



Centre for Energy Technology  
**CET Research Day Program,**  
**12 November, 2020**

## Introduction

The CET's eighth annual Research Day, will mark the Centre's 10 year anniversary, and build on the success of last year's event, with a full day's program, divided into the following 3 sessions.

- Hydrogen – the fuel of the future
- Circular carbon economy
- Decarbonising heavy industry

Each session will have a guest speaker from industry, staff and student presentations and a panel session for Q&A. CET Research Day will continue to encourage research excellence by the award of annual prizes for PhD students and ECRs. Each PhD student in their second year or beyond is expected to bring a poster, as well as register for a virtual poster presentation.

Registration will begin at 8:45am in the Engineering Annexe. Morning tea, lunch and afternoon tea will be provided.

This event will be offered in hybrid mode, in the Horace Lamb Lecture theatre for the formal program, and the Engineering Annexe for breaks, and via Zoom.

Please register your virtual or actual attendance by Monday November 2. A Zoom link will be sent to those, who register to attend virtually.

Register at <https://www.eventbrite.com.au/e/centre-for-energy-technology-annual-research-day-2020-tickets-122509823179> with password of 'CET'.

## Objectives

The objectives for the CET Research Day are as follows:

- 1) **To foster innovation, quality and impact:** To promote the development of innovative and high-quality research that has a strong impact on technology, with strong potential to meet society's needs for reliable, affordable and sustainable energy;
- 2) **To inform research priorities:** To engage the members in refining research priorities and future directions in research and technology development;
- 3) **To foster multi-disciplinary research:** To engage researchers with different expertise and background to identify new opportunities to meet major local-global challenges, to generate new ideas and foster new collaborations;
- 4) **To foster informal interactions between researchers:** To prioritise time for discussion and the establishment of new collaborative partnerships;
- 5) **To provide training for post-graduate students and post-doctoral researchers:** To broaden the understanding of post-graduate students and increase their capacity to develop their own questions and ideas;
- 6) **To recognise significant contributions of members:** To award prizes for outstanding contributions to the CET and its objectives;
- 7) **To strengthen our team spirit:** To engender pride in our research activities and to promote social interactions where team members can interact informally.

**CET Research Day Program, Thursday November 12, 2020**  
Horace Lamb Lecture Theatre, Engineering Atrium and via Zoom

TOPIC	SPEAKER	TIME
Poster session Coffee		Engineering Atrium 9:00 – 9:30am
Welcome	Bassam	9:30 – 9:35am Horace Lamb Lecture Theatre
Director overview	Gus Nathan	9:35 – 10:00am

**Session 1: Hydrogen the fuel of the future**

<https://adelaide.zoom.us/j/89016969145?pwd=QUhHWldwMCs5bE96Q20yYjdLcjkwQT09> (Passcode 263602)

TOPIC	SPEAKER	TIME
<b>Chair: Prof Peter Ashman</b>		
Industry Perspective on Hydrogen Adaptation	Kristin Raman - AGIG	10:00 – 10:15am
Markets and Policy for a Hydrogen Economy	Liam Wagner and Mike Young – Uni of Adelaide	10:15 – 10:30am
Innovative Hydrogen Production Technology	Greg Metha – Uni of Adelaide	10:30 – 10:45am
Industrial Use and Utilisation of Hydrogen	Paul Medwell and Neil Smith – Uni of Adelaide	10:45 – 11:00am
Poster session: Reza Abdollahi; Nazgol Mehrabian, Ivan Yin, Huanyu Jin, Ketan Patel	Presentations of 2 minutes each	11:00 – 11:10am
Panel Discussion	Panel Discussion	11:10 – 11:50pm
Lunch	Lunch Virtual Poster session	Engineering Atrium 12:00 – 12:45pm

**Session 2: Circular carbon economy**

<https://adelaide.zoom.us/j/84221597287?pwd=V0VQN2NRMmlkQkVjNTVxcj9mZzFJdz09> (Passcode 879338)

TOPIC	SPEAKER	TIME
<b>Chair: Dr Yan Jiao</b>		
Targeting a lower carbon future	Ying Luo, Santos	12:45 – 1:00pm
Decarbonizing natural gas: Methane Pyrolysis	Mehdi Jafarian – Uni of Adelaide	1:00 – 1:15pm
Electrocatalytic reduction of CO <sub>2</sub> into useful fuels	Anthony Vasileff – Uni of Adelaide	1:15 – 1:30pm
The role of anaerobic digestion in the circular economy	Tara Hosseini – Uni of Adelaide	1:30 – 1:45pm
Poster session: Xing Zhi, Eyad Al Smadi, Charlie Chen, Sijia Fu	Presentations of 2 minutes each	1:45 – 1:55pm
Panel Discussion	Panel Discussion	1:55 – 2:35pm
Coffee	Coffee	Engineering Atrium

	Poster session	2:35 – 3:00pm
--	----------------	---------------

**Session 3: Decarbonising heavy industry**

<https://adelaide.zoom.us/j/82027997527?pwd=OVIMM0xrZE1xWWxERDZ1L1lheWk0dz09> (Passcode 715743)

TOPIC	SPEAKER	TIME
<b>Chair: Prof Bassam Dally</b>		
Overview of decarbonising heavy industry	Gus Nathan	3:00 – 3:15pm
Decarbonising cement and lime – an industrial perspective	Felicity Lloyd – Adelaide Brighton	3:15 – 3:30pm
Case study – options to electrify alumina calcination	Philip Ingenhoven	3:30 – 3:45pm
Hybrid energy systems for industry	Alfonso Chinnici	3:45 – 4:00pm
Poster session: Ahmad Seyfaee, Tse Chuen Tsai, Elham Alipour	Presentations of 2 minutes each	4:00 – 4:10pm
Panel Discussion		4:10 – 4:50pm
Prizes		4:50 – 4:55pm
Closing Comments	Susan Jeanes, Chair, CET Advisory Board and Gus Nathan	4:55 – 5:00pm