

# Yongli Zhu

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## Education

- **University of Tennessee, Knoxville**  
PhD Student, Electrical Engineering Jan. 2014 - Dec. 2017  
GPA: 4.0/4.0
- **Iowa State University**  
graduate student, Electrical Engineering Aug. 2012 - Dec. 2013  
GPA: 3.86/4.0
- **State Grid Electric Power Research Institute (SGEPRI)**  
Master degree, Power System Sept. 2009 - Apr. 2012  
GPA: 87.88/100; Class Rank: 1/22  
(With first year courses in Southeast University, Nanjing)
- **Huazhong University of Science & Technology (HUST)**  
Bachelor degree, Electrical Engineering Sept. 2005 - Jun. 2009  
GPA: 85.2/100; College Major Rank: upper 15%

## Main Professional Experience

- 2014.1 - present: Research Assistant at University of Tennessee
- 2014.8 - present: Teaching Assistant at University of Tennessee
- 2008.7 - 2008.8: Wuhan Rising Technology Ltd, as an intern student joined the GPRS wireless metering project (supported by Wuhan city utility), Wuhan, China
- 2010.8 - 2012.3: State Grid Electric Power Research Institute (SGEPRI), as an intern student joined the microgrid group and studied microgrid (also VSC-HVDC) by PSCAD and MATLAB

## Books

- *Distributed generation and Microgrid technology* (Chinese edition) by Xu Qingshan, published by Posts & Telecom Press, 2011 (In charge of some chapters writing and proof)

## Papers

- Yongli Z., Bin W., Kai S., Using Energy Storage to Improve Power System Oscillation Damping (submitted), the 2016 IEEE PES General Meeting, Boston, Massachusetts.
- Yongli Z., Kai S., et al., Microgrid Security Assessment and Islanding Control by Support Vector Machine, the 2015 IEEE PES General Meeting, Denver, Colorado.
- Yongli Z., Songtao L., Load Profile disaggregation by Blind Source Separation: a Wavelets-assisted Independent Component Analysis Approach, the 2014 IEEE PES General Meeting, Washington D.C.
- Riyasat Azim, Kai Sun, Fangxing Li, Yongli Zhu, Hira Amna Saleem, Di Shi, Ratnesh Sharma, "A Comparative Analysis of Intelligent Classifiers for Passive Islanding Detection in Microgrids to July 2, 2015." IEEE PES PowerTech 2015, Eindhoven, Netherlands, June 29 - July 2, 2015.
- Riyasat Azim, Yongli Zhu, Hira Amna Saleem, Kai Sun, Fangxing Li, Di Shi, Ratnesh Sharma, "A Decision Tree Based Approach for Microgrid Islanding Detection," IEEE PES Innovative Smart Grid Technologies (ISGT) 2015, Washington DC, Feb. 17-20, 2015.
- Yongli Z., Simulation Study of PEM Fuel Cell and its Dynamic Characteristics. Proceedings of the 2013 IEEE PES General Meeting in Vancouver, Canada.
- Yongli Z., Jianguo Y., Review on key technologies and recent development of Microgrid [J]. Jiangsu Electrical Engineering, 31(3), May 2012. (in Chinese)
- Yongli Z., Jianguo Y., An Improved Newton Load Flow for Distributed Generation Based on Different Control Strategies. (APPEEC 2011, Ei & IEEE Xplore Indexed)

- Yongli Z., Jianguo Y., Comparative study of two stages and single stage topologies for Grid-Tie Photovoltaic Generation by PSCAD/EMTDC. (APAP 2011, IEEE Co-host)
- Yongli Z., Jianguo Y., Comparison research of three classic MPPT methods for photovoltaic system. The 27th Chinese Universities Symposium on Electrical Power System Automation, 2011.

## Academic Activities

- IEEE Transactions on Smart Grid, Reviewer (2013-2014)
- IEEE Transactions on Energy Conversion, Reviewer (2013-2014)
- IEEE Power and Energy Society, Student Member
- IEEE Power Electronics Society, Student Member

## Main Honors & Awards

- ECE department fellowship, University of Tennessee, Knoxville
- The 3rd prize of the 5th China Nationwide Embedded System Design Competition for College Students (Work name: An unattended substation monitoring system base on ZigBee technology), 2009.7
- Excellent students scholarship of State Grid Electric Power Research Institute, 2009 - 2011
- “Best Reader” Prize of Southeast University Library (rank 6th on the amount of borrowing books in semester 2009 - 2010)

## Main Research Projects

- “Novel Control Techniques for Enhancement of Microgrid Stability in the Islanded Mode”. Research project for NEC Lab Co., Ltd., 2014.1 - 2014.12
- “Distribution network power flow calculation with Distributed Generation”. Research project for Jiangmen city utility of China Southern Power Grid Co., Ltd. In Southeast University with Professor Qingshan Xu, 2010.6 - 2010.12
- “Impact of East China, Central China and North China grid interconnection by ultrahigh voltage transmission lines (AC 1000kV)”. Use BPA to calculate the 2012 operation data and study interface power flow control methods by sensitivity analysis, 2011.9
- “Chaos modulation technique for harmonics elimination in DC/DC converter”. In Huazhong University of Science & Technology, tutored by Professor Rui Xiong, 2007.11 - 2008.3

## Thesis & Reports

- Novel Control Techniques for Enhancement of Microgrid Stability. Reports for NEC labs, 2014
- Microgrid Lab Modeling and Control Study under Different Operation Conditions. Master degree thesis, 2012
- A Research on the Object-Oriented Transient Relay Modeling. Bachelor degree thesis. 2009
- Distribution network power flow calculation with Distributed Generations. Research report for Jiangmen city utility of China Southern Power Grid Co., Ltd. 2010
- Composing the chapter “Microgrid modeling and simulation” in “Critical technologies for Microgrid” Research Report for Headquarter of State Grid Corporation of China (with Prof. Gao Shan and Wu Zaijun of Southeast University, China), 2011.9 - 2011.10

## Computer and Hardware Skills

- **Programming languages & Platforms:**  
C++, FORTRAN, Python, R, Java, Ubuntu Linux, Eclipse, Visual Studio
- **Academic tools:**  
SigmaPlot, Origin, MathCAD, EndNote
- **Power system tools:**  
PSS/E, DSATools(TSAT,VSAT,etc.), PLEXOS, DIgSILENT, BPA, PSCAD/EMTDC, EMTP-RV, MATLAB/Simulink
- **Power Electronics tools:**  
PLECS, Saber 2008, OrCAD PSpice, Altium Designer, CCS 4; TI DSP 2812, MCS196 MCU, Fluke meters, Tektronix oscilloscope, Power Analyzer

- **Office processing:**  
Word, Excel, PowerPoint, Visio 2007; WinEdt 6 (Latex)
- **Database and big data related:**  
SQL Server, Oracle, MySQL, Hadoop, MapReduce

### **Extracurricular Activities**

- Volunteer for Sequoyah Elementary School "Engineering night" outreach event. Dec. 2014
- North American SynchroPhasor Initiative (NASPI) meeting. Knoxville, Tennessee, Mar. 2014
- Volunteer for Whittle Springs Middle School "Engineering night" outreach event. Feb. 2014
- Organize the 2011 New Year Evening for students in SGEPRI and work as an emcee
- Organize the 2011 ping-pong games and badminton games for SGEPRI students