Linjia Wu

Email: linjiawu@stanford.edu Mobile: 650-250-9769
Address: 37 Angell Court, Apt 331, Stanford, CA, 94305

EDUCATION

Peking University 2014 - 2018
Bachelor of Engineering GPA: 3.78/4.00
Stanford University 2018 - present
Ph.D. Candidate, Operations Research

RESEARCH INTEREST

Applied Probability, Decision Making, Stochastic Modeling,Online Learning

PUBLICATIONS

1. **Exact Simulation of the Ornstein-Uhlenbeck Driven Stochastic Volatility Model**, with Chenxu L. *European Journal of Operations Research*, 2019, vol 275, pp 768-779

WORKING PAPER

1. **Asymptotically Optimal Control of a Centralized Dynamic Matching Market with General Utilities**, with Blanchet, J.H., Reiman, M.I., Shah, V. and Wein, L.M *(joined in the revision to be submitted shortly)*

RESEARCH EXPERIENCE

A/B Testing in Queuing System
Joint work with Jose Blanchet, Peter Glynn and Ramesh Johari

- Proposed a switchback experiment design for A/B testing in a queuing system
- Constructed a consistent, efficient and parametric MLE estimator for the difference of performance between two policies
- Considered the case with switching cost as well as the case under heavy traffic regime

Asymptotically Optimal Control of a Centralized Dynamic Matching Market with General Utilities
Joint work with Jose Blanchet, Martin Reiman, Viragh Shah, Lawrence Wein

- Considered a centralized two-sided dynamic and asymmetric matching market
- Proposed an utility-based threshold match policy
- Simulated utility threshold policy and analyzed the sensitivity of long-run average utility rate with utility thresholds
- Proposed a batch match policy and derived an upper and lower bound for the long-run average utility rate under batch policy

Exact Simulation of the Ornstein-Uhlenbeck Driven Stochastic Volatility Model
Joint work with Chenxu Li

- Proposed an exact simulation algorithm for the Ornstein-Uhlenbeck driven stochastic volatility model by deriving joint distribution
- Numerically showed the proposed algorithm outperforms the Euler discretization in the RMSE convergence rate
- Applied simulations to path-dependent options pricing

Generating and Reconstructing 3D Point Clouds via VAE
Joint work with Ye Ye

- Built an AE model to learn the compact representation of the high-dimensional point clouds
- Built a VAE model on the space of the compact representation to reconstruct and generate 3D point clouds

AWARDS

Dantzig-Lieberman Operations Research Fellowship	2020
The Liu and Perkins Family Graduate Fellowship	2018
China National Scholarship (0.2%)	2017
Meritorious Winner in 2017 Mathematical Contest in Modeling	2017
First Prize in National Physical Competition for college students	2016

BOOK TRANSLATIONS

- B. Minor, J. Doppa, and D. Cook. **Learning activity predictors from sensor data: Algorithms, evaluation, and applications**. *Tsinghua University Press*. Translated by Wenguo Wu and Linjia Wu

TEATCHING EXPERICE

Teaching Assistant, Department of MS&E
Responsible for holding office hours and leading problem sessions

- MS&E 226, Fundamentals of Data Science — Fall 2019, 2020
- MS&E 125, Applied Statistics — Winter 2019
- MS&E 221, Stochastic Modelling — Spring 2019

PROFESSIONAL SERVICES

Referee for: *Mathematics of Operations Research*

COMPUTER SKILLS

Python, C, Mathematic, MATLAB, R, Mosek