

IEEE PES & IAS

POWERAFRICA CONFERENCE



Tshwane University of Technology
We empower people



Power & Energy Society



IEEE Industry Applications Society
Linking Research to Practice



Powering Africa: Affordable and Clean Emerging Energy Solutions for Sustainable Development

- 14 Nov. 2017 Call for papers opens
- 22 Jan. 2018 All full papers must be submitted
- 19 Feb. 2018 Authors will be advised by email of acceptance or rejection
- 05 Mar. 2018 Final revised papers are due

IEEE PES-IAS 5th PowerAfrica Conference 2018



The IEEE PES-IAS PowerAfrica Conference 2018 will be hosted by Tshwane University of Technology (www.tut.ac.za) in River Club, **Cape Town, South Africa**, during **June 26-29, 2018**. The IEEE Power and Energy Society (PES) and Industrial Applications Society (IAS) have joined forces to coordinate the latest international forum on clean and affordable energy pathways in support of the sustainable development goals (SDGs). The conference will emphasize affordable and clean energy solutions pursued and deployed in African settings, as enabled by suitable system integrations, business models, technological advances, policies, and regulatory stances. The conference venue is the Mother City of South Africa, Cape Town, which is well established as a world class tourist destination with local attractions including: Table Mountain, Lions Head, Kirstenbosch Botanical Garden, Robben Island, Cape Point with Cape of Good Hope, the Penguin Colony at Simons Town, Wine Route, Hermanus the home of Whales, and beautiful beaches both in Atlantic and Indian Oceans (<http://www.capetown.travel/>).

The IEEE PES-IAS PowerAfrica Conference 2018 invites professionals and researchers with interest or experience in addressing energy challenges in developing countries to submit papers on their ideas and research. All relevant areas of specialization are welcome including engineering, finance, and the social sciences. Examples of relevant topics include, but are not limited to: design of on- and off-grid microgrids, energy efficiency and industrial applications, renewable energy systems and energy storage, reliability of electricity provision, national or regional energy policies and markets, distribution and demand management, communications and automation for infrastructure and payment, and design of electrical machines, converters and actuators. Papers are limited to six pages in IEEE Conference written format. Accepted and presented papers will be published in the 5th IEEE PowerAfrica 2018 conference proceedings and submitted for inclusion in the IEEE Xplore Digital Library.

The technical program acknowledges pressures on supplies of energy and water, the need to make decisions under uncertainty, and emerging technical, commercial, and social innovations that have the potential to improve and spread services needed for economic and social development. The Conference will provide attendees with original investigations, real case studies and lessons learned, and future outlooks via a diversified technical program consisting of tutorials/workshops, keynote/plenary speeches, and oral presentations.

The conference theme covers African applications or relevant international experience in the following five key topic areas and indicative sub-topics, but not restricted to:

Infrastructure Advances: Automating, Auditing, and Data Analytics. Systems for Payment Collection • Outage Reporting • Condition Monitoring • Analytics for Diagnosis Energy Theft Detection • Customer Creditworthiness New Techniques and Technologies for Asset Management and Maintenance • Transactive Energy Frameworks, Internet of Every Thing

Energy Access Frameworks and Policies: Tariff and Market Design, Regulation, and the Role of Global Institutions • Local Growth: Skills, Jobs, Investors, and Lenders • Financial Case Studies: Options for Financial Instruments, Investor/Lender Arrangements • Monitoring and Evaluation of Rural and Peri-urban Infrastructure Projects

Transforming and Renewing Centralised Systems: Technical Design for Reliability, Signal Processing, Communications and Security, Protection • Business Design for Investment and Non-technical Loss Reduction • Grid-integration and Grid Code for Distributed Generation • Electrical Safety Operation and Planning Techniques for Uncertainty

Resilient Services from Energy, Water and Health: Energy/Water Nexus: Projects and Analysis Economic, Environmental, and Social Effects of Electrification, Energy Efficiency, Theft, Safety & Grid Resilience • Rural Energy Poverty Alleviation Definitions and Evaluation of Infrastructure Resilience, Environment Protection

Innovation in Components and Systems: Hybrid Energy Systems and Microgrid Design and Operation • Energy Storage: Advances in Diagnostics, Cell Technology, and Management • Conversion: Power Electronics, Machines, and Actuators • Delivery: Materials Research and Techniques for Aging or Novel Equipment

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