

# HAN WANG

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## EDUCATION

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**Columbia University, New York, NY**

2020 - Present

Ph.D. in Electrical Engineering

Department of Electrical Engineering

Advisor: James Anderson

GPA: 3.9042 / 4.00

**University of Pennsylvania, Philadelphia, PA**

2018 - 2020

M.A. in Applied Mathematics

Department of Applied Mathematics and Computational Science

Advisor: Victor M. Preciado

GPA: 4.00 / 4.00

**National University of Singapore, Singapore**

2017 - 2018

M.S in Mathematics

Department of Mathematics

Advisor: Haizhao Yang

GPA: 4.75 / 5.00

**Stanford University, CA, USA**

2015

Summer school in Financial Modeling and Statistics

**Capital University of Economics and Business, Beijing, China**

2013 - 2017

B.S in Economics

Department of Economics

Advisor: Jiazhang Zhao

GPA: 4.24 / 5.00 Rank: 1 / 121

**Research Interests:** Federated Learning, Large-scale Optimization, Randomized Algorithm, Control Theory, Machine Learning

## PUBLICATIONS

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1. **Han Wang**, Siddhartha Marella, James Anderson. *FedADMM: A Federated Primal-Dual Algorithm Allowing Partial Participation*. arXiv:2203.15104 [pdf]
2. **Han Wang**, James Anderson. *Learning Linear Models Using Distributed Iterative Hessian Sketching*. 4th Annual Learning for Dynamics Control Conference, Stanford, CA (will appear in PMLR). [pdf]
3. **Han Wang**, James Anderson. *Large-Scale System Identification Using a Randomized SVD*. Accepted to 2022 American Control Conference. [pdf]
4. **Han Wang**, Shaoru Chen, Victor Preciado, Nikolai Matni. *Robust closed-loop model predictive control via system level synthesis*. IEEE Conference on Decision and Control (CDC), 2020. [pdf]
5. **Han Wang**, Mahyar Fazlyab, Shaoru Chen and Victor Preciado. *Robust Convergence Analysis of Three-Operator Splitting*, Allerton Conference on Communication, Control, and Computing, Urbana, IL, 2019. [pdf]
6. Jiang Chen, **Han Wang**, Xin Zhang, Sihan Chen and Zongyu Bao. *Analysis of carbon emissions from transportation in Beijing*, International Journal of Services Technology and Management, 22:271-286, 2016. [pdf]

7. Jiang Chen, Zongyu Bao, Xinyue Liu, Yanan Liang, **Han Wang**. *Analysis of low-carbon transport in Beijing*, 2015 International Conference on Logistics, Informatics and Service Sciences (LISS).[\[pdf\]](#)

## HONORS AND AWARDS

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- Wei Family Scholarship (Departmental Fellowships for outstanding PhD students)
- National Scholarship (top 1% students nationwide)
- First Prize in the Chinese Mathematical Contest (8/ 70,000)
- President Scholarship (top 10 students in university and I ranked 1st)
- Chinese Telecom Scholarship (top 5000 students nationwide)
- Outstanding Undergraduate Thesis
- Meritorious Winner of The Interdisciplinary Contest in Modeling

## INTERNSHIP

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**Economic Researcher, BMW group (Beijing, China)**

April 2017 ~ July 2017

- Utilized statistical methods like SARIMA, SVM or BP to forecast macroeconomic index.
- Predicted CPI by using dynamic regression model and foreign exchange rate by using ARIMA+SVM.
- Predicted the growth rate of GDP by exploiting GARCH combined with SVM. Simulate the short-term trend of the population by GM (1, 1) and long-term trends with partial differential equations.

## PROFESSIONAL ACTIVITIES

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- **Teaching Assistant:** ESE 605 Modern Convex Optimization, UPenn, (Spring 2020), Instructor: Prof. Nikolai Matni; E4650 Convex Optimization for Engineering, Columbia University, (Fall 2020), Instructor: Prof. James Anderson
- **Peer Reviewer:** Conference on Neural Information Processing Systems (Neurips); IEEE Conference on Decision and Control (CDC); IEEE Control Systems Letters (L-CSS).