

WORKSHOP

Engineering & the World: Through the lens of engineering practice

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WORKSHOP MODE

The workshop will be facilitated **in-person**.

OVERVIEW OF WORKSHOP

Building on the vision for the future of engineering set out in the *Engineering 2035 Report* (ACED 2019), participants will contribute to the co-design of an emerging research agenda seeking to extend this vision beyond the classroom – into the world of engineering practice.

ACTIVITIES

Participants will engage in a structured and facilitated conversation on engineering practice with Professor of Practice Robert Care AM. With storytelling and visuals, the facilitators will guide participants through a line of questioning concerning 'why' and 'how' the way we practice engineering should evolve in response to changing contexts, circumstances, and societal needs. This will culminate in an ideation activity to generate research questions in response to the prompt: "how might the social-institutional features of engineering practice provide mechanisms to evolve engineering practice in response to societal needs?" Participants will consider mechanisms for reform and continuity, evolution and stability using a schema of the 'social building blocks of engineering practice'.

TARGET AUDIENCE

Actors in the engineering enterprise (education, research, practice) working towards engineering futures that address societal needs. No prior knowledge is assumed.

OUTCOMES

By developing an understanding of engineering practice, participants will identify opportunities to shape the future of the engineering enterprise, informing an emerging research agenda.

REFERENCES

Australian Council of Engineering Deans. (2019). *Engineering 2035 Report*.
<https://www.aced.edu.au/downloads/2021%20Engineering%20Change%20-%20The%20future%20of%20engineering%20education%20in%20Australia.pdf>

KEYWORDS

Engineering practice; engineering knowledge; societal needs

PRESENTERS' BACKGROUNDS

Charlotte Wang is a PhD candidate at UNSW investigating the role of engineering practice in socio-technological change, drawing on 8 years' professional experience in sustainable engineering practice.

Dr. Ruth Fisher is a Senior Lecturer at UNSW in an education focussed role. As a program coordinator she is preparing future engineers to tackle global challenges.

Prof. Robert Care AM is a Professor of Practice at UNSW, member of the Board of Engineering Excellence (ACT Government), and chair of RedR International and RedR Australia. He is a former Director in the Arup Group for 37 years, including as chair of Arup UK, Middle East and Africa, and chair of Arup Australasia. He was named Australian Professional Engineer of the Year in 2014.