

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 by the end of 2021. Section ExCom elections are planned for 2021, hopefully the new Section Constitution will be 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 2021.

Event Title	Hosts
On the use of mutual information for performance prediction in radar target recognition problems : South Africa Section Jt. Chapter, SP01/COM19	CH08018 - South Africa Section Jt. Chapter, SP01/COM19
IEEE YP-Pretoria Chair Training : South Africa Section (Pretoria) Affinity Group,YP	YP80141 - South Africa Section (Pretoria) Affinity Group,YP, R80141 - South Africa Section
The Role of Cognition in Radar Sensing : South Africa Section Chapter, AES10/GRS29	CH08080 - South Africa Section Chapter, AES10/GRS29
Emerging Technologies for Smart Cities: Challenges and Trends : South Africa Section Chapter, AES10/GRS29	CH08080 - 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, CS23/RA24	CH08081 - South Africa Section Chapter, CS23/RA24
MM-WAVE GAN POWER AMPLIFIERS: A virtual DML Talk by James M. Schellenberg : South Africa Section Jt. Chapter, AP03/MTT17/EMC27	CH08019 - South Africa Section Jt. Chapter, AP03/MTT17/EMC27
Information Communication Technology and Society Conference (ICTAS2021) : South Africa Section Jt. Chapter,SMC28/C16	CH08647 - South Africa Section Jt. Chapter,SMC28/C16
Embedding Sustainable Green Technologies into Waste Water Management : South Africa Section Chapter, NANO42	CH08665 - South Africa Section Chapter, NANO42
UCT IEEE Opening Event : University of Cape Town	STB21501 - University of Cape Town
Los Angeles EMC Chapter Webinar Meeting: EMC Test and Analysis Campaign of NASA's Mars 2020 Perseverance Rover : Coastal Los Angeles Section Chapter, EMC27	CH06018 - Coastal Los Angeles Section Chapter, EMC27, etc
Reducing Environmental Impacts of Textile Industry : South Africa Section Chapter, NANO42	CH08665 - South Africa Section Chapter, NANO42
Talk THE FUTURE OF WORK by Prof Sunil Maharaj, a SAIEE Presidential Inaugural talk : South Africa Section	R80141 - South Africa Section
Strategic designing and innovations of materials development for green and sustainable solutions : South Africa Section Chapter, NANO42	CH08665 - South Africa Section Chapter, NANO42, R80141 - South Africa Section
Introduction to IEEE Membership Series: Talk 1 : University of Cape Town	STB21501 - University of Cape Town
IEEEXtreme Introduction Session : University of Cape Town	STB21501 - University of Cape Town
Semiconductor Nanowires: Optoelectronics, Energy and Neuroscience Applications : South Africa Section Chapter, NANO42	CH08665 - South Africa Section Chapter, NANO42, R80141 - South Africa Section
Introduction to IEEE Membership Series: Talk 2 : University of Cape Town	STB21501 - University of Cape Town
Computational Quest of High-Performance Sorbents for Water Treatment: From Mechanism Understanding to Big-Data-Driven Prediction : South Africa Section Chapter, NANO42	CH08665 - South Africa Section Chapter, NANO42, R80141 - South Africa Section
WOODWINDS AND MICROWAVES: A virtual MTT Speaker's Bureau Talk by Charles M. Jackson : South Africa Section Jt. Chapter, AP03/MTT17/EMC27	CH08019 - South Africa Section Jt. Chapter, AP03/MTT17/EMC27
Renewables and Sustainability Series: Talk 1 : University of Cape Town	STB21501 - University of Cape Town
Fabrication and modification of different nanoparticles by laser irradiation process : South Africa Section Chapter, NANO42	CH08665 - South Africa Section Chapter, NANO42, R80141 - South Africa Section
Tetrapods based 3D Smart Materials for Advanced Technologies : South Africa Section Chapter, NANO42	CH08665 - South Africa Section Chapter, NANO42, R80141 - South Africa Section
Meet the Grads : University of Cape Town, WIE	SBA21501 - University of Cape Town, WIE
R2T2 RENDEZVOUS MARS 2021 : South Africa Section Chapter, CS23/RA24	CH08081 - South Africa Section Chapter, CS23/RA24
Information session with SOLIDtech : University of Cape Town	STB21501 - University of Cape Town
Introduction to Machine Learning : University of Cape Town	STB21501 - University of Cape Town
Mental Health Pressure : University of Cape Town, WIE	SBA21501 - University of Cape Town, WIE
IoT Talk : University of Cape Town	STB21501 - University of Cape Town
AI and the Law : University of Cape Town	STB21501 - University of Cape Town, STB06451 - Univ of South Florida
Artificial Intelligence with MATLAB : University of Cape Town	STB21501 - University of Cape Town
Personal Finance : University of Cape Town	STB21501 - University of Cape Town
Ethics and Explainability for Responsible Data Science (EE-RDS) : South Africa Section Chapter, CIS11	CH08656 - South Africa Section Chapter, CIS11
Robotics in Mining : South Africa Section Chapter, CS23/RA24	CH08081 - South Africa Section Chapter, CS23/RA24
RAPDASA-RobMech-PRASA 2021 : South Africa Section Chapter, CS23/RA24	CH08081 - South Africa Section Chapter, CS23/RA24

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.
- Conference MoU signed with RAPDASA which has formed the start of a collaboration with industry through RAPDASA (<https://site.rapdasa.org/>).
- Other initiatives in the pipeline includes collaboration in with local industry player in robotics and automation Robotics Handling Systems (<https://www.robotic.co.za/>).

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.