



ABOUT THE PRESENTERS

3:00 PM SEMINAR COMMENCES — Welcome from Peter Berry, Chief Executive of EEA

3:05 PM Nu'man Rashid — Unison

Title: Enhancing rating studies through soil digital twin



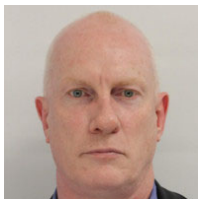
Nu'man Rashid is a Digital Engineering Specialist in Networks & Operation division at Unison Networks Limited, New Zealand. Nu'man presently leads the data driven decision making workstream within the company's digital strategy. Nu'man hold a PhD in EE from University of Canterbury and currently expanding his knowledge and passion in the data science field.

About: Electrical distribution network planning and design relies on good knowledge of field conditions. For underground cables, knowledge of the soil conditions allows network operators to optimise the selection of their asset to operate in the identified environmental condition whilst ensuring it has enough capacity to meet the load demand.

The technical challenge is to streamline the process of data collection from thermal sensors, soil samples, local site knowledge and then using those data to infer the exposure of distribution assets to the varying environmental condition. With the availability of sensors, improved cellular networks and increased application of Internet of Things, it presents an opportunity for network operators to digitalise spatial data from the fields and turn it into actionable information .

3:25 PM Darren Lucinsky — Electra

Title: IoT for a smarter grid



Darren has spent his career leading technology development and implementation teams for several commercial entities. Many of his developments and designs lead to patent filings with IPONZ and the World Intellectual Property Organisation. Darren has a patent in Battery Management and is Chair of the NZ Electricity Networks IoT Forum.

About: Low cost Internet of Things (IoT) is enabling LV network monitoring and customer participation in a transactive grid.

Together with providing low cost visibility and control for parts of networks not previously monitored, it also facilitates low-cost real-time interactions with consumers, providing them with real time energy management choices. The realisation path at Electra has implemented IoT comms media and progressively connected devices with desired capability across all voltage levels, including LV.

3:45 PM Dr Bhaba Das— Hitachi-ABB Power Grids

Title: Advance analytics for Transformer Asset Management



Dr. Bhaba Das is currently working as the Lead Digital Business Developer, Asia Pacific Middle East and Africa HUB of the Transformer Business of Hitachi-ABB Power Grids. He is based out of Singapore and is responsible for ABB Power Grids's digitalization push for digitally enabled transformers in the region. He graduated from the University of Canterbury, where he completed his PhD on harmonics mitigation in HVDC transformer using current reinjection. He was awarded the "EEA Young Engineer of the Year 2017" for his work on design and development of the "Smart Transformer". He is a senior member of IEEE.

About: A new asset performance management platform called APM Edge, based on the reliability centred maintenance (RCM) methodology for the fleet-wide assessment of power transformers that utilises the principle of fault tree analysis is now available from Hitachi-ABB Power Grids, Transformers. This presentation will present a case study on the utilisation of the expert system in the APM Edge on a 25 MVA transformer.