



## **Dr. Tarlochan S Sidhu**

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### **Biography**

**Prof. Tarlochan S. Sidhu** received a B.E (Hons.) degree from Thapar Institute of Engineering and Technology, India and the M.Sc. and Ph.D. degrees from the University of Saskatchewan, Canada. He has worked for the Regional Computer Center, Chandigarh, India, Punjab State Electricity Board, India and Bell-Northern Research Ltd., Ottawa, ON, Canada. From July 1990 to June 2002, he was with the Department of Electrical Engineering, University of Saskatchewan, where he served as Professor and Graduate Chairman of the Department. From 2002-2011, he was Professor and Chair of the Electrical and Computer Engineering Department at the University of Western Ontario, London, Ontario, Canada. He also held the NSERC/Hydro One Networks Senior Industrial Research Chair in Power Systems Engineering. Effective January 2012, Dr. Sidhu joined the University of Ontario Institute Of Technology (now known as Ontario Tech University), Canada and served as the Dean of the Faculty of Engineering and Applied Science till Feb 2020 where he currently holds the rank of Professor. He has published more than 300 papers in refereed journals and conferences, has delivered many invited talks, short courses, tutorials around the world and has regularly provided consulting to power industries in Canada and abroad. Dr. Sidhu is a well-known international expert in the area of smart grid, substation automation and protection, and microgrids. He has supervised the work to completion of 25 Ph.D., 30 Master's and 14 post-doctoral fellows. Dr. Sidhu has provided technical leadership as Chair or Member of working groups or sub-committees for international professional organizations such as IEEE Power System Relaying Committee(PSRC) and CIGRE (France). He has been involved in development of international standards and guides in the general area of smart grid and specifically in substation automation. A number of these works have won awards from these organizations and he was given the Distinguished Service Award of IEEE PSRC in 2011.

Dr. Sidhu is the Founding Editor-in-Chief of the International Journal of Emerging Electric Power Systems published by De Gruyter(Germany). He is also serving as Specialty Chief Editor of Frontiers in Smart Grids journal. He has served as Editor, IEEE Transactions on Power Delivery (2001-2012), Member of Editorial Board, Electric Power Components and Systems (published by Taylor and Francis), Member of Editorial Board, Electric Power Systems Research (published by Elsevier) and as Member of Editorial Board, IEEE Power Engineering Letters. Dr. Sidhu is a Fellow of the Institution of Engineers (India), a Fellow of the Institution of Engineering & Technology (U.K), a Fellow of the Institute of Electrical and Electronics Engineers (USA) and a Fellow of the Canadian Academy of Engineering. He is also a Registered Professional Engineer in the Province of Ontario and a Chartered Engineer in the U.K.

#### ***Abstract***

# **Evaluation of Communication Technologies for IEC61850 based Distribution Automation System with Distributed Energy Resources**

Distribution systems are also undergoing changes due to introduction of renewables and electric vehicles. IEC61850 standard has been proposed and is being used in substations for protection, control and monitoring functions. Most of the installations have used wired communication for implementation of the standard. This talk will discuss the possibility of using wireless communication technologies for IEC61850-based distribution automation system with distributed energy resources. Comparison of the performance with wired communication technologies will be presented. Results obtained from simulation as well as laboratory implementation studies will be shared.