a breakthrough that earned her the Young Biomedical Engineer of the Year from Engineers Australia in 2010. She leads international multidisciplinary research projects and is an inventor of several new technologies for the most vulnerable children.
- 4 Ms Shammi Ferdousi, Deakin University**  
*Breaking the wall of costly energy storage*  
Ms Shammi Ferdousi is a material scientist with more than five years of research experience as a laboratory researcher in nanomaterials, electrochemistry and surface science. Currently completing a PhD in Material Science and Engineering at the Institute for Frontier Materials, Deakin University. Her research interest is battery materials, electrode preparation, electrolyte development and optimisation from laboratory to pilot scale and battery fabrication. She also has skills for developing nanomaterials by various inorganic synthesis methods.

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## 5 **Dr Kalim Kashif, Monash University**

### *Breaking the wall of premium conducting polymers*

Dr Kalim Kashif is a research fellow with the department of Chemical Engineering at Monash University. He earned his MPhil degree in Chemistry from Quaid-i-Azam University, Pakistan and has worked as a CERC Postdoctoral Fellow in Energy at CSIRO. Following his outstanding PhD at Monash University, he was awarded an ACAP postdoctoral position at Monash University. Recently, his innovation in the field of electrically conducting and electromagnetic shielding materials was selected in the Australian Defence Forces Pitchfest competition and an entrepreneurship program D.Start Ignite.

## 6 **Ms Nilakhi Poddar, University of Melbourne**

### *Breaking the wall of water insecurity*

Ms Nilakhi Poddar completed a Master of Biotechnology and Bioinformatics from La Trobe University in 2018. She has been undertaking a PhD candidature under A/Prof Megan Maher's supervision, first within the La Trobe Institute for Molecular Science, then from August 2019 at the University of Melbourne. Nilakhi has assisted the wider University through her role as a laboratory demonstrator and has excellent laboratory bench skills and expertise in a wide variety of modern research methodologies.

## 7 **Dr Saffron Bryant, RMIT University**

### *Breaking the wall of toxic cryopreservation*

Dr Saffron Bryant is a research fellow at RMIT University where she is investigating novel methods of cryopreservation. Saffron has experience in a variety of scientific disciplines, having gained her bachelor's degree in biomedical science, her PhD in chemistry, and currently working in a physics department. In 2019 she held a position as a research fellow at The University of Bath before returning to Australia in 2020. She is especially interested in applying her experience with neoteric solvents to health-related and real-world problems.

## 8 **Mr Ethan Grooby, Monash University**

### *Breaking the wall of newborn health monitoring*

Ethan is a joint PhD student at Monash University and University of British Columbia. His research focuses on accessible cardio-respiratory monitoring of newborns through digital stethoscopes and video cameras. Keen to progress his career in translation biomedical engineering research, Ethan has participated in various programs such as BioDesign Innovation, The Generator: StartUp Sprint, MedTech Actuator Origin and SPARK: Biomedical Innovation and Entrepreneurship Training Course. He is an active engineering ambassador for Melbourne University Biomedical Engineering Society.

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- 9 **Ms Deepa Prabhu, Swinburne University of Technology**  
*Breaking the wall of eye-hand-coordination training*  
Ms Deepa Prabhu is a Biomedical Engineer, co-founder of Novasense Biomedical, and inventor of Cue Sleeve, which is a motorised, wearable sleeve that provides motion guidance for people with vision impairment. She has significant industry experience having spent 10 years designing wearable and portable biomedical technologies for soldiers in the Department of Defence - DRDO in India. She is a current PhD student of Biomedical Engineering at Swinburne University of Technology, in the final stages of completion.

- 10 **Dr Scarlett Howard, Deakin University**  
*Breaking the wall of insect intelligence in conservation*  
Dr Scarlett Howard is an Alfred Deakin Postdoctoral Research Fellow in the Centre for Integrative Ecology at Deakin University, Australia. She examines the impacts of humans on native pollinator behaviour, distribution, and morphology. She also researches conceptual learning, neurobiology, and vision in bees. Scarlett was previously a postdoctoral research fellow at the University of Toulouse III in France working on the neurobiology of simple and complex learning in honeybees. Scarlett hopes to raise the profile of insects with the public through her research and community outreach activities.

## PARTNERS

