

Ruiyao Chen

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Education

PhD student in Electrical Engineering, University of Central Florida, 2012-present

B.S. in Electrical& Information Engineering, Wuhan University of Science and Technology, 2008-2012

Research Area

Microwave Remote Sensing

Laboratory: Central Florida Remote Sensing Laboratory

Research Experience

◆Research Assistant, Direction of Intelligent Automation

- 02/2012-06/2012 Designed a WSN dimming system for multi-user activities. After study and compare of several algorithms, linear programming was adopted for optimal illumination adjustment vector based on the constructed light dimming model. Realized this algorithm by using MATLAB programming, and the goal of lower energy consumption was demonstrated by the simulated results.
- 05/2011-09/2011 A ZigBee WSN for real-time environment monitoring. After the understanding of the ZigBee technology, this protocol was chosen for the purposes of low power consumption, large-scale self-organizing and long-term survival. Cooperated to design the architectures for both of the software and hardware systems.
- 09/2010-05/2011 A method to trace the water pollution source based on the WSN technology. Two dimensional models were built up to illustrate the distribution of the polluted water. With the detected ion concentration from the nodes in the WSN, the position of the pollution source can be derived by least square method and least absolute deviation. These two methods were realized by MATLAB simulation, and the error rates of these two were evaluated, respectively.

Journal Articles

1. J. Yang, C. Ruan, R.Y. Chen, H.Q. Fu, "Realization of WSN monitoring system based on ZigBee," *Submitted*.
2. S.S. Chen, H.P. Chen, R.Y. Chen, "A Light Dimming Algorithm Based On Users' activities for Wireless Sensor Networks," *Submitted*

Patent

J. Yang, L. Chai, F. Luan, R.Y. Chen, "A Tracking Method of Water Pollution Source Based on Wireless Sensor Networks," Chinese Patent Publication Number: 201110359281

Honors & Awards

- 05/2012 Outstanding Graduate, WUST (top 5%)
- 2010-2011 Excellent Student, WUST
- 2008,2011 Second-class Academic Scholarship (twice), WUST
- 2008,2011 Excellent Student Leader (twice), WUST
- 2009-2010 National Endeavor Award (5% of more than 30,000 students)
- 2009-2010 First-class Academic Scholarship, WUST
- 2009-2010 Excellent Student Pivotman, WUST
- 05/2010 Third Prize of Math Model Competition, WUST
- 2008-2009 Excellent Leader of the Youth League, WUST

English Proficiency

Excellent in writing and good at speaking

Computer Skills

- Programming languages C, Matlab, Assembly
- Office software Office 2007, Photoshop