



**SOUTH AFRICAN ACADEMY OF ENGINEERING**

**23<sup>rd</sup> ANNUAL REPORT**

**1 April 2020 - 31 March 2021**

**E P Kearsley**

## **South African Academy of Engineering**

### **23<sup>rd</sup> Annual Report**

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**EP Kearsley**

**President**

### **INTRODUCTION**

During the past year, the Covid-19 pandemic has disrupted all activities, including those planned by the South African Academy of Engineering (SAAE). Despite the extended duration of lockdown and isolation, this disruption has had some positive consequences. The fact that physical meetings could not take place, resulted in online meetings and discussions, which made it possible for more Fellows to partake in Academy activities. These activities include the expert panels that have been promoting excellence in the application of engineering for the benefit of South Africa and its people. More people than ever attended our annual lectures, in virtual format, resulting in increased visibility.

The continued support from the Department of Science and Innovation (DSI) grant and ASSAf for undertaking the administration of these funds and for providing office facilities to SAAE are highly appreciated, as this support enabled our international interaction and continued participation in the international network of Academies of Engineering.

### **EXECUTIVE COMMITTEE**

The Executive Committee (Exco) of the SAAE for the period 2020 – 2022 comprised the following elected members:

- Prof Elsabe Kearsley (President)
- Mr Neil Macleod (Deputy President)
- Prof Yunus Ballim
- Prof Ian Jandrell
- Prof Alison Lewis
- Me Anita Loots
- Dr Hylton Macdonald
- Mr Stanford Mkhacane
- Dr Christine Render
- Prof Wikus van Niekerk

During the first Exco meeting, it was decided to co-opt the following Fellows to the Committee:

- Mr Seetella Makhetha
- Mr Hangwani Makwarela
- Mr TC Madikane
- Mr Bob Pullen (Treasurer)

Four Exco meetings took place during the Financial Year 2020/2021, on the following dates:

- 26 May 2020
- 25 August 2020
- 24 November 2020
- 2 March 2021

All the members of Exco serve on a voluntary basis and their contribution of valuable time during the year is highly appreciated.

### **23<sup>RD</sup> ANNUAL GENERAL MEETING**

The 23<sup>rd</sup> Annual General Meeting (AGM) was held virtually through electronic communication on 25 June 2020. Seventy-six Fellows (forty five percent of the membership) took part in the electronic meeting. This was a considerable improvement compared to previous years.

### **MEMBERSHIP**

The following new Fellows were elected during the year:

- Prof Lesley Cornish
- Matthys De Wet
- Prof Trevor Fowler
- Prof Adam Luckos
- Vishaal Lutchman
- Prof Akshay Saha
- Prof Kathryn Sole
- Alex Van Niekerk
- Prof Harro von Blottnitz

As a result of Covid-19 lockdown restrictions no Induction Dinners took place and the Exco decided to postpone these Dinners until lockdown restrictions are lifted.

### **INTERNATIONAL COUNCIL OF ACADEMIES OF ENGINEERING AND TECHNOLOGICAL SCIENCES (CAETS)**

#### **CAETS Convocation 2020**

The 2020 CAETS Convocation was hosted by the National Academy of Engineering of Korea in Seoul from 12 to 15 October 2020. In the week preceding the Convocation two CAETS Working Groups had meetings. On 5 October 2020 SAAE President Prof Elsabe Kearsley and past Exco member Dr Mike Shand attended an online meeting of the Communications Working Group and on 7 October 2020 Bob Pullen attended an online meeting of the Education Working Group. The CAETS conference was presented in an online/offline hybrid format, which enabled foreign members to stream the meetings via Zoom or live on YouTube. On 12 October 2020 Prof Yunus Ballim and Seetella Makhetha attended the COVID-19 Special Committee meeting and Prof Wikus van Niekerk attended the CAETS Energy Committee Meeting. On 13 October 2020 Prof Elsabe Kearsley and Bob Pullen attended the Plenary Session. The open sessions took place on 13 and 14 October 2020 and the topics of

these sessions were Smart Energy Network, the Hyper-connected Life, Education for Smart Society and Climate change. On 15 October 2020 Prof Kearsley attended the Council Meeting.

### **CAETS Convocation 2021**

The Academy of Engineering of Argentina, which will host the 2021 CAETS Convocation from September 20 to 23, 2021 in Buenos Aires, has informed SAAE of its decision to carry out the meeting in virtual mode due to prolonged uncertainty regarding Covid19. The theme of the meetings will be The Future of Energy. The organising committee invited SAAE to present proposals for topics.

### **Other CAETS matters**

The National Academy of Technologies of France, which will host the 2022 Convocation, has informed SAAE that the meeting was rescheduled from March 2022 to September 26 to 30, 2022.

In accordance with the CAETS Rotation Schedule, SAAE was invited to nominate a representative to serve a two-year term (2022-2023) on the CAETS Board of Directors. On 23 and 24 November 2020 the Mexican Academy of Engineering hosted an International Congress “Engineering and Public Policies”. Dr Trueman Goba, SAAE’s past President, represented SAAE in this virtual congress.

