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Education

- Ph.D Electrical Engineering, Zhejiang University, Hangzhou, China, March, 2007
Dissertation Title: Research on Digital Control Platform for Power Electronics Integrations
- M.S Electrical Engineering, Zhejiang University, Hangzhou, China, March, 2003
Thesis Title: Real-time Instrument for measuring power quality
- B.S. Industrial Automation, Hunan University of Technology, June 1995

Work and Academic Experience

Professor, June 2014-present

College of Automation Engineering
Nanjing University of Aeronautics and Astronautics

Research Fellow, Mar 2009-Feb.2012

School of Electrical Engineering and Computer Science
University of Central Florida, Orlando, Florida, USA

Associate Professor, June 2009-May, 2014

College of Automation Engineering
Nanjing University of Aeronautics and Astronautics

Assistant Professor, June 2007-May 2009

College of Automation Engineering
Nanjing University of Aeronautics and Astronautics

Principle Engineer, June,1998-July 2000

Lanxi Electric Power Administration,Zhejiang, China

Awards and Group Memberships

Awards

2013 Team advisor for the International Future Energy Challenge Competition(Second prize)

2013 Excellent advisor for undergraduates

Member

IEEE member

Reviewer for IEEE Transaction on Power Electronics, IEEE Transactions on Industry applications, IEEE transactions on Industrial Electronics, IEEE Transactions on Renewable Energy, IEEE Transactions on Industrial Informatics.

Tutorial for ECCE2010- Photovoltaic Microinverters: Topologies, Control Aspects, Reliability Issues, and Applicable Standards

