Qianqian **Ma**

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Education

Ph. D Candidate — *Boston, USA*

Boston University, Electrical and Computer Engineering — *Sep. 2017 - Present*

- Research: Distributed optimization and Learning. Advisor: Alex Olshevsky. GPA: 3.7/4.0

Master of Engineering — *Harbin, China*

Harbin Institute of Technology, Electrical Engineering — *Sep. 2015 - Jul. 2017*

- Research: Optimization and Control. Advisor: Guangcheng Ma. GPA: 3.4/4.0

Bachelor of Engineering — *Harbin, China*

Harbin Institute of Technology, Electrical Engineering — *Aug. 2010 - Jun. 2014*

- Major: Automation. GPA: 3.5/4.0

Research Interests

Optimization, Machine Learning, Online Learning, Distributed and networked systems, Control

Skills

Operation System: Windows, Linux (Ubuntu), and MacOS

Languages: Python, MATLAB, C/C++

Software: MATLAB/Simulink, Multisim, AutoCAD, Pspice, Quartus

Research Experience

Boston University, Electrical and Computer Engineering Department — *Boston, USA*

Research Assistant — *Sep. 2017 - Present*

- Low-rank matrix completion with adversaries and noises, Crowdsourcing
- Graph representation learning and domain adaption learning
- Projection-free online learning algorithms, Frank - Wolfe type online algorithms
- Network independent distributed optimization algorithms
- Structural controllability

Harbin Institute of Technology, Space Control Technology Lab — *Harbin, China*

Research Assistant — *Sep. 2015 - Jul. 2017*

- The stability and stabilization analysis of nonlinear system with time-delay
- The analysis for the novel imperfect premise matching approach and conventional PDC method
- Fuzzy filter design for nonlinear systems with time-varying delay

Harbin Institute of Technology, Space Control Technology Lab — *Harbin, China*

Research Assistant — *Jan. 2014 - Jun. 2014*

- Designed a novel attitude control algorithm based on the sliding model theory and feedback linearization approach, and did a simulation analysis based on the MATLAB/SIMULINK
- Investigated a physical simulation experiment scheme whose core component is a 3-axis air bearing table, and analyzed the attitude control subsystem of the physical simulation system

Publications

1. **Qianqian Ma**, Li Li, Guangcheng Ma, Daling Jia, Hongwei Xia, "A new fuzzy H_∞ filter design for nonlinear time-delay systems with mismatched premise membership functions", *IFAC - Papers Online,* v 50, n 1, p 1433-1438, July 2017.
2. **Qianqian Ma**, Hongwei Xia, Guangcheng Ma, Yong Xia, Chong Wang, "Improved stability and stabilization criteria for T-S fuzzy systems with distributed time-delay", *Data Mining and Big Data - 2nd International Conference,* p 517-526, 2017.
3. **Qianqian Ma**, Li Li, Junhui Shen, Haowei Guan, Guangcheng Ma, Hongwei Xia, "Improved fuzzy H_∞ filter design method for nonlinear systems with time-varing delay", *2017 IEEE International Conference on Systems, Man and Cybernetics (SMC)* p 722-727, 2017.

4. **Qianqian Ma**, Lili, Hongwei Xia, Mingyang Yang and Guangcheng Ma, "New Results on Stability and Stabilization Analyses for T-S fuzzy Systems with Distributed Time-Delay under Imperfect Premise Matching", *2016 ICICIP, Angkor, Cambodia,* p 143-148.

5. Lili, **Qianqian Ma**, Hongwei Xia, Guangcheng Ma and Dali Zhang, "New H_∞ Filter Design Approach for Time-Delay Fuzzy-Model-Based System under Imperfect Premise Matching", *2016 ICICIP, Angkor, Cambodia* p 5-10.

Presentation

7th International Conference on Intelligent Control and Information Processing (2016ICICIP) *Angkor, Cambodia*

Presenter *Dec. 1-4 2016*

- Presented the papers "New Results on Stability and Stabilization Analyses for T-S fuzzy Systems with Distributed Time-Delay under Imperfect Premise Matching" and "New H_∞ Filter Design Approach for Time-Delay Fuzzy-Model-Based System under Imperfect Premise Matching"

2nd International Conference on Data Mining and Big Data (DMBD 2017) *Fukuoka, Japan*

Presenter *July. 27 - August. 1*

- Presented the paper "Improved stability and stabilization criteria for T-S fuzzy systems with distributed time-delay"

Working Experience

Teaching Assistant *Boston, USA*

ENG EC503 (Learning from Data) *2018fall, 2019Spring*

- A **machine learning** course covering the general theories, algorithms, and applications of machine learning tasks.
- The course focus on the following major classes of supervised and unsupervised learning problems: classification, regression, density estimation, clustering, dimensionality reduction, kernels, robustness regularization, and neural networks

Teaching Volunteer *Yunnan, China*

Ninglang No.1 Senior High School of Yunnan Province *Jul. 2014 - Jul. 2015*

- Worked as a **full-time teacher for 1 year time** in a senior high school which locates in Yunnan province of china. It was a voluntary project for graduate student of HIT

Awards

2016.09 The First Prize of Post-Graduate Students Scholarship Recipient
2016.05 The *May-4th Medal* for Excellent Youth (**top 0.1%**)
2016.03 The *University-level Outstanding Communist Youth member*
2015.09 The First Prize of Post-Graduate Students Scholarship Recipient
2012.10 The *China-Survey* University Students Social Research Scholarship Recipient (**top 2.5%**)
2011.03 The Second Prize of Renmin Scholarship Recipient