Address: Blacksburg, VA, 24060, USA Email: qcs@vt.edu

## Education

Zhejiang University, Hangzhou, Zhejiang

2012.08- 2016.06

- ➤ Bachelor of Science in Engineering
- Major in Electrical Engineering
- Overall GPA: 3.85/4.0

## Virginia Tech, Blacksburg, VA

2018.01- Now

- > Master of Science in Engineering
- Doctoral of Science in Engineering
- Major in Electrical Engineering
- > Overall GPA: 3.96/4.0

# Research Experiences

**Virginia Tech Power and Energy Center (PEC)** 

2018.01- 2021.06

## Research Assistantship

dAta-driven modelinG preservinG contRollable dEr for outaGe mAnagemenT and rEsiliency (AGGREGATE) Project

- Designed Outage Management System based on the Advanced Meter Infrastructure for the distribution system
- Designed Feeder Restoration Module with Distributed Energy Resources (DERs) for the distribution system

Transactive Energy for EV Charging Management

- Develop protocols for home appliance in the scope of Transactive Energy
- Designed a blockchain-based Electric Vehicle Charging Management System: EV-TRADing Energy & Services (EV-TRADES)
- Proposed the concept of Transactive Energy for EVs providing ancillary service in the power grid

## Washington State University Energy System Innovation Center (ESIC) 2016.08- 2018.01 Research Assistantship

Advanced Distribution Management System (ADMS) Project

- Developed microgrid control and distribution system partition algorithm
- Proposed the cyber-security metric of remote terminal units at the distribution system level

# Zhejiang University Lab of High-Performance Computing in Power System 2014.07-2016.07 Research Assistantship

High-performance Computation of Power System Project

- Designed a Distributed Power System Analysis Package
- ➤ Modeled the converters in HVDC transmission

#### **Zhejiang University Lab of Electronic Innovation**

2015.04-2016.07

- Led the group and won national awards in China for Electronic Design of Smart Switches, Smart Socket, Wind Pendulums, and High-Frequency Signal Generator
- ➤ Designed high-performance PID controller for Hoverboards and Quadcopters
- Developed a digital DC power and functional generator

## **Publication**

C. Qi, C. -C. Liu, X. Lu, L, Yu, and M. Degner, "Transactive Energy for EV Owners and Aggregators: Mechanism and Algorithms," *IEEE Transactions on Sustainable Energy*, (accepted) DOI: 10.1109/TSTE.2023.3253162

- C. Qi and C. -C. Liu, "Integrated Outage Management with Feeder Restoration for Distribution Systems With DERs," *IEEE Access*, vol. 9, pp. 112978-112993, 2021
- V. Venkataramanan, C. Qi, A. M. Annaswamy, C. -C. Liu and A. K. Srivastava, "A Two-Step Restoration Scheme with DER Controllability for Resilient Distribution Systems," 2021 IEEE Industry Applications Society Annual Meeting (IAS), 2021, pp. 1-7

# **Honors**

Pratt Scholarship in Virginia Tech	2021
The National Electronic Design Contest Second Class Prize	2015
The Provincial Electronic Design Contest First Class Prize	2015
The Provincial Physics Innovation Competition Third Class Prize	2013
Zhejiang University Electronic Design Contest First Class Prize	2014

# **Skill**

➤ Proficient in (Programming Language): C, Python, VHDL, JavaScript, Basic, Pascal, Assembly Language, Solidity Language, SQL

➤ Skillful in (Software) MATLAB, OpenDSS, GridLAB-D, WindMil, Simulink, MatrikonOPC, MySQL, Solidity, VMware, LabVIEW, PSS/E

# **Social Activity**

	Power and Energy Center Annual Conference of Virginie Tech	Student Co-Chair
$\triangleright$	IEEE Access	Reviewer
$\triangleright$	Science & Technology Explorer Club of Zhejiang University	Chair
$\triangleright$	Students' Union of the College of Electrical Engineering	Vice-Chair