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## SPECIAL SESSION PROPOSAL

**Title: Power Quality and Condition in Smart Microgrids and Smart Communities**

**Proposer:** Dr M V Chilukuri, SMIEEE, VIT, Vellore

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In the recent years, several disruptive technologies evolved such as IoT, Big Data and Machine Learning whose success lays in the development of Smart Grid as well as Smart Cities. The key digital transformation is Power Quality which will facilitate reliable and safe operation of electrical grid as well as connected devices. The success of Smart Grid and Smart Cities is measured by seem less integration of condition monitoring and health assessment technologies with the help of IoT, Big Data and Machine Learning to improve the quality of electric supply as well as quality of asset life. TENCON provides a wonderful platform to host a special session on "**Power Quality and Condition Monitoring in Smart Microgrid and Smart Communities**" to bring various experts develop and discuss solutions to the need of Smart Microgrid and Smart Communities.

- Power Quality Standards for Smart Microgrid/Cities/Home
- Power Quality Issues in Grid Integration of Renewable
- Power Quality issues in Converters (VSD/HVDC)
- PQ/EMI/EMC Issues in Healthcare/Data Centres/Railways/Aircraft/Shipboard
- Demand Response in Smart Buildings
- Transactive Energy implementation in a Smart Community
- Smart Monitoring and Health Assessment
- Intelligent Diagnosis and Prognosis of Critical Equipment

**Submission Deadline: June 30, 2019**

**Paper Notification date: August 15, 2019**

**Camera-Ready: August 30, 2019**

Papers submitted for special sessions will be peer-reviewed in the same way as submissions to the regular tracks. Papers should conform to the IEEE format and specifications. Authors are requested to submit full paper (Maximum 6 pages, double- column US letter size) as PDF using the IEEE templates. The submission and review process are to be done through the TENCON website [www.tencon2019.org](http://www.tencon2019.org).

**Prospective authors are encouraged to submit innovative and good papers related to the special session THEME.**

**Biography:**Chilukuri received BE and ME in Electrical Engineering from the Andhra University, India in 1993 and 1996 respectively and PhD in Electrical Engineering from Multimedia University, Cyberjaya, Malaysia in 2011. He was a Lecturer at Faculty of Engineering, Multimedia University, Cyberjaya, Malaysia from 2001-12. He was an Assistant Professor at the Department of Electrical and Electronics Engineering, University of Nottingham Malaysia Campus from 2012 – 2015. Since, May 2016 he is an Associate Professor and Head of Power Quality & Condition Monitoring Research Group, at the School of Electrical Engineering, Vellore Institute of Technology, Vellore, India. Currently, he is working member of IEEE P825 Working Group on Transactive Energy and developing Working Guide. Earlier, he was member of IEEE PES & IAS Task Force on P1564 and UIE Working Group on Voltage Sag Indices.

He was involved in developing time-frequency signal processing techniques for power quality and condition monitoring in LV distribution system. He has conducted a tutorial on “**Intelligent Power Quality Analysis**” at IEEE TENCON, Chiang Mai (2004), and IEM, Kuala Lumpur. He also conducted a workshop on **Time-frequency Signal Processing** at UKM (2004), Telekom Malaysia R & D (2004). He was tutorial speaker on “**Power Quality and Condition Monitoring**”, at IEEE TENCON, Melbourne (2005). He conducted a tutorial on “**Smart Grid Communication Standards & Smart Metering**” at IEEE International Conference on Information Networking (ICOIN), Kuala Lumpur (2011). He is a Senior Member (2004) of IEEE Power Engineering Society, Industrial Application Society, Power Electronics Society, Member of Malaysian National Committee of CIGRE (2005-08), CIRED and IET, UK (2001 – 2012). He is organizing committee member of IEEE ICSIPA2011, IEEE ICSIPA2009, IEEE PECON06, IEEE PECON03 and CIGRE C6 Study Committee Colloquium on “**Rural Electrification for Socioeconomic Development**” (2007). In addition, he was a member of “**Asia Pacific Regional Conference and Exhibition on Power Quality**” organized by CIRED Malaysia. He is a reviewer of IEEE Transactions on Power Delivery, Smart Grid, and Signal Processing for the last 15 years.