

Title: Smart Grid Research and Power Hardware in loop implementation of Smart Microgrid at The Hong Kong Polytechnic University

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About Prof.Xu

Zhao Xu received his B.Eng., M.Eng, and Ph.D. degrees from Zhejiang University, China, in 1996, National University of Singapore, Singapore, in 2002, and The University of Queensland, Australia, in 2006, respectively.

He is now Professor and Director of Power System Laboratory with The Hong Kong Polytechnic University. He was previously with Centre for Electric Power and Energy, Technical University of Denmark. His research interest includes grid integration of renewable energies and Evs, demand side, electricity market planning and management, and AI applications in power engineering. He is an Editor of IEEE POWER ENGINEERING LETTERS, IEEE TRANSACTIONS ON SMART GRID, and *Electric Power Components and Systems journal*. He is also serving as Chairman of IEEE HK Joint Chapter of PES/IES/IAS/PELS.

Abstract of Talk

Smart Grid features advanced technologies for monitoring, control and optimization of power grid, thus enabling high performance system operation. The research was started in 2000 and is ongoing at The Hong Kong Polytechnic University, followed by detailed

introduction on a power hardware in loop implementation of smart microgrid system at HKPU. Technical details concerning the microgrid system monitoring, data acquisition, and control will be given. Specially, based on the microgrid system, a new prediction free smart real time dispatch algorithm is developed and will be briefly presented.