



South African Society for Engineering Education

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6th Biennial General Meeting - 12 July 2023 - President's Report

We are delighted to once again be able to present, with our engineering education community, the SASEE biennial conference to South Africa and beyond. SASEE, founded in 2011, held biennial conferences in 2011, 2013, 2015, 2017, and then partnered with REEN to co-host REES in Cape Town in 2019. And then the Covid19 Pandemic rocked our world. As our members well know, 2020 was an especially challenging year for higher education. Quickly adapting our learning activities and academic environments to online learning, as well as helping our students and colleagues to navigate a severely disruptive environment placed an enormous burden on our community. Nevertheless, SASEE was instrumental in supporting IFEEES in organising WEEF 2020, that took place online, and then continued to support this global organisation in presenting the WEEF 2022 conference in Cape Town to great success. As a result of the disruption to our environments, SASEE skipped the traditional conference year of 2021, but we are back in style in 2023 at Glenburn Lodge, Muldersdrift, along with our host institution for this conference, Tshwane University of Technology.

This report for the 6th biennial SASEE BGM briefly summarises key activities of the 2019 - 2023 period.

SASEE Board 2019-2023

The board for the period consisted of the following members, with portfolios indicated:

- Dr Keith Jacobs (Independent), President
- Prof Deborah Blaine (SU), Past President
- Prof Karin Wolff (SU), Vice-President, Media
- Prof Johnson Carroll (UJ), General Secretary
- Prof Brandon Collier-Reed (UCT), Treasurer
- Prof Bruce Kloot (UCT), SJEE & CREE
- Dr Maggie Chetty (CPUT) Fundraising
- Mr Eudes Tshitshonu (VUT) Southern African Network
- Dr Disaapele Mogashana (UCT/UP) Young Engineers

Quarterly board meetings were held, with the majority being remote, as follows:

- 9 Dec 2019 (UCT)
- 30 Mar 2020 (Remote)
- 4 Aug 2020 (Remote)
- 2 Dec 2020 (Remote)
- 4 Feb 2021 (Remote)
- 13 Apr 2021 (Remote)
- 22 Aug 2021 (Remote)
- 29 Oct 2021 (Remote)
- 25 Feb 2022 (Remote)
- 16 Sep 2022 (Stellenbosch - Hybrid)
- 24 Nov 2022 (UCT - Hybrid)

In light of the Covid-era impact, a special general meeting was held remotely on 26 February 2021 to discuss and implement necessary constitutional changes to enable the existing board to continue until the next BGM.

SASEE Activities & Events

Workshops & Webinars:

Despite the shift to online forms of networking and practice-sharing, SASEE continued to facilitate opportunities for its members and a broader range of stakeholders, with three key workshop opportunities:

Good Practices Online Workshop - 26 Feb 2021

Online facilitator: Prof Brandon Collier-Reed

The SASEE community and workshop participants were presented with a summary of the impact of [Emergency Remote Teaching on national Engineering Educators & PGs](#), conducted by Prof Karin Wolff on behalf of SASEE. Three case studies were presented and breakout discussion sessions facilitated for practice-sharing:

- Online assessment: Approaches & Lessons (Prof J Carroll & Dr H Inglis)
- Engaging Students (Prof D Blaine)
- The marriage between Maths & Physics (Prof Megan Govender)

Workshop recording: <https://youtu.be/7-fyrOhBYb4>

Hybrid Seminar - 12 July 2022 in collaboration with TSP/IEC

In an innovative move, SASEE partnered with the Transforming Systems through Partnerships - Innovative Engineering Curriculum (TSP/IEC) project in facilitating a hybrid workshop around the country. Groups of engineering educators met at UCT, NWU and UP in person and each venue was connected remotely to enable facilitators at the different venues to present three different workshop sessions. Between sessions, participants in the different venues worked with local facilitators to develop strategies and share practices.

The three sub-workshops were:

- Assessment for accreditation (Profs Brandon Collier-Reed & Maggie Chetty)
- Facilitating active, experiential learning in your classroom (Drs Helen Inglis & Lelanie Smith)
- Engineering Education Research: reflective and responsive practice (Profs Teresa Hattingh, Karin Wolff & Dr Eudes Tshitshonu)

SASEE/IEC Industry-ECSA Indaba 24 Nov 2022

Continuing the hybrid strategy and TSP/IEC partnership, a stakeholder engagement session was held with key industry stakeholders, the Engineering Council of South Africa (ECSA) representatives and engineering academics. The presence of Dr Franciska Bothma (Executive : Regulatory Functions) and Ms Nivashnee Naidoo (Manager: Education) from ECSA marked an invaluable opportunity to strengthen our network and enable meaningful dialogue across the higher education-professional body-employer domains.

