



**THE CHINESE UNIVERSITY OF HONG KONG**  
Department of Information Engineering  
*Seminar*

**A Multiobjective Approach to  
Multimicrogrid System Design**

by  
**Professor Wei-Yu Chiu**  
National Tsing Hua University (NTHU)  
Taiwan

**Date : 25 Jan., 2018 (Thur.)**  
**Time : 3:00pm – 4:00pm**  
**Venue : Room 833, Ho Sin Hang Engineering Building**  
**The Chinese University of Hong Kong**

*Abstract*

In this talk, we discuss the design of a market operator and a distribution network operator for a network of microgrids in consideration of multiple objectives. For a power grid in the network, the net value derived from providing power to the network must be maximized. For a microgrid, it is desirable to maximize the net gain derived from consuming the received power. For an independent system operator, stored energy levels at microgrids must be maintained as close as possible to storage capacity to secure network emergency operation. To achieve these objectives, a multiobjective approach is investigated. By using the proposed approach, a fair scheme that does not advantage one particular objective can be attained.

*Biography*

Wei-Yu Chiu received his B.S. degree in electrical engineering and the Ph.D. degree in communications engineering from National Tsing Hua University (NTHU), Hsinchu, Taiwan in 2006 and 2010, respectively. From 2011 to 2012, he was a Postdoctoral Research Fellow with the Department of Electrical Engineering, Princeton University, Princeton, NJ, USA. He was a Visiting Scholar at Oklahoma State University in 2015 and at Southern University of Science and Technology in 2018. From 2013 to 2017, he was an Assistant Professor of Electrical Engineering with Yuan Ze University (YZU), Taiwan. He is currently an Assistant Professor of Electrical Engineering with NTHU, Taiwan. His research interests include multiobjective optimization, smart grid, and computational intelligence. Dr. Chiu received the Young Scholar Research Award bestowed by YZU in 2014, the Exploration Research Award bestowed by Pan Wen Yuan Foundation in 2015, the Outstanding Young Automatic Control Engineering Award bestowed by Chinese Automatic Control Society in 2016, and the Outstanding Young Scholar Academic Award bestowed by Taiwan Association of Systems Science and Engineering in 2017. Since 2015, he has been serving as an Organizer/Chair of the International Workshop on Integrating Communications, Control, and Computing Technologies for Smart Grid. He is the Lead Guest Editor of several feature topics in IEEE Communications Magazine.

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