Australia Awards

Curtin University

Guest Lecture

‘Powering the Future: Overcoming Renewable Energy Challenges with Smart Grid Technologies’
By Professor Ahmed Abu-Siada

Thursday, 6 November 2025
2:00pm to 4:00pm (Jakarta time)

Indonesian graduates and scholars of Australian tertiary institutions who are interested in attending this event, please RSVP by Tuesday, 4 November, via this link: **http://oz.link/rsvpGL6NOV**

**Due to the limited availability of places, early registration is recommended. A link to this event will be shared with you after registration.*

Lecture overview

With the rapid growth of renewable energy sources such as wind and solar, their intermittent and variable nature presents new challenges in maintaining the reliability and stability of modern power grids. In this lecture, Professor Ahmed Abu-Siada from Curtin University will explore these critical issues, providing expert insights into how power systems can evolve to meet the demands of an increasingly renewable energy landscape.

The session will examine the effects of renewable intermittency on power system stability, unpacking the complexities and risks involved in integrating variable energy sources. Prof. Ahmed will also introduce Flexible AC Transmission System (FACTS) devices, which are advanced technologies that enhance grid flexibility, improve voltage control and strengthen overall system resilience. Through real-world case studies, he will demonstrate how FACTS devices have been successfully applied to optimise wind energy conversion systems, delivering measurable improvements in performance and grid integration.

This lecture will equip participants with the knowledge and practical strategies needed to address the challenges of renewable energy integration and to foster innovation in shaping a sustainable energy future for Australia.

Professor Ahmed Abu-Siada received his B.Sc. and M.Sc. degrees in Electrical Engineering from Ain Shams University, Egypt, in 1998, and his PhD from Curtin University, Australia, in 2004. He currently serves as a Full Professor and Director of Global Initiatives at Curtin University.

Prof. Ahmed’s research focuses on power systems, renewable energy, asset management, and fault diagnosis. He has supervised more than 40 Higher Degree Research (HDR) theses and authored over 300 journal articles and conference papers in these fields. Prof. Ahmed also holds multiple patents related to condition monitoring, fault diagnosis and building-integrated photovoltaic thermal panels.

A recognised leader in his field, Prof. Ahmed has delivered numerous keynote addresses at IEEE and other international conferences, served as General Chair for IEEE iSPEC 2022 and CMD 2018, and is the Founding Editor-in-Chief of two international journals. He also holds an Adjunct Professorship at the Institute of Technology Bandung.