

# POWER, ENERGY & CLEAN TECHNOLOGIES



## seminars

### Biography

Dr Jose Lopez-Roldan received the M.Sc. and Ph.D. degrees in electrical engineering from the University of Barcelona in 1993 and 1997 respectively. During his Ph.D. studies, he was a visiting-researcher at the R&D centres of Ontario-Hydro (Toronto), Schneider-Electric (Grenoble) and EDF (Paris).

He worked at VA TECH-Reyrolle in the UK from 1996 to 2000 as a senior engineer engaged in the development of Gas Insulated Switchgear. He joined Pauwels in Belgium in 2000 as R&D Project Manager in the Transformer Division and from 2002 to 2006 he was the engineering manager of the Substations Division.

From 2006 to 2016 he worked as Principal Consultant in Gas Insulated Switchgear for Powerlink Queensland in Australia. From 2016 to 2017 he was Research Manager of G&W Electric in the USA doing R&D in high voltage switchgear. Since 2018 he works as high voltage switchgear specialist in the Substation Standards department in Energy Queensland in Australia.

Jose has co-authored 60 papers on HV switchgear, substations and electrical insulation. He is a Fellow of the Institute of Engineers of Australia, senior member of the IEEE and he has been member of 11 international working groups of CIGRE, including WG A3.24 on internal arc withstand in HV switchgear.

He was 2016 National Professional Electrical Engineer of the Year of Engineers of Australia. From 2011 to 2018 he was an Adjunct Professor of the Queensland University of Technology, lecturing in High Voltage Switchgear and Condition Monitoring of HV plant.

### Speaker's contact details

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Date and Time:

**Friday 6 October 2023**

12:00pm (AEST) – start

12:55 – conclusion

*Time will be allocated for questions after the presentation*

*This seminar will be delivered in person  
and by livestream Zoom:*

**Venue: GP-P-419**

P-Block, Level 4, Room P419, [QUT Gardens Point](#)

**Zoom Delivery: [Join by Zoom](#) Password: 174621**

*The Energy Researchers at QUT are pleased to invite you in person or online  
to the hybrid PECT Seminar given by Dr Jose Lopez-Roldan from Energy Queensland*

## Simulation and Testing of the Effects of Internal Arc in MV and HV Switchgear: Differences between SF6 and Air

### Abstract

To guarantee the withstand of the internal arc generated inside the switchgear during a short-circuit and the safe relief of the hot and toxic gases produced is very important to assure the safety of the personnel operating and maintaining the plant.

The presentation will cover the following topics:

1. Understanding the effects of an internal arc inside a MV or HV switchgear enclosures.
2. Estimating the consequences of the internal arc such as pressure rise and enclosure burn-through.
3. Examining the influence of the pressure devices in a switchgear.
4. Utilising the type tests methods and current standards to ensure the switchgear withstand against an internal arc failure.
5. What are the different behaviours of testing the switchgear with SF6 and with air.

*NOTE: We encourage our audience to attend in person or by Zoom, since the material presented in this PECT seminar is a private property and QUT does not have rights for recording, publication or distribution of the content.*

**[RSVP via Eventbrite](#)**

**COB Thursday 5 October 2023**