## **PUBLIC LECTURES**

### **Hendrik van der Bijl Lecture**

The Hendrik van der Bijl Memorial Lecture, which is presented annually by SAAE in collaboration with the Faculty of Engineering, Built Environment and Information Technology, UP, was presented virtually on 29 September 2020. Mr Chris Griffith, former CEO of Anglo Platinum, was the speaker and the topic was *An economic recovery strategy for South Africa and the role we can play*.

### **Academy Lecture**

On 24 February 2021 Dr Rob Adam, a Fellow of SAAE, presented the Academy Lecture virtually. The title of the lecture was *Technology, policy, and politics: critical success factors in high-technology infrastructure projects*. The lecture was attended by around two hundred people from around the world and was very well received.

## **EXPERT PANELS**

During the past year, the activities of the five expert panels, formed by SAAE Fellows to develop evidence-based material on matters of concern, continued in the form of online meetings, press releases and advisory notes and letters to political decision makers.

### **Water Panel**

On 26 October 2020 the Water Sector Expert Panel’s third Advisory Note, which dealt with municipal water losses, was sent to the President of SALGA. On 15 February 2021 SAAE sent Advisory Note 4: *The foundation of our water security is eroding – why hydrological information is important*, which was prepared by the Water Sector Expert Panel, to President Ramaphosa and copied it to the relevant Ministers.

### **Energy Panel**

On 19 March 2021 SAAE sent a letter regarding the implementation of the 2019 Integrated Resource Plan to President Ramaphosa. The Energy Sector Expert Panel prepared this letter.

### **Engineering Education Panel**

On 9 July 2020 the Engineering Education Expert Panel held a Mini Symposium on *Engineers, Engineering and Development of the Public Sector in South Africa* to address concerns about the declining role and influence of engineers and engineering sciences in the public sector of South Africa. The symposium was attended by 47 people.

### **Transportation Panel**

During the second virtual meeting of the Transport Sector Expert Panel on 2 November 2020, SAAE Fellow Jack van der Merwe made a presentation on the *Establishment of a Transport Authority for Gauteng and the impact of Covid-19*.

### **Engineering Profession Panel**

On 26 February 2021 SAAE sent a letter entitled *The Rightful role of the Professional Engineer in the Public Service* to the Head of the National School of Government. This letter was prepared by the Engineering Profession Expert Panel and was sent in reply to the request for comment on the Draft National Implementation Framework toward the Professionalisation of the Public Service.

## **FINANCIAL OVERVIEW**

The Report of the Independent Auditor on the Financial Accounts of the SAAE for 2020/21 confirms that the financial position of the Academy as at 31 March 2020 is satisfactory with cash in hand of about R238 000. This is sufficient to cover the fixed costs of the association, primarily administration and membership expenses, for a full year even if no income was realized. The Auditor reports that the financial performance and cash flows during the year 2020/21 are fairly presented in all respects in the Annual Financial Statements. These Statements are based on Management Accounts which were prepared for consideration by the Management Committee during the year.

Attention is drawn to the following points of interest and, perhaps of concern:

- The main sources of income for the Academy are member's subscriptions, a Grant-in-Aid from the Department of Science and Innovation (DSI), and *ad hoc* sponsorships and donations.
- No income was generated from project activities or investigations funded by other entities and this has had a negative impact on the cash reserves of the Academy.
- There was no sponsorships for events arranged for the benefit of Members as no physical meetings could take place.
- Of the funds made available to the SAAE by the DSI (formerly the DST) for memberships of CAETS and for other activities associated with international liaison in 2020/21 only R15 721 was utilized. No costs were incurred in attending CAETS Board or Committee meetings. Due to constraints imposed by COVID-19 pandemic no local or regional meetings were possible. The budget provision for this and related events could not be utilized, and it is hoped that these funds will be available in the next financial year.
- The assets of the Academy comprise primarily cash and cash equivalents, represented by cash in the bank accounts, which has been accumulated from

retained earnings over many years. Total assets stand at R269 062, marginally up from the previous year.

- Membership subscription fees owing on 31 March 2021 amounted to R33 741. Some debts have been written off and no provision is made for the doubtful debts which may be recovered in the coming year.

## **OUTLOOK FOR THE FUTURE**

The disruption caused by the Covid-19 pandemic forced the SAAE to make changes in the way we operate. Despite the disadvantages of social distancing, virtual meetings and presentations allowed Fellows that could in the past not partake in SAAE activities, to make valuable contributions. The continued use of virtual platforms will in future make it possible for Fellows to attend activities without limitations caused by geographical location.

The activities of the expert panels contributed significantly to the relevance and visibility of the SAAE. The scope of work of the 5 current panels covers a small fraction of the total spectrum of the field of interest and expertise of the fellows of the SAAE. I would wish to urge Fellows to contribute towards the activities of the SAAE by assisting in the formation of more expert panels, where we can use our combined knowledge and experience to promoting excellence in the application of engineering for the benefit of South Africa and its people.



Fellow EP Kearsley

President

South African Academy of Engineering, Pretoria

15 June 2021