

WEI QI

☎ 1(514)398-2064 ✉ wei.qi@mcgill.ca 🌐 www.mcgill.ca/desautels/wei-qi

RESEARCH INTERESTS

Energy and transportation systems optimization; smart cities; sharing economy; data analytics

APPOINTMENT & EDUCATION

McGill University <i>Assistant Professor, Desautels Faculty of Management</i>	Montreal, Quebec, Canada From August 2017
Lawrence Berkeley National Laboratory <i>Postdoctoral Fellow, China Energy Group</i>	Berkeley, CA March 2016 - June 2017
University of California, Berkeley <i>Ph.D. in Industrial Engineering and Operations Research (IEOR)</i> Minors: Statistics, Economics	Berkeley, CA December 2015
University of California, Los Angeles <i>M.S. in Process Systems Engineering</i>	Los Angeles, CA June 2011
Zhejiang University <i>B.Eng. in Control Science and Engineering</i> <i>Chu Kochen Honor School</i>	Hangzhou, China July 2010

PUBLICATIONS & WORKING PAPERS

OPERATIONS RESEARCH & OPERATIONS MANAGEMENT

- [1] **Wei Qi**, Yong Liang and Zuo-Jun Max Shen. Joint Planning of Energy Storage and Transmission for Wind Energy Generation. *Operations Research*, 63.6 (2015): 1280-1293.
- [2] **Wei Qi**, Lefei Li, Sheng Liu and Zuo-Jun Max Shen. Shared Mobility for Last-Mile Delivery: Design, Operational Prescriptions and Environmental Impact. Forthcoming in *Manufacturing & Service Operations Management*.

ENERGY, TRANSPORTATION AND WATER SYSTEMS

- [3] **Wei Qi**, Bo Shen, Hongcai Zhang and Zuo-Jun Max Shen. Coordinating and Sharing Demand-Side Energy Resources - A Conceptual Design. *Energy*, vol.135, 15 September 2017, Pages 455-465.
- [4] Hongcai Zhang, Scott Moura, Zechun Hu, **Wei Qi** and Yonghua Song. A Second Order Cone Programming Model for PEV Fast-Charging Station Planning. Forthcoming in *IEEE Transactions on Power Systems*.
- [5] **Wei Qi**, Zhiwei Xu, Zuo-Jun Max Shen, Zechun Hu and Yonghua Song. Hierarchical Coordinated Control of Plug-in Electric Vehicles Charging in Multi-family Dwellings. *IEEE Transactions on Smart Grid*, 5.3 (2014): 1465-1474.
- [6] **Wei Qi**, Jinfeng Liu and Panagiotis D. Christofides. Distributed Supervisory Predictive Control of Distributed Wind and Solar Energy Generation Systems. *IEEE Transactions on Control Systems Technology*, 21.2 (2013): 504-512.

- [7] **Wei Qi**, Jinfeng Liu and Panagiotis D. Christofides. Supervisory Predictive Control for Long-Term Scheduling of an Integrated Wind/Solar Energy Generation and Water Desalination System. *IEEE Transactions on Control Systems Technology*, 20.2 (2012): 504-512.
- [8] **Wei Qi**, Jinfeng Liu and Panagiotis D. Christofides. A Distributed Control Framework for Smart Grid Development: Energy/Water System Optimal Operation and Electric Grid Integration. *Journal of Process Control*, 21.10 (2011): 1504-1516.
- [9] **Wei Qi**, Jinfeng Liu, Xianzhong Chen and Panagiotis D. Christofides. Supervisory Predictive Control of Stand-Alone Wind-Solar Energy Generation Systems. *IEEE Transactions on Control Systems Technology* 19.1 (2011): 199-207.

