

## South Africa Section

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### Section Vitality

Three OUs had elections in November/December 2020. The other OUs which were not able to hold elections either due to logistics or been in mid-term in office will do so in 2021. Section ExCom elections are planned for 2021 when the new Section Constitution is in force. The Section does not have the practice of Vice-Chair becoming the next Section Chair although this has been discussed a few times. The last Section ExCom meeting was in September 2020 during which we discussed Section Vitality, IEEE South Africa Section Constitution, finances, legacy IEEE programmes, industry engagements, section management and training for volunteers.

### Students Branches

STB21531 - University of Kwazulu-Natal

STB21501 - University of Cape Town

STB11423 - University of Western Cape

STB15111 - University of Pretoria

STB02681 - University of Witwatersrand

STB09321 - Stellenbosch University

### Affinity Groups

South Section has three Young Professional Affinity Groups, one Women in Engineering Affinity Group as well as an active Women in Power group which is under the PES.

- IEEE South Africa Section Young Professionals AG- Northern Region
- IEEE South Africa Section Young Professionals AG- Southern Region
- IEEE South Africa Section Women in Engineering (WiE) AG
- IEEE Power & Energy Society Women in Power (WiP)

All these units are actively hosted events in the last reporting cycle.

At a Section level, support toward AGs include guidance in hosting virtual events and networking opportunities as well as a programme to train new volunteers in South Africa.

### Chapters

1. CH08656 - South Africa Section Chapter, CIS11
2. CH08817 - South Africa Section Chapter, EMB18
3. CH08687- South Africa Section Chapter, IT12
4. CH08665 - South Africa Section Chapter, NANO42
5. CH08682 - South Africa Section Chapter, PE31
6. CH08459 - South Africa Section Chapter, E25
7. CH08861 - South Africa Section Chapter, VT06
8. CH08080 - South Africa Section Chapter, AES10/GRS29
9. CH08081 - South Africa Section Chapter, CS23/RA24
10. CH08881 - South Africa Section Jt Chap, NPS05/MAG33/IM09/PC26
11. CH08019 - South Africa Section Jt. Chapter, AP03/MTT17/EMC27
12. CH08062 - South Africa Section Jt. Chapter, IE13/IA34/PEL35
13. CH08018 - South Africa Section Jt. Chapter, SP01/COM19
14. CH08647 - South Africa Section Jt. Chapter, SMC28/C16

Due to COVID-19, face-to-face meetings were not encouraged. As a result, webinars were popular.

Listed below are some of the meetings there were held in the last quarter.

Event Title	Hosts
The Complex source of GICs and Effects on Power Systems : South Africa Section	R80141 - South Africa Section
Managing Uncertainties of the Future Grid : South Africa Section Chapter	South Africa Section Chapter, PE31
IEEE Day Talk : University of Cape Town	STB21501 - University of Cape Town
IEEE Senior Membership Elevation Workshop : South Africa Section	R80141 - South Africa Section
Leadership opportunities within IEEE South Africa Section : South Africa Section	R80141 - South Africa Section
wattnow Tech Talk presents: Robotics in a time of COVID-19 in South Africa : South Africa Section Chapter	South Africa Section Chapter, CS23/RA24
Forming closer ties with Industry : South Africa Section (Pretoria) Affinity Group	South Africa Section (Pretoria) Affinity Group,YP
Cyathlon 2020 : South Africa Section Chapter	South Africa Section Chapter, CS23/RA24
2020 2nd International Multidisciplinary Information Technology and Engineering Conference (IMITEC) : South Africa Section Jt. Chapter	South Africa Section Jt. Chapter,SMC28/C16
On the use of mutual information for performance prediction in radar target recognition problems : South Africa Section Jt. Chapter	South Africa Section Jt. Chapter, SP01/COM19
IEEE YP-Pretoria Chair Training : South Africa Section (Pretoria) Affinity Group	South Africa Section (Pretoria) Affinity Group,YP
The Role of Cognition in Radar Sensing : South Africa Section Chapter	South Africa Section Chapter, AES10/GRS29
Emerging Technologies for Smart Cities: Challenges and Trends : South Africa Section Chapter	South Africa Section Chapter, AES10/GRS29
SAUPEC/RobMech/PRASA 2021 Conference : South Africa Section	R80141 - South Africa Section, CH08081 - South Africa Section Chapter, CS23/RA24
Technical Talk: Creating Robots That See : South Africa Section Chapter	South Africa Section Chapter, CS23/RA24
MM-WAVE GAN POWER AMPLIFIERS: A virtual DML Talk by James M. Schellenberg : South Africa Section Jt. Chapter	South Africa Section Jt. Chapter, AP03/MTT17/EMC27
Information Communication Technology and Society Conference (ICTAS2021) : South Africa Section Jt. Chapter	South Africa Section Jt. Chapter,SMC28/C16

