



Frontiers of Science Forum

Friday 25 March 2022

Concord Golf Club, 190 Majors Bay Road, Concord

Schedule

5.00 pm	Refreshments served	
5.55 pm	Dr Frederick Osman, MC, Welcome and Introductions	
6.00 pm –	Welcome by Dr Susan M Pond AM FRSN, President, RSNSW Welcome by Dr Nigel Lengkeek, President, RACI Welcome by Professor Michael Lerch, Chair, AIPNSW	
6.15 pm –	Hon Alister Henskens SC MP	
6.25 pm	Minister for Science, Innovation and Technology, Minister for Skills and Training	
6.30 pm –	Professor Andrea Morello	
6.55 pm	University of New South Wales, School of Electrical Engineering and Telecommunications – Building a Quantum Computing Lab from the Fundamental Constants of Nature	
7.00 pm –	Professor Chris Tisdell	
7.25 pm	University of New South Wales, School of Mathematics and Statistics – Beyond the Compass: Exploring Geometric Constructions via Circle Templates and a Straightedge	
10 min	Networking break	
7.35 pm –	Professor Dr Johannes le Coutre	
8.00 pm	University of New South Wales, School of Chemical Engineering – From Botanists and Butterflies to Populations and Planets	
8.05 pm –	Professor Martina Stenzel	
8.30 pm	University of New South Wales, School of Chemistry – Going small to make big impacts in medicine: nanomedicine	
8.35 pm –	Panel discussion and Q/A with	
9.25 pm	Ian Woolf (Diffusion Radio)	
9.30 pm	A vote of thanks and close	Dr Nigel Lengkeek (RACI) assisted by Dr Michael Lerch (AIP)

2022 FRONTIERS OF SCIENCE PRESENTERS

Professor Andrea Morello is the Scientia Professor of Quantum Engineering at UNSW Sydney (Australia), and a Fellow of the American Physical Society. He received his PhD from the University of Leiden in 2004, followed by a postdoc at the University of British Columbia. His group at UNSW has pioneered the use of donor spins for quantum information processing, demonstrating the first electron and nuclear spin qubits in silicon. For these contributions he received numerous awards, including the 2017 Landauer and Bennett Award for Quantum Computing. His interests further extend to quantum chaos, quantum foundations and quantum sensing.

Professor Chris Tisdell is an Honorary Professor of STEM & Digital Education at UQ (Brisbane). My significant and innovative contributions to the student experience have positively impacted millions of people around the world by exploring the challenges of scale, flexibility and personalized learning. For example, I lead Australia's earliest YouTube channel dedicated to learning mathematics, now in its thirteenth year of operation with more than 15 million views; and I have authored free etextbooks that have a global audience of more than 10 million readers. I am proud to collaborate with key partners within the education industry, ensuring continuous improvement and collaborative advantage therein.

Professor Johannes le Coutre joined the University of New South Wales (UNSW), Sydney in 2019 as a full Professor Food & Health. He is responsible for the UNSW Food program, and currently he is developing a broad research agenda on cellular agriculture. Johannes obtained a Ph.D. in Biophysics at the Max-Planck-Institute of Nutrition Physiology in Germany, where he identified intricate details of the reaction mechanism underlying light driven bacterial proton transport. With a Human Frontiers award, he went to the Howard Hughes Medical Institute at UCLA to investigate molecular mechanisms of membrane transport. In 2000 he was asked to build a research program on taste physiology at the Nestlé Research Center in Lausanne, Switzerland. His contribution and expertise have been pivotal in making the Nestlé work on taste perception and central integration internationally valued and recognized. From 2009 to 2017 le Coutre held a visiting Professorship at the University of Tokyo, where he has been involved with teaching and with a project on taste perception in the Elderly (Mikaku). Professor le Coutre is the founding Field Chief Editor for FRONTIERS in Nutrition, an open access journal by the Frontiers Media company.

Professor Martina Stenzel studied chemistry at the University of Bayreuth, Germany, before completing her PhD in 1999 at the Institute of Applied Macromolecular Chemistry, University of Stuttgart, Germany. She started as a postdoctoral fellow at UNSW in 1999 and is now a Scientia Professor in the School of Chemistry at UNSW as well as an ARC Laureate Fellow. Her research interest is focused on the synthesis of functional nanoparticles for drug delivery applications. Her team is working closely with medical researcher and together they develop new nanoparticles to improve the treatment of cancer. She is the editor in chief of Materials Horizons and currently serves on a range of editorial boards. She received a range of awards including the 2011 Le Fèvre Memorial Prize of the Australian Academy of Science.

