



What's on in AAEE?

2021 Edition 1



- REES-AAEE2021 Conference
- AAEE2020 Conference
- AAEE 2020 Award winners
- AAEE 2020 HDR Symposium
- AAEE SIG Engineering Education for International Students
- AJEE – from the Editor
- From the Community – <summary> as well as resources and discussion from the Facebook group!

EVENT/INFORMATION/ETC:

REES – AAEE2021 Conference

The Research in Engineering Education Symposium (REES) – Australasian Association for Engineering Education (AAEE) 2021 is the first joint REES-AAEE Conference. The theme was recently announced at the AAEE 2020 annual conference as “Engineering Education Research Capability Development”. REES-AAEE 2021 welcomes papers and workshops on all topics in the field of engineering education, especially those aligned with the theme “Engineering Education Research Capability Development”.

REES-AAEE 2021 will be hosted by The University of Western Australia in Perth 5 – 9 December 2021, with [more information now available on the conference website](#).

This combined event will provide AAEE members with an excellent opportunity to network internationally and showcase the latest research in engineering education our community has to offer. REES is an international conference held every two years by the [Research in Engineering Education Network](#), an international community of scholars interested in conducting high quality work in, and advancing the field of, engineering education research. REES is widely recognised as the top engineering education research conference globally.

EVENT/INFORMATION/ETC:

AAEE2020 Conference

AAEE2020 drew together engineering educators, students, and affiliates from across Australasia and overseas. It was the first time the conference has been run online and was a great success, attracting 231 registered delegates and with many lively sessions. The online format significantly reduced cost of access and drew many new AAEE

participants as a result – including 49 student delegates! We are currently undertaking an evaluation of the event to understand the benefits and limitations of the online format as run in 2020, and what AAEE could do in future to maximise accessibility and value of future conferences in either face-to-face or online formats.

Full papers are now available for download at <https://www.aeee2020.com.au/program-with-papers/>. Full proceedings will also be available shortly.

EVENT/INFORMATION/ETC:

AAEE 2020 Award winners

Congratulations to the winners of the AAEE 2020 Awards:

ACED Award for Engineering Excellence: Keith Willey

Keith's significant international reputation and sustained contribution to and impact within the field is demonstrated through 19 keynote presentations, 90+ speaking and workshop engagements, publishing a 100+ peer-reviewed EER publications (34 in AAEE conferences and journal), facilitating the AAEE Research Winter School and representing Australasia on the governing board of the Research in Engineering Education Network (REEN). His work on self and peer assessment, flipped and collaborative learning has led to changes in practices across many disciplines, programs and institutions, evidenced by the SPARKPLUS resources he developed being used by staff at 50+ universities to enhance learning for 750,000+ students.

Award for Engineering Education Engagement: Cris Birzer, Nick Brown, Eva Cheng, Sarah Herkess, Beatrix Neville, Tanja Rosenqvist, Jeremy Smith, Alison Stoakley, Jennifer Turner

This team is behind the EWB Design Summits - a two-week immersive cross-cultural study-abroad programs that embed human-centred values and approaches in engineering, design, and technology. There has been over 1,500 students from 35 universities engaged with multiple stakeholders, including 32 Australian and three New Zealand universities, university students, academics, and dozens of local partner organisations. The engagement has resulted in approximately \$4,800,000 in student mobility funding and almost \$500,000 universities' administrative funding, much from consortia applications. Through engagement with these programs, universities across Australasia have produced graduates with greater global awareness, understanding of the implementation of engineering and technology within society, and stronger consideration of the social impacts of engineering. EWB Summits are raising the quality of engineering education across Australasia and redefining engineering as a human-centred profession.

Citation for Outstanding Early Career Contribution to Engineering Education: Nick Brown

Nick incorporates his industry experience into his teaching practice, sharing developing and delivering innovative teaching materials that empowers and inspires students to apply their skills for social justice and poverty alleviation. Nick's classes leverage and share his experiences as well as that of his colleagues and have students focused on developing professional skills through evidence based elements such as professional portfolios.

See the Upcoming Events section of this newsletter for AAE Awards Roadshow Online presentation dates from these Award winners – taking the roadshow to the information superhighway.

AAEE HDR Symposium

On Friday 04 December 2020, AAE held the inaugural AAE Higher Degree by Research (HDR) Symposium. The symposium was co-designed by two HDR students, Ashlee Pearson and Veronica Halupka, and two senior academics, Les Dawes and Olivera Marjanovic, with the direction shaped by input from the HDR contingent at the AAE 2019 Annual Conference. A symposium for students, guided and organised by students.