## Industry

During the last quarter, two meetings were held with the sub-committee of the Africa Council to develop a framework for industry engagements in Africa.

A summary of the draft framework developed is attached to this report.

## Activities since the last report

Most of the OUs in South Africa relied on web-based events due to the pandemic which did not allow for face-to-face interactions. This worked well. A selection of these activities is listed in the table above.

## Planned activities

Targeted industry engagements

Training for new volunteers

Increased webinar presentations and support.

## How Region 8 can be of help to your Section, members, and activities

We need Region 8 to assist the Section in finalizing the Section Constitution with IEEE Legal.

Date: 10 December 2020

## **Memorandum to IEEE Africa Council**

### **Re: IEEE Industry Engagement Collaboration for Africa**

The Section supports the drive within IEEE to promote increased collaboration with industries in Africa. The strategy explored by the Section is one which seeks to develop/apply/implement programmes which are aimed at meeting the specific needs of industries, professionals, Young Professionals (YP) and are aligned with the Mission and Vision of IEEE.

The seven (7) stages of the strategy are:

1. Company Identification

Identifying the industries in various sectors. To be arranged by IEEE YPs, Section ExCom Rep and Section Industrial Ambassador. Cognisance should be taken of industries with existing MoUs with IEEE.

2. Request for information

The team in (1) arranges to meet with the industries in (1) to discuss a predefined set of questions, yet allowing discussion to grow organically.

3. Visits

The team in (1) meets with the listed industries to discuss how IEEE may be of better value to the company, personnel professional development, improvement of social conditions, humanitarian activities, IEEE membership, etc.

4. Planning

The team in (1) develops/apply/implement targeted programmes. The Section ExCom should be consulted to ensure that no agreement or commitments are undertaken which could harm IEEE or fall outside the bound of authority.

5. Execute

Team in (1) working with the industrial partner executes the programme.

6. Monitoring and evaluation

A matrix which defines the outputs, outcomes and impact should be developed into a rubric for assessing each programme. Team in (1) monitors and evaluates the programme. See Annexure 1 for sample definitions.

7. Reporting

For sustainability of this endeavour, as the strategy is implemented, proper

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documentation is proposed to allow the next set IEEE volunteers carry on which ongoing projects for continuity.

Plans should be in place to include media publicity and manage the narrative on the role of IEEE in industry.

We look forward to your contributions.

Yours sincerely,



Dr. David Oyedokun

Chair: IEEE South Africa Section, *SMIEEE*

Member: IEEE EPICS in IEEE Committee, of IEEE EAB

Member: IEEE Africa Council

### Annexure 1:

Table 1: Sample definitions for monitoring and evaluation projects

Elements	Definition
Inputs	Things (or resources) used in implementing a project. For example, human resource (personnel), finances in the form of money, car hire, building, computers, etc.
Activities	Actions associated with the inputs in furtherance of the project objectives. For example, survey, meetings, site visits, camping, teaching, site work, R & D, etc.
Outputs	Otherwise referred to as first level results. Usually a direct consequence of the activities.
Outcomes	Second level results which would be short term or medium term depending on the nature of the project. May involve behavioral change, second order results directly linked to the existence of the outputs and in line with the project objectives.
Impact	Third level results. More tricky to assess. A reasonable estimate based on the outcomes may be considered. Likely assessed accurately after the project has ended. May be assessed through an end of project survey