Ningyuan Chen

CONTACT INFORMATION

Yale School of Management
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EMPLOYMENT

Yale School of Management, New Haven, CT
Postdoctoral Associate — Oct 2015 - 2016

EDUCATION

Columbia University, New York, NY
Ph.D., Industrial Engineering and Operations Research — 2010 - 2015
M.S., Operations Research — 2010 - 2012

Peking University, Beijing, China
B.S., Mathematics — 2006 - 2010

RESEARCH INTERESTS

Revenue management and dynamic pricing; decision making under market microstructure (order books); applied probability, in particular, big-data analytics of information ranking on large networks

JOURNAL PUBLICATIONS

[1] Chen, Ningyuan, and Mariana Olvera-Cravioto. "Coupling on Weighted Branching Trees." *Advances in Applied Probability*, 48.2 (2016): 499-524.

[2] Chen, Ningyuan, and Mariana Olvera-Cravioto. "Directed Random Graphs with Given Degree Distributions." *Stochastic Systems* 3.1 (2013): 147-186.

WORKING PAPERS

[3] Chen, Ningyuan, Steven G. Kou, and Chun Wang. "A Partitioning Algorithm for Markov Decision Processes and Its Application to Market Microstructure." *Management Science*, revised and resubmitted.

[4] Chen, Ningyuan, Nelly Litvak, and Mariana Olvera-Cravioto. "Ranking algorithms on Directed Configuration Networks." *Random Structure and Algorithms*, minor revision.

[5] Chen, Ningyuan, and Steven G. Kou. "Does the Prohibition of Trade-throughs Hurt Liquidity Demanders?" *Working paper*.

[6] Chen, Ningyuan, and Guillermo Gallego. "Do Consumers Benefit from Dynamic Pricing?" *Working paper*.

[7] Chen, Ningyuan, Guillermo Gallego, and Steven G. Kou. "Dynamic Pricing for Dealership Markets." *Work in progress*.

CONFERENCE PROCEEDINGS

[8] Chen, Ningyuan, and Mariana Olvera-Cravioto. "Efficient Simulation for Branching Linear Recursions." To appear in *Proceedings of the Winter Simulation Conference. Winter Simulation Conference, 2015*.

[9] Chen, Ningyuan, Nelly Litvak, and Mariana Olvera-Cravioto. "PageRank in Scale-free Random Graphs." In *Proceedings of the 11th Workshop on Algorithms and Models for the Web Graph*, Beijing, China, December 2014.

TALKS

Do Consumers Benefit from Dynamic Pricing?
- INFORMS Annual Meeting, Philadelphia, 2015

Does the Prohibition of Trade-through Hurt Liquidity Demanders?
- INFORMS Annual Meeting, Philadelphia, 2015

A Partitioning Algorithm for Markov Decision Processes and Its Application to Market Microstructure
- First Berlin-Singapore Workshop on Quantitative Finance & Financial Risk, Berlin, Germany, 2014
- European Economic Association Annual Congress and Econometric Society European Meeting, Toulouse, France, 2014
- INFORMS Annual Meeting, San Francisco, 2014
- INFORMS APS Conference, Istanbul, Turkey, 2015

Ranking Algorithms on Directed Configuration Networks
- INFORMS Annual Meeting, San Francisco, 2014

Directed Random Graphs with Given Degree Distributions
- INFORMS APS Conference, San Jose, Costa Rica, 2013
- INFORMS Annual Meeting, Minneapolis, 2013
- Columbia Business School DRO Student Seminar Series, New York, 2013

Efficient Simulation for Branching Linear Recursions
- INFORMS APS Conference, Istanbul, Turkey, 2015

TEACHING

Columbia University, New York, NY

Teaching Assistant, responsible for weekly recitation and office hour

- IEOR E4731, Credit Risk/Credit Derivatives — Summer 2015
- IEOR E4700, Introduction to Financial Engineering — Fall 2010, Spring 2012
- IEOR E4404, Simulation — Fall 2012
- IEOR E4706, Foundations of Financial Engineering — Summer 2012
- IEOR E4500, Applications Programming for Financial Engineering — Spring 2011

Substitute Instructor

- IEOR E4106, Introduction to OR: Stochastic Models — February 2015
- SIEO W3600, Introduction to Probability and Statistics — April 2015

HONORS AND AWARDS

INFORMS Financial Services Section Best Student Paper Competition, finalist, 2015

Class of 1988 Doctoral Fellowship, 2015

Chinese National Scholarship (top 3%), 2007 - 2008

ACADEMIC SERVICE

Member of INFORMS, MSOM, APS, the Econometric Society

Referee for Mathematical Finance

PROFESSIONAL EXPERIENCE

National University of Singapore, Singapore

Visiting Scholar, Department of Mathematics — Oct 2013 - Nov 2013

Visiting Scholar, Risk Management Institute — Jan 2015

Columbia Business School, New York, NY

Research Assistant, working with Professor Mark Broadie — June 2011 - May 2014

- Conducted data analysis of all PGA Tour shots from 2003 to 2012
- Proposed an algorithm to rank the golfers' skill in different categories

Credit Suisse, New York, NY

Quantitative Summer Associate — June 2013 - Aug 2013

- Analyzed the strong correlation between the spot and the implied volatility movements
- Constructed and backtested a portfolio of options with different strikes to exploit the correlation

Last updated: July 1, 2016