CONFERENCE PAPERS AND TECHNICAL REPORT

- [10] Hongcai Zhang, **Wei Qi**, Zechun Hu and Yonghua Song. Planning Hydrogen Refueling Stations with Coordinated On-Site Electrolytic Production. 2017 IEEE PES General Meeting.
- [11] Hongcai Zhang, Scott Moura, Zechun Hu, **Wei Qi** and Yonghua Song. Joint PEV Charging Station and Distributed PV Generation Planning. 2017 IEEE PES General Meeting.
- [12] **Wei Qi**, Jinfeng Liu and Panagiotis D. Christofides. A Two-Time-Scale Framework for Supervisory Predictive Control of an Integrated Wind/Solar Energy Generation and Water Desalination System. In *Proceedings of the American Control Conference*, pages 2677-2682, San Francisco, California, 2011.
- [13] **Wei Qi**, Jinfeng Liu and Panagiotis D. Christofides. Supervisory Predictive Control of an Integrated Wind/Solar Energy Generation and Water Desalination System. In *Proceedings of the 9th International Symposium on Dynamics and Control of Process Systems*, pages 821-826, Leuven, Belgium, 2010.
- [14] **Wei Qi**, Roger Sathre, William Morrow and Arman Shehabi. 2015. Unit Price Scaling Trends for Chemical Products. Berkeley, CA: Lawrence Berkeley National Laboratory. *LBNL-189844*.

ESSAYS IN DATA-DRIVEN ALGORITHMS

- [15] **Wei Qi**, Antje Dittmer and Niklas Karlsson. An Online Latency Estimation Algorithm. Research report at AOL Inc., 2014.
- [16] A Smart Thermostat Design Based on the Learning Model of User Behaviors (with Cheng Lyu and Luming Wang).

PRESENTATIONS AND INVITED TALKS

INFORMS Annual Meetings, 2013-2017
 MSOM Conference, Toronto, Canada, June 2015
 AOL Advertising R&D Center, Palo Alto, CA, August 2014
 Amazon, Seattle, WA, January, 2017

SERVICE

Journal Referee

Operations Management: MSOM, Decision Sciences, Omega, Naval Research Logistics
 Journal of Cleaner Production

Engineering: IEEE Transactions on Smart Grid
 IEEE Transactions on Power Systems
 IEEE Transactions on Control Systems Technology
 IEEE Transactions on Industrial Electronics
 IEEE Transactions on Intelligent Transportation Systems
 Journal of Intelligent Systems
 Energy Policy

Invited Session Chair

- “Sharing Logistics,” INFORMS Annual Meeting, Nashville, TN, 2016
- “Delivery Services,” INFORMS Annual Meeting, Houston, TX, 2017
- “Electric Vehicles,” INFORMS Annual Meeting, Houston, TX, 2017

TEACHING EXPERIENCE

Instructor, McGill University

Faculty of Management: Business Statistics

Teaching Assistant, UC Berkeley

RESEARCH EXPERIENCE

University of California, Berkeley Berkeley, CA
Graduate Student Researcher August 2011 – December 2015

- Supply chain network planning for renewable energy; Coordination of electric vehicle charging; Data-driven energy management systems; Municipal water infrastructure planning
- Supply chain management for emerging technologies; Logistic systems planning and management

Lawrence Berkeley National Laboratory Berkeley, CA
Researcher, Sustainable Energy Systems Group, China Energy Group May 2012 – June 2017

- BEAM (Behavior Energy Autonomy Mobility): business model design and operations strategies for urban transportation systems (e.g. autonomous vehicles)
- ARPA-E project: life-cycle supply chain cost analysis for an advanced energy-efficiency technology
- U.S.-China Climate Change Working Group: design and management of demand-side energy resources

AOL Inc. Palo Alto, CA
Summer Data Scientist Intern, Algorithm Research Group May – August 2014

- Recursive learning algorithm design for online display advertising based on a mixture model
- AOL ACE Internship Award (recognized as one of the 8 best interns out of 250 candidates)

University of California, Los Angeles Los Angeles, CA
Research Associate, Process Control & Applied Mathematics Laboratory February 2010 – June 2011

- Optimal operations of wind/solar energy generation and water desalination systems

HONORS & AWARDS

AOL ACE Internship Award (recognized as one of the 8 best interns out of 250 candidates)	2014
Meritorious Winner of 2009 International Mathematical Contest in Modeling (MCM/ICM)	2009
Excellence Certificate of Chu Kochen Honor School, Zhejiang University (top 2%)	2010
UC Berkeley Full Fellowship	2011-2012
UCLA Full Engineering Graduate Research Fellowship	2010-2011