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Jiacheng Zhang

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EDUCATION

PhD, Operations Research and Financial Engineering 2016 - Present
Princeton University, under the supervision of Professor Mykhaylo Shkolnikov and Professor Daniel Lacker

Bachelor, Pure and Applied Mathematics 2012 - 2016
Tsinghua University

RESEARCH ARTICLES

"Dynamics of observables in rank-based models and performance of functionally generated portfolios" (2018)
Joint work with Sergio A. Almada Monter and Mykhaylo Shkolnikov. *Annals of Applied Probability* **29**, 2849-2883.

"Inverting the Markovian projection, with an application to local stochastic volatility models" (2019)
Joint work with Daniel Lacker and Mykhaylo Shkolnikov. *Annals of Probability.* **48**, 2189-2211.

"Superposition and mimicking theorem for conditional McKean-Vlasov equations" (2020)
Joint work with Daniel Lacker and Mykhaylo Shkolnikov. *Submitted.* Preprint available at *arxiv.org/abs/2004.00099.*

"Sharp interface limit for the Giacomin-Lebowitz model of phase segregation"
Joint work with Sergey Nadtochiy and Mykhaylo Shkolnikov. *In preparation.*

"Interacting diffusions and the spectrum of sparse graphs"
Joint work with Daniel Lacker. *In preparation.*

RESEARCH TALKS & PRESENTATIONS

Dynamics of observables in rank-based models and performance of functionally generated portfolios
11th Oxford Princeton Workshop on Financial Mathematics and Stochastic Analysis, Princeton University, November 2018

Stationary stochastic local volatility
SIAM Conference on Financial Mathematics & Engineering (FM19), University of Toronto, June 2019

Inverting the Markovian Projection with an Application to Local Stochastic Volatility Models
Seminar talk in the Department of Applied Mathematics, the Hong Kong Polytechnic University, August 2019
4th Eastern Conference on Mathematical Finance, October 2019

Sharp interface limit on Giacomin-Lebowitz model for phase segregation
Graduate Student Seminar, October 2020,
Columbia Online Probability Seminar, November 2020

Interacting diffusions and spectrum of m-regular tree
Northeast Probability Seminar, November 2020

HONORS & AWARDS

Member of 'Tsinghua Xuetang Training Program' for excellence in academics 2012 – 2015
Tsinghua University

Chinese National Scholarship (1% of university students in China) 2012

TEACHING EXPