

South Africa Section

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Section Vitality

Three OUs had elections in November/December 2020. The Section Nomination and Appointments Chair is currently arranging nominations and elections for vacant posts in the Section. A series of face-to-face events have been planned for Cape Town, Johannesburg, Pretoria, and Durban in April 2022 to revive IEEE activities in these areas, promote IEEE and recruit new members as we move out of the difficult part of the pandemic.

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)

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 registered over the last 12 months.

Event Title	Hosts
On the use of mutual information for performance prediction in	CH08018 - South Africa Section Jt. Chapter, SP01/COM19

radar target recognition problems : 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
Ethics and Explainability for Responsible Data Science (EE-RDS) :	CH08656 - South Africa Section Chapter, CIS11

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
AI Uptake: Panel discussion on collaborative research : South Africa Section Chapter, CIS11	CH08656 - South Africa Section Chapter, CIS11
Blockchain-enabled Transactive Energy Use Cases : South Africa Section Chapter, PE31	CH08682 - South Africa Section Chapter, PE31
Recipes for low-resource language research: An African Perspective : South Africa Section Jt. Chapter, SP01/COM19	CH08018 - South Africa Section Jt. Chapter, SP01/COM19
Machine Learning for Process Control : South Africa Section Chapter, CS23/RA24	CH08081 - South Africa Section Chapter, CS23/RA24
Energy and Spectral Efficiencies of OFDM-based Visible Light Communication : South Africa Section Jt. Chapter, SP01/COM19	CH08018 - South Africa Section Jt. Chapter, SP01/COM19
Transition from IPv4 to IPv6 - Way forward and not looking back : South Africa Section	R80141 - South Africa Section, R801 - Africa Council
IEEE YP-Pretoria New Volunteer Officer Orientation : South Africa Section (Pretoria) Affinity Group,YP	YP80141 - South Africa Section (Pretoria) Affinity Group,YP
IEEE YP-Pretoria Volunteer Officer Training : South Africa Section (Pretoria) Affinity Group,YP	YP80141 - South Africa Section (Pretoria) Affinity Group,YP
Andrejs XXX : South Africa Section	R80141 - South Africa Section
What is my measurement equipment actually doing? A virtual DML talk by Jon Martens : South Africa Section Jt. Chapter, AP03/MTT17/EMC27	CH08019 - South Africa Section Jt. Chapter, AP03/MTT17/EMC27
Talk on "5G+IPv6" by IPv6 Forum Chair Prof Sureswaran : South Africa Section	R80141 - South Africa Section, R801 - Africa Council, CH08018 - South Africa Section Jt. Chapter, SP01/COM19
World Record Attempt - Largest Online AI Lesson - Join it! : South Africa Section	R80141 - South Africa Section, R801 - Africa Council

Industry

- Conference MoU signed with RAPDASA which has formed the start of a collaboration with industry through RAPDASA (<https://site.rapdasa.org/>) in 2021 will likely be withdrawn in 2022 due to insufficient overlap between IEEE Xplore content spectrum and RAPSASA publication interests.
- IEEE South Africa Section received accreditation from the Engineering Council of South Africa to provide CPD courses for the next 3 years. Certificate attached.
- SAUPEC 2022 was the first major hybrid IEEE supported conference held face to face in South Africa. It was held at the Durban ICC in January 2022. More than 80% of the presenters attended the conference in person and it was a huge success.

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.



CERTIFICATE

OF RECOGNITION

AWARDED TO

IEEE South African Section

For being recognized as an ECSA CPD Licensed Body
in terms of Section 4 of the CPD Standard (ECSA-01-
STD)

Licensed Body Number: LB_046/2024

Executive: Regulatory Functions

Chief Executive Officer

LICENSE PERIOD

12 October 2021 to 11 October 2024

CERTIFICATE NUMBER: LBR.046

21 October 2021

IEEE South African Section

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Dear Sir/Madam,

RE: RECOGNITION AS A ECSA CPD LICENSED BODY

The Engineering Council of South Africa (ECSA) is pleased to inform you that IEEE South African Section application to be recognised as a Continuing Professional Development (CPD) Licensed Body has been successful. The recognition of IEEE South African Section as an ECSA CPD Licensed Body is in line with the prescribed Rules on Continuing Professional Development (Board Notice 86 of 2017) and the Standard for Continuing Professional Development (ECPD-01-STA).

As an ECSA CPD Licensed Body, the organisation is required to acquaint itself with all the provisions of the enclosed CPD Rules and the Standard for Continuing Professional Development, which will, during the time of the organisations recognition, be applicable. In accordance with the Standard, IEEE South African Section is entitled to use the title "ECSA CPD Licensed Body" and should display the license at its Head Office and/or on its website. Please take note of the organisation's unique number below.

ECSA CPD Licensed Body Number: **LB_046/2024**

The license is valid for a period of three (3) years; after which it must be renewed upon the expiry thereof. The renewal process entails a review of the requirements to ensure that the ECSA CPD Licensed Body still complies with the requirements and conforms to any new criteria that might be prescribed.

It is important, as a ECSA CPD Licensed Body, to ensure that all the CPD providers who apply to IEEE South African Section are verified in accordance with the criteria stipulated in the CPD Standard.

As an ECSA CPD Licensed Body, IEEE South African Section has to ensure that all CPD activities it validates are of an appropriate standard and quality for the target audience by monitoring and auditing the CPD Service Providers at regular intervals. ECSA reserves the right to monitor, evaluate and audit all recognised ECSA CPD Licensed Bodies in terms of the requirements of both the CPD Rules and Standard. Failure to comply with this prescribed legislation and Standard could lead to the revoking of the licence.

A certificate of registration will be couriered to IEEE South African Section under a separate cover.