

## SACAC President's Report AGM 2021

Dear members and guests,

Welcome to the Annual General Meeting of the South African Council of Automation and Control (SACAC). I would like to thank upfront our executive committee members for their commitment throughout 2020. Everyone will agree that it was an extraordinary year, with many of us affected on a personal and professional level by the pandemic. It was not business as usual, and I appreciate the sacrifices made by our leadership team to guide and support our council during this time.

### Covid-19 in South Africa

Some of us were affected more than others. Contrary to the misconception that "Covid does not discriminate", we have to acknowledge the significant impact that this pandemic has delivered on especially those most vulnerable in our society. An investigation by Statistics South Africa (Stats SA, [lined here](#)) identifies the following groups as most vulnerable:

- Those who are poor or live in deprived conditions, which impacts health and sanitation;
- who live in crowded areas or informal settlements, which impacts social distancing; and
- live in multigenerational households with large extended families in a single dwelling.

As I'm writing this, the first doses of the Covid-19 vaccine are being administered as part of the national vaccine rollout response. Indeed, the world breathed a collective sigh of relief when news first broke of an effective vaccine, already only 9 months into the pandemic.

The pace of development and efficacy of these vaccines are remarkable scientific achievements. Something to be recognised for its historic contribution to humanity, especially during a time where misinformation is promoting distrust in science.

The delivery and uptake of the vaccine to our people is now the challenge that lies ahead. I feel great pride that, true to the South African spirit, there is a collective response from various stakeholders across our country. Civil society, the private sector, and government have all come together to take on this significant financial and logistic challenge.

### SACAC history and mandate

This being the 60th AGM draws attention to a legacy that started with the International Federation of Automatic Control (IFAC) seeking a national member organisation in South Africa. After having been approached by IFAC, and with due consideration, the Council for Scientific and Industrial Research (CSIR) turned down the invitation, purportedly due to concerns that the CSIR would not be able to adequately represent the activities and interest of the NMO for IFAC. A new council was subsequently established, the SACAC, to serve a singular mandate, namely, to *promote the science and practice of automation and control for the benefit and economic prosperity of the people of South Africa*.

### Relationship with related organisations

As subject matter experts in automation and control, our potential contributions as individuals towards our mandate is perhaps clear. However, our mandated focus on the prosperity of the people of South Africa is something that we share with other societies and organisations.

I believe that we can more efficiently serve our mandate through collaboration with related organisations. As such, we have towards the end of 2020 directed our focus to identify

organisations with whom we can partner on new initiatives, or who's existing initiatives we can support as long as it serves our mandate.

### State of the industry - opportunities and concerns

The outlook for the automation and control industry is looking bright. Advances in recent years have significantly driven down automation and control system component costs. Moreover, a decrease in computing and memory costs, together with key algorithmic advancements, has spurred a revolution in artificial intelligence related technologies. These include, for example, advances in computer vision and machine learning systems, which has enabled new measurements and utility for automation and control.

It is now generally accepted that we are experiencing a *Fourth Industrial Revolution* (4IR), with key technologies expected to play an ever more dominant role in our future. More than just the menial, manual tasks performed by people will likely be replaced by robotics. This raises concerns over two conflicting realities for our people: opportunities for those who can take advantage of the disruptions by the 4IR, and a risk on the livelihoods of those who are not skilled to partake in this future.

I refer you to the summary report from the *Commission On the Fourth Industrial Revolution [1]*. Wherein is provided a very thorough overview of the expected impact of the 4IR, the opportunities it presents, and a recommended response for South Africa to take advantage of these opportunities, and to ensure job retention and creation.

### The year in review and plans for the year ahead

While 2020 had its challenges, the SACAC adapted well by taking a virtual approach to the delivery of its events. Unfortunately, we had to postpone some events, most notably, our annual control systems day due to a disruption in the University academic calendar.

A virtual approach allowed us to reach a larger audience. We saw a tenfold increase in the attendance of our *Innovation Funding Seminar*. We also had a great turnout for our first time workshop on a *Practical Guide on the Management of "Bad Actor" Alarms*.

During his state of the nation address in 2018, president Cyril Ramaphosa noted that "our prosperity as a nation depends on our ability to take full advantage of rapid technological change. This means that we urgently need to develop our capabilities in the areas of science, technology and innovation." In the summary report, referenced earlier, it is noted that less than 30% of students graduate in science, technology, engineering, and mathematics (STEM) related fields. We also note that the principal members of the SACAC are predominantly engineering graduates, who then specialised in automation and control.

As the SACAC we need to partake in the national effort to encourage an interest in STEM-related fields. A major focus for the year ahead will therefore be to improve engagement with school going pupils. We will do so through collaboration with relevant organisations.

Towards the end of last year, we joined the [National Science and Technology Forum](#) (NSTF), that coordinates more than a 100 organisations, councils, and institutions involved in science, engineering, and technology (SET). We did so, recognising that the NSTF has a well-established network, is closely positioned to government, and has established frameworks to reach school going pupils. As a first initiative, we will support their [STEMulator project](#), an e-learning platform that attracts interest in STEM and provides career guidance.

At about the same time we made contact with the Robotics Association of South Africa (RASA) and the IEEE chapter for Control Systems / Robotics and Automation (IEEE CS/RA). We are

looking to collaborate with them on relevant conferences and workshops. I refer you to [our website](#) for the now familiar workshops and events, presented on request or as part of the planned SACAC calendar.

We are excited about the second Control Conference Africa (CCA 2021), planned for the 6th and 7th of December 2021. Arrangements for this international conference are championed by Dr Kevin Brooks, who will present more on this a bit later this morning. We have attracted a great plenary line-up. I encourage you all to attend, and take advantage of having world class experts discuss their areas of expertise.

### Conclusion

The SACAC was affected by the pandemic, but adapted well. We have a busy calendar planned for the year ahead, with a focus on establishing and strengthening our relationships with related organisations, and on promoting automation and control among school going students.

I sincerely wish you and your family's good health and prosperity for the year ahead.

Kind Regards,

John Burchell

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[1] Published in the Government Gazette No.43834 on 23 October 2020.