On the day 17 students from 4 countries (Australia, New Zealand, USA and Belgium) joined the Zoom call with dissertation topics covering engineering culture and identity, educational technology in engineering education, engineering in schools, transferable skills and competency development as well as engineering industry and practice. In small groups students shared their current dissertation work, exchanging feedback as well as networking with peers. The small groups were themed by dissertation topic and guided by expert mentors - Kacey Beddoes, Scott Daniel, Andrea Mazzurco, as well as Olivera and Les themselves.

Some key take aways included the value in connecting with other PhD students in engineering education, tips and tricks on undertaking specific analysis methods, and the importance of opportunities such as this for students to seek feedback and perspective from outside their supervisory team. We're looking forward to follow ups during the year and an improved offerings in 2021.



Participants at the 2020 AAE HDR symposium

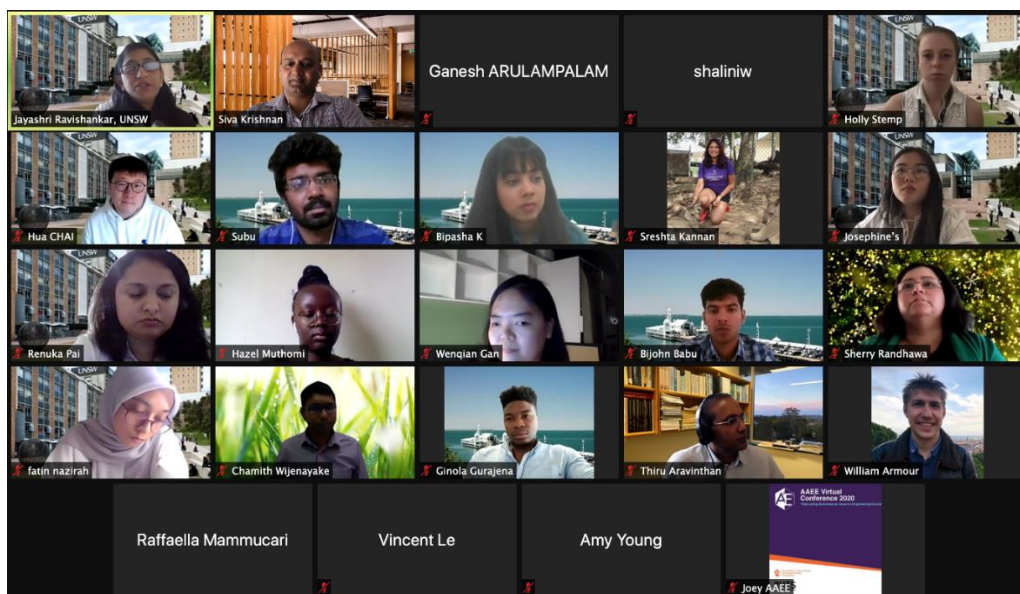
AAEE SIG Engineering Education for International Students

The AAEE Special Interest Group in Engineering Education for International Students, which was launched in August 2020, conducted their first workshop as part of the AAEE 2020 Conference. The workshop facilitated by Dr Siva Krishnan, Associate Professor Jayashri Ravishankar and Dr Chamith Wijenayake engaged participants from the AAEE community in assessing the effectiveness of learning experiences and support experiences of international students, with a view to identify useful strategies pre- and during the pandemic crisis.

International engineering students from three Australian institutions represented as panel members in this workshop. This diverse panel comprised of undergraduate, postgraduate coursework and Higher Degree by Research students as well as a recent graduate, articulated their experiences, challenges, opportunities at their respective institutions and in Australia.

Students reported facing many obstacles including language barriers, financial literacy, access to general health and housing. They also highlighted existing support, and the need for additional support, in relation to mental health and wellbeing, acclimatisation to a new culture, learning with people from different cultures and creating a sense of community at the same time as their academic orientation to a different learning and assessment system. For the participants, the voice of students themselves has been a highlight, reinforcing the mechanisms that we put in place to support our international students in our units and courses.

International and transnational education is a multifaceted challenge at the best of times. International students have been the backbone of growth of engineering schools in the last decade. With a growing demand for engineers in Australia and overseas, there is no better time to think more deeply about what international students want from Australian engineering degree courses. This Special Interest Group was established for sharing ideas and practice. If you are interested and haven't already, please join the AAEE Special Interest Group on Engineering Education for International Students.