Publications

Selected Journal Articles

- [1]. Haibing Hu*, Wenxi Yao, Zhengyu Lu, "Design and implementation of Three-Level Space Vector PWM IP core for FPGAs", IEEE Trans. Power Electronics. Vol.22, No. 6 Nov. 2007, pp.2234-2244.
- [2]. Haibing Hu*, Wisam Al-Hoor, Nasser Kutkut, Issa Batarseh and Z. John Shen. "Efficiency Improvement of Grid-tied Inverters at Low Input Power Using Pulse Skipping Control Strategy". IEEE Trans. Power Electronics. Vol.25, No. 12 Dec. 2010, pp.3129-3138.
- [3]. Haibing Hu*, Souhib Harb, Xiang Fang, Dehua Zhang, Qian Zhang, Z. John Shen, Issa batarseh, "A Three-port Flyback for PV Micro-Inverter Applications with Power Pulsation Decoupling Capability ". IEEE Trans. On Power Electronics, Vol.27,No.9, Sept. 2012,pp.3953-3964.
- [4]. Haibing Hu*, Wei Shi, Ying Lu, Yan Xing . "Design Considerations for DSP Controlled 400Hz Shunt Active Power Filter in an Aircraft Power System" . IEEE Trans. On Industrial Electronics. Vol.59, no.9,Sept. 2012,pp.3624-3634.
- [5]. Haibing Hu*, Harb Souhib, Nasser, Kutkut, Issa, Batarseh, John Shen." A Review of Power Decoupling Techniques for Micro-inverters with Three Different Decoupling Capacitor Locations in PV Systems". IEEE Transactions on Power Electronics. Vol.28, no.6, June, 2013, pp.2711-2726.
- [6]. Haibing Hu*, Harb Souhib, Nasser, Kutkut, Issa, Batarseh, John Shen." A Single-stage Micro-inverter Without Using Electrolytic Capacitors". IEEE Transactions on Power Electronics, Vol.28, no.6, June, 2013, pp.2677-2687.
- [7]. Haibing Hu*, Xiang Fang, John Shen, Issa Batarseh,"A Modified High-Efficiency LLC Converter with Two Transformers for Wide Input Voltage Range Applications", IEEE Transactions on Power Electronics, Vol.28, no.4, April, 2013, pp.1946-1960.
- [8]. Haibing Hu*; Xing, Y. "Design considerations and Fully Digital Implementation of 400Hz Active Power Filter for Aircraft Applications" .IEEE Transactions on Industrial Electronics. Vol.61,no.8 Aug. 2014,pp.3823-3834.
- [9]. Xiang Fang, Haibing Hu, John Shen, Issa Batarseh, "Operation Mode Analysis and Peak Gain Approximation of the LLC Resonant Converter". IEEE Trans. On Power Electronics. Vol.27, no.4, April, 2012, pp.2285-2296.
- [10]. Xiang Fang, Haibing Hu*, Lin Chen, Utsav Somani, Auadisian Emil, John Shen, Issa Batarseh,"Efficiency Oriented Optimal Design of the LLC Resonant Converter Based on Peak Gain Placement", IEEE Transactions on Power Electronics, Vol.28, no.5, May, 2013, pp.1985-1995.
- [11]. Ming Hua, Haibing Hu, Yan Xing, Zhongyi He. "Distributed Control for Asynchronous Motor Drive Inverters in Parallel Operation". IEEE Transactions on Industrial Electronics.Vol.58,no.12, Dec., 2011,pp.5361-5370.
- [12]. Ming Hua, Haibing Hu, Yan Xing, Guerrero, J.M. Multilayer Control for Inverters in Parallel Operation Without Intercommunications. IEEE Trans. On Power Electronics.Vol.27, no.8,Aug. 2012,pp.3651-3663.
- [13]. Wenxi Yao, Haibing Hu, Zhengyu LU, Comparisons of Space-vector Modulation and Carrier-based Modulation of Multilevel Inverter, IEEE Trans Power Electronics. Vol.23, No. 1 Jan. 2008, pp.45-51.
- [14]. Hongfei Wu, Runruo Chen, Junjun Zhang, Yan Xing, Haibing Hu, Hongjuan Ge. A family of Three-Port Half-Bridge Converters for a Stand-Alone Renewable Power System[J]. IEEE Transactions on Power Electronics, 2011, 26(9): 2697-2706.
- [15]. Qian Zhang, **Haibing Hu**, Dehua Zhang, Xiang Fang, Z.John Shen, Issa Batarseh, A Controlled-Type ZVS Technique Without Auxiliary Components for the Low Power DC/AC Inverter. IEEE Transactions on Power Electronics, 2013, 28(7): 3287-3296.
- [16]. Amirahmadi,A. ; LinChen ; Somani,U. ; **HaibingHu** ;Kutkut,N.; Bartarseh., High Efficiency Dual-Mode Current Modulation Method for Low-Power DC/AC Inverters. IEEE Transactions on Power Electronics, 2014, 29(6): 2638-2642.
- [17]. Hongfei Wu, Peng Xu, **Haibing Hu**, Zihu Zhou, and Yan Xing, " Multiport Converters Based on Integration of Full-Bridge and Bidirectional DC–DC Topologies for Renewable Generation Systems". IEEE Transactions on Industrial Electronics.Vol.61,no. 2, FEBRUARY 2014,pp.856-869.
- [18]. Amirahmadi, A. ; Haibing Hu ; Grishina, A. ; Qian Zhang ; Lin Chen ; Somani, U. ; Batarseh, I. "Hybrid ZVS BCM Current Controlled Three-Phase Microinverter ". IEEE Transactions on Power Electronics, Vol.29, no.4,April, 2014, pp.2124-2134.
- [19]. Lin Chen, Haibing Hu, Qian Zhang, Ahmadreza Amirahmadi, Issa Batarseh "Boundary Mode Forward-Flyback Converter with Efficient Active LC Snubber Circuit" .IEEE Transactions on Power Electronics. 2013.

Selected Conference Papers

- [1]. Haibing Hu, Qingbao Hu, Zhengyu Lu,Dehong Xu. Optimal PID Controller Design in PMSM Servo System Via Particle Swarm Optimization, IECON 2005, Carolina, USA, pp.79-83.
- [2]. Haibing Hu, Qingbao Hu, Zhengyu Lu. A simple repetitive controller embedded in PI-based UPS for reducing total harmonic distortion with nonlinear loads, PESC2006, Korea, pp.1-5.
- [3]. Haibing Hu, Wenxi Yao, Zhengyu Lu. Rapid construction of a 100kW three-level inverter for Synchronous Motor based on a universal digital platform, software building blocks and PEBBs, APEC2007, USA,pp.427-431.
- [4]. Haibing Hu, Tianjun Jin, Wenxi Yao, Zhengyu Lu, Zhaoming Qian. A Universal Digital Platform and Software Library for Power Electronic Systems Integration, IPEMC2006,Shanghai,China,pp.127-131.
- [5]. Haibing Hu,Tianjun Jin, Xianmiao Zhang, etal. A Floating-point Coprocessor Configured by a FPGA in a Digital Platform Based on Fixed-point DSP for Power Electronics, IPEMC2006,Shanghai, China, pp.1183-1187.
- [6]. Haibing Hu, Wenxi Yao, Yanxing, Zhengyu LU. A Generalized Algorithm of n-level Space Vector PWM Suitable for Hardware Implementation, PESC08, Rhode, Greece, pp.4472-4478.