

## **SACAC President's Report AGM 2022**

Welcome to the Annual General Meeting of the South African Council of Automation and Control (SACAC). I would like to up front thank the SACAC leadership for their commitment throughout 2021. We've had a successful year on all accounts, under what were still some difficult circumstances. While COVID had a much less disruptive impact compared to 2020, we still experienced some challenges not being able to anticipate how COVID sentiment or lockdown restrictions would affect the turnout to events.

Most of the events were consequently arranged in a hybrid format. This ensured that local events proceeded without much disruption, however, the Delta variant forced a lock-down on international travel to SA. This impacted our in person turnout by international delegates for CCA late last year.

Again, thank you SACAC leadership for all the extra scenario modelling and additional effort that goes into arranging hybrid events like these.

### SACAC History and Mandate

The agenda of our AGMs proceed with the formal matters of our organisation, as prescribed by our constitution, and in a manner shaped by past members and leadership. This warrants a short reflection on our history and mandate.

Our organisation was established as the national member organisation (NMO) in SA of the International Federation of Automatic Control (IFAC). Our history is therefore tied to IFAC's history, which goes back all the way to 1956.

During the first International Conference on Automatic Control in Heilderberg Germany the delegates signed a declaration for the need to create an international organisation of automation and control. They further declared a commitment to form national organisations where they did not already exist. A provisional committee was established to draft a constitution.

The following year, 1957, the first IFAC General Assembly was convened in Paris, where delegates from 18 countries voted on the constitution and by-laws, and where leadership was elected. IFAC was established, and as part of their drive to establish national organisations around the world, the SACAC was established four years later in 1961. Since then, the SACAC has carried the mandate of promoting the science and practice of automation and control for the benefit and economic prosperity of the people of South Africa.

### Look back at 2021

Workshops, lectures, and familiar events:

- Control Systems Day - Event where academic groups from around the country present their research. This year we focused on involving industry to promote closer industry / academia collaboration.
- Observer Design Workshop - a Full day workshop on the design of model based observers. A deep theoretical workshop with hands-on practical examples.
- Motorcycles: the Science, the Folklore and Going Fast - a Lecture by Prof Limebeer concerning optimal control in closed - circuit motorcycle racing.
- A Practical Guide to the Management of "Bad Actor" Alarms - a Lecture on industrially tested methods to maintain efficient and effective alarm management systems.
- Machine Learning for Process Control - a Full day workshop on machine learning. The workshop included a number of case studies by different industry experts, and a hands-on practical session where delegates developed a soft sensor of a Fermentation Reactor.

Establishing / strengthening relations with related organisations:

- NSTF - We joined the ProSET sector of the NSTF, allowing us a broad network for collaborating with other professional bodies and learned societies in science, engineering, and technology (SET) education on matters overlapping our mandate.
- SAIMM and RASA - Similarly, to promote common goals shared with these organisations, we are actively identifying co-promotion and collaborating opportunities. On the back of this we hosted a lecture on “Robotics in Mining”.
- South African Chambers of Commerce - Our intentions here are to leverage the chambers of commerce’s networks to further reach potential industrial membership. Through this collaboration we organised a workshop on “Government Grants and Incentives Available to South African Businesses”

Control Conference Africa (CCA) was undoubtedly the highlight of our calendar year. Planning started in early 2020 already, and CCA was recognised as part of the IFAC calendar. We will have an in depth overview of the conference later in the programme.

### Goals for 2022

A key focus for the year is to build on momentum established in 2021 with our related organisations. We’ve already had a kick-off with the SAIMM in January where we agreed on co-promotion of events of interest to our shared membership. The first event was a lecture on Model Predictive Control that was hosted earlier this month.

We’ve applied for NSTF funding for a “Girls in Control” workshop. This initiative will target an uptake in engineering among school students, which aligns well to the NSTF qualifying criteria of supporting SET education.

Finally we are exploring potential initiatives to stimulate interest in automation and control solutions that target sustainability criteria. There is a growing strategic focus on sustainability, or ESG (Environmental, Social, and Governance), criteria within organisations. The importance and longevity of this focus is well considered in the view of Prof Eccles, in his HLS Forum post<sup>1</sup> on Corporate Governance, where he notes “the purpose of a company is to produce profitable solutions to problems faced by people and the planet”, while at the same time “not profiting from producing problems for people and planet”.

Clearly these sentiments are widely supported by society in general, and growing in its importance within organisations targeting socially responsible investment. We will align ourselves to this focus by hosting targeted initiatives that explore and encourage automation and control projects supporting sustainability objectives.

### Conclusion

I would like to acknowledge the dedication of our SACAC leadership team and those organisations who collaborated with us throughout 2021. It was a productive year on the back of their efforts.

Thank you members for your continued support. I wish you and your families success and good health for the year ahead.

Best Regards,

John Burchell

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<sup>1</sup> Robert Eccles, Colin Mayer, and Judith Stroehle, 2021, The Difference Between Purpose and Sustainability (aka ESG), viewed 28 November 2021, <<https://corpgov.law.harvard.edu/2021/08/20/the-difference-between-purpose-and-sustainability-aka-esg/>>