



Ahmed Abdi Yusuf Ali

Senior Member, IEEE | Associate Professor | NRF Rated Researcher

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Profile

Multidisciplinary academic and engineering professional with over 15 years of experience in electrical engineering, renewable energy systems, AI, and machine learning. Proven track record in postgraduate supervision, curriculum development, and collaborative research. Skilled in managing complex projects, leading AI innovation initiatives, and contributing to impactful publications in ISI/Scopus-indexed journals.

Education

- **DEng (Doctorate) in Electrical & Electronic Engineering**, University of Johannesburg
- **MEng (Master) in Electrical & Electronic Engineering**, University of Johannesburg
- **BSc (Hons) in Electrical & Electronic Engineering**, Applied Science University, Jordan
- **Postgraduate Program in AI & Machine Learning**, University of Texas at Austin
- **Master of Data Science** at Deakin University Australia

Academic Appointments

- University of Johannesburg, South Africa
Associate Professor | 2014 – Present
 - Module leader for: Programming II & III, Software Engineering, Microcontroller Systems, and Digital Systems.
 - Supervised 13 master's and 10 PhD students.
 - Authored and co-authored more than 190 research publications across high-impact journals, conferences, and book chapters.
 - Contributor to departmental AI and 4IR strategy.
- Artificial Intelligence Group (South Africa)
Head of Development | 2018 – Present
 - Leads projects in ML-based diagnostics, smart grids, and AI applications for energy systems.

Industry Experience

- Electrical Engineer, Alanim Group, Kuwait (2008–2009)
- Power Line Communication Engineer, Almoustahlik International, Kuwait (2010–2012)

Research Areas

- Artificial Intelligence & ML Applications
- Renewable Energy and PV Optimization
- Power Electronics
- Smart Grid Systems
- Finite Element Modelling

Selected Publications (ISI/Scopus)

- Energies – MPPT Control in Grid-Integrated PV Systems
 - Sustainability – Hybrid PV/Wind/Hydro Storage System Optimization
 - IET GTD – Cross-Country High Impedance Fault Diagnosis
 - IEEE CJECE – AI Forecasting of Hourly Solar Radiation
 - Elsevier – Energy Reports – Improved Firefly Algorithm for PV Systems
- Full list available on Google Scholar.

Grants, Projects & Editorial Work

- Guest Editor, Journal of Autonomous Intelligence
- Reviewer: Journal of Engineering Research, Energy Reports, Sustainability
- Lead investigator on projects funded by NRF and IEEE

Technical Proficiency

- Programming: Python, MATLAB, Octave, Java, C++
- Tools: PSPICE, R, Proteus, MS Office
- Platforms: LSTM, ConvLSTM, SVM, Firefly, CNN-LSTM, ANFIS, GA-ANN

Professional Memberships

- Senior Member, IEEE
- Member, Engineering Council of South Africa (ECSA)
- Member, Kuwait Society of Engineers (KSE)

References

- **Prof. Tshilidzi Marwala** – Rector, United Nations University | Former VC, UJ
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- **Prof. Bhakisipho Twala** – Deputy Vice-Chancellor, TUT
Email: BhakisiphoT@tut.ac.za
- **Prof. P. Sanjeevikumar** – Univ. of South-Eastern Norway / Murdoch Univ.
Email: p.sanjeevikumar.in@ieee.org