National & International Collaborations

In line with our mandate to support practice-sharing and capacity-building beyond our borders, SASEE board and members continue to collaborate with national and international stakeholders in collaborative capacity-building projects and are active in the planning, organising and running of key international Engineering Education workshops and conferences. A few highlights of the 2019-2023 period are:

TSP/IEC Collaboration

Prof Karin Wolff represents SASEE in the collaborative, Royal Academy of Engineering-funded Transforming Systems through Partnerships - Innovative Engineering Curriculum ([TSP/IEC project](#)) headed up by Dr Lelanie Smith (UP), the Global Engineering Dean's Council Diversity Award winner of 2022. The TSP/IEC project entails

national online and in-person capacity building workshops aimed at innovating our engineering education practices with a focus on networking, pedagogical and curriculum practice-sharing, as well as the redesign of programmes. These workshops offered SASEE members opportunities to connect more broadly and consistently, particularly over the ERT/Covid period.

IFEES

Prof Deborah Blaine was elected to the executive board of the International Federation of Engineering Education Societies ([IFEES](#)), and has continued to contribute to international capacity-building through coordinating and presenting online webinars (such as the Brent-Felder series 2022-2024), as well as sharing her experience in the Rising to the Top - [Global Women Engineering Leaders](#) book series.

WEEF 2020:

- Conference chair: Prof Sunil Maharaj, Dean EBE UP - SASEE institutional member
- Technical Programme Chair: Dr Helen Inglis, SASEE member, UP
- Organising and technical programme committee members:
 - Prof Deborah Blaine, SASEE board member, SU
 - Prof Johnson Carroll, SASEE board member, UJ
 - Prof Karin Wolff, SASEE board member, SU
- Peer reviewers: many SASEE members

WEEF 2022:

- Conference chair: Prof Sunil Maharaj, Dean EBE UP - SASEE institutional member
- Technical Programme Chair: Prof Deborah Blaine, SASEE member, SU
- Organising and technical programme committee members:
 - Dr Helen Inglis, SASEE board member, SU
 - Prof James Swart, SASEE member, CUT
 - Dr Lelanie Smith, SASEE member, UP
 - Prof Karin Wolff, SASEE board member, SU
- Peer reviewers: many SASEE members

SASEE Research Grants

SASEE continued to support new researchers in engineering education by offering grants of up to R20 000 to develop research skills in engineering education that help to both advance the researcher's career and expand the engineering education community in South Africa. The following are grant awardees for the 2017 - 2022 period:

2017 Research Grant Awardees:

- Teresa Hattingh (NWU) - Why lecturers in an Eng School assess the way they do (presented at REES 2019);
- Tinashe Tendayi (CPUT) - Technical skills gap in industrial engineering sectors

2019 Research Grant Awardees:

- Liezle Boshoff (CPUT) - [Developing Model-Eliciting Activities for Undergraduate Engineering Students](#)
- Lelanie Smith (UP) - Investigation of the impact of a co-curricular vertically integrated design project to develop innovative attitudes in engineering students

2022 Research Grant Awardees:

- Helen Inglis (UP) - Perspectives on student success from experienced engineering educators in Sub-Saharan Africa
- Samuel Gqibani (UJ) - Perception of students and industry on the Diploma WIL (Data gathering and analysis)

SJEE Launch

The Southern Journal of Engineering Education was launched on [23 July 2021 as an online event](#) with Profs Chris Winberg (CPUT), Xiangyun Du (Qatar) and Jenni Case (Virginia Tech) as keynote speakers. Editor in Chief, Prof Bruce Kloot along with the editorial board (Brandon Collier-Reed, Karin Wolff and Maggie Chetty) successfully published the [1st issue in November 2022](#).

The Southern Journal of Engineering Education (SJEE) is a scholarly forum for the publication of original research that is relevant to the international engineering education community. The journal is 'southern' in that it values critical perspectives on the unique challenges facing engineering education in South Africa and the Global South. The SJEE is an open-access publication that promotes the development of high-quality scholarship through a supportive peer-review process.

While the journal particularly values empirical investigations, other forms of research (such as papers exploring theoretical perspectives or methodological approaches, review papers, as well as practice-oriented articles) will be considered. Furthermore, while critical perspectives from the Global South are the main interest, papers that deal with wider international or intercultural dimensions, of interest to our readership, could also be appraised for publication. In this sense, the Global South should not be considered in solely geographical terms but as a counterpoint to dominant perspectives from the Global North.

SASEE looks forward to continuing its support of the national engineering education community.

Dr Keith Jacobs (PhD) (BEd)

President, SASEE

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Board members: Dr Keith Jacobs (UNISA), President; Prof Debby Blaine (SU), Past President; Prof Karin Wolff (SU), Vice-President; Prof Johnson Carroll (UJ), General Secretary; Prof Brandon Collier-Reed (UCT), Treasurer; Prof Bruce Kloot (UCT), SJEE & CREE Representative; Dr Maggie Chetty (CPUT), Mr Eudes Tshitshonu (VUT), Dr Disaapele Mogashana (UP).