Screenshot of participants at the AAEE2020 workshop

Australasian Journal of Engineering Education (AJEE)

From our Journal

Sally Male, Editor-in-Chief, *Australasian Journal of Engineering Education*

Thanks to major commitments of time and expertise from authors, reviewers, the Editorial team, and the publisher, and the support of the Australasian Association for Engineering Education and Engineers Australia, there is much to celebrate about the *Australasian Journal of Engineering Education*.

Best Paper Volume 24

Congratulations to **Cristian Birzer and Jaimee Hamilton** whose paper '[Humanitarian engineering education fieldwork and the risk of doing more harm than good](#)' was announced at AAEE 2020 as Best Paper in Volume 24. The Australasian Association for Engineering Education is supporting a new Best Paper Award, of open access to the best paper in the most recent volume, or to a paper by the first author of said paper in one of the following three volumes.

Open Call for Papers for a Special Issue *Disrupting Business as Usual*

Researchers are invited to submit full papers to the Journal for a special issue on *Disrupting Business as Usual*, the theme of the AAEE Virtual Conference 2020. Authors are welcome to interpret the theme widely. Papers may be original, or expanded from the Conference. The deadline for full papers is 15 April 2021. Paper must satisfy the Journal's [Aims and Scope](#).

Special Issue *Agents of Change*

The special issue of the *Australasian Journal of Engineering Education*, [Agents of Change](#), is now available. Papers are expanded from studies presented at the 30th AAEE Annual Conference hosted by University of Southern Queensland, 8-11 December, 2019.

Read about developing empathetic communication, interdisciplinary teamwork, active learning, interactions in laboratory classes and implementation of an institutional change model to develop scholarly approaches to teaching and learning in engineering education.

Editorial

- [Editorial](#)
Sally A. Male
Pages: 119-120 | DOI: 10.1080/22054952.2020.1865040
- **Research Articles**
[A qualitative study of how mental models impact engineering students' engagement with empathic communication exercises](#)
Nicola W. Sochacka , Kathryn M. Youngblood , Joachim Walther & Shari E. Miller
Pages: 121-132 | DOI: 10.1080/22054952.2020.1832726
- [Interdisciplinary teamwork artefacts and practices: a typology for promoting successful teamwork in engineering education](#)
Kacey Beddoes
Pages: 133-144 | DOI: 10.1080/22054952.2020.1836753
- [Student Resistance to active learning: do instructors \(mostly\) get it wrong?](#)

Madison E. Andrews , Matthew Graham , Michael Prince , Maura Borrego , Cynthia J. Finelli & Jenefer Husman
Pages: 142-154 | DOI: 10.1080/22054952.2020.1861771

- [Perceptions of the relative importance of student interactions for the attainment of engineering laboratory-learning outcomes](#)
Sulakshana Lal , Anthony D. Lucey , Euan D. Lindsay , David F. Treagust , Mauro Mocerino & Marjan G. Zadnik
Pages: 155-164 | DOI:10.1080/22054952.2020.1860363
- [Cultivating a culture of scholarly teaching and learning in a college of engineering: An ecological design approach](#)
Nicola W. Sochacka , Joachim Walther , John R. Morelock , Nathaniel J. Hunsu & Peter H. Carnell
Pages: 165-176 | DOI: 10.1080/22054952.2020.1864087

Advisory Committee Established

The Journal now has an [Advisory Committee](#). Members have been selected for their expertise and have committed to provide advice and to review manuscripts.
Congratulations to

Enda Crossin - *University of Canterbury | Te Whare Wānanga o Waitaha, New Zealand*

Andrea Goncher - *University of Florida, USA*

David Knight - *Virginia Tech, USA*

Melissa Marinelli - *University of Western Australia, Australia*

Andrea Mazzurco - *Swinburne University of Technology, Australia*

Grace Panther - *University of Nebraska - Lincoln, USA*

Jeremy Smith - *Australian National University, Australia*

Nicola Sochacka - *University of Georgia, USA*

James Trevelyan - *University of Western Australia, Australia*

Andrew Valentine - *University of Queensland, Australia*

Editorial Team Update

The Editorial Team has worked especially hard to secure reviews during 2020.

I thank outgoing Deputy Editor, Anne Gardner, and welcome Scott Daniel to the role of Deputy Editor.

From the Community

If you have an upcoming event, opportunity or resource you would like to be considered to be shared with the broader AAEE community via the newsletter - please either post it to the Facebook group or [submit it via the website portal](#) by the 1st of each month.

Australian 'Onlining' Teacher Experience Survey - Engineering Education

Our colleagues (Griffith University and QUT) are running a research project to support teachers in the online transition of teaching amidst covid19 and beyond. As you reflect on what you have learned in 2020, please can you take 10 minutes to also help with getting a full picture of the Australian context - Link here: <https://forms.gle/SYLSmjbEKpfoQy1i6>

INFORMATION:

Upcoming Events and Conferences

- AAEE Online Awards Roadshow – 11th February 12.30 – 1.30pm AEDT
Presentation from the ACED 2020 Award winner Keith Willey. [Please register here](#)

- AAE Online Awards Roadshow – 22nd February 12.30 – 1.30pm AEDT. Presentation from the team that won the AAE Engineering Education Engagement Award. [Please register here](#).
- AAE Online Awards Roadshow – 11th March 12.30 – 1.30pm AEDT. Presentation from Nick Brown who was awarded an AAE Citation [Please register here](#)
- SEFI Ethics Spring School 25-26 March 2021 - Experiencing Engineering Ethics Education: Reflections, evidence and perspectives on engineering ethics education in practice. [For more information see here](#).
- 28-30 April 2021 – Work-Integrated Learning New Zealand Conference (University of Waikato), ‘Work-Integrated Learning on the Rise 2.0’. [For more information see here](#).
- Weekly (typically announced Monday) – ONLINE - [IFEES Webinars](#)

INFORMATION:

2021 Conferences

With some abstracts due in the coming months, we’ve compiled a list of conferences already announced for 2021. For further information, please search and refer to the organisation’s website.

	Abstracts Due	Conference Dates and Location
Research in Engineering Education Symposium (REES) and AAE Annual Conference (2021)	30 April 2021	5 – 9 December 2021 Perth, Australia
IEEE World Engineering Education Conference (EDUNINE) – Hybrid mode conference	15 October 2020	14-17 March 2021 Guatemala, Guatemala
IEEE Global Engineering Education Conference (EDUCON)	05 October 2020	21 - 23 April 2021 Vienna, Austria
Canadian Engineering Education Association (CEEA-ACEG) Annual Conference	11 January 2021	20 - 23 June 2021 Chatlottesville, Canada
American Society for Engineering Education (ASEE) Annual Conference	12 October 2020	27 - 30 June 2021 California, USA
Students, Transitions, Achievement, Retention & Success (STARS) Conference	26 March 2021	5 – 9 July 2021 Online
Higher Education Research and Development Society of Australia (HERDSA) Annual Conference	22 January 2021	7 – 10 July 2021 Brisbane, Australia
SEFI Annual Conference	16 March 2021	13 – 16 September 2021 Berlin, Germany
Frontiers in Education (FIE) Conference (Engineering and Computing Education)	25 January 2021	13 – 16 October 2021 Lincoln, USA

OPPORTUNITIES:

Opportunities

REEN - the Research in Engineering Education Network is calling for an Australasian representative. Please see the details here: <https://reen.co/blog/> I would also like to bring to your attention the list of EER journals on their website and a link to EER resources. IF you would like to discuss what's involved in being on the REEN Board you can email Anne Gardner at Anne.Gardner@uts.edu.au

INFORMATION/RESOURCES:

Resources and Discussion

A quick snapshot of the discussions, shared articles and resources from the Facebook group lately and some scooped up from engineering education relevant conversations on Twitter. If you're on Facebook and not yet a member, [join the group online here](#).

- [AAEE wiki](#)
- [ASEE interim report – COVID-19 and Engineering Education](#)
- [Proposed updated IEA Benchmark for Graduate Attributes and Professional Competencies](#)
- [ASEE's Black in Engineering Resource page](#) outlining specific actions that colleges and universities can take toward becoming anti-racist institutions, offering a set of guiding principles and a series of action-oriented recommendations.
- [Multidisciplinary Research Methods for Engineers MOOC](#) by TU Delft (Jan 2021)
- Recordings from previous CHEER UP webinars - <http://bit.do/cheerupvideos>
- Recordings from [Education 4.0 Our Next Phase to Curriculum and Assessment Design International Virtual Series](#)
- SEFI 2020 Best Paper Award presentation: [Towards a Typology in Literature Studies and Reviews in Engineering Education Research](#)
- [Resource on respecting ethnic names](#)
- [International Virtual Forum in Teaching and Learning: Student-as-Partners in Online Learning Voices from HKU](#)
- [How Indigitek's Ben Armstrong is changing STEM for the next generation](#)
- [Redefining the scientific conference to be more inclusive](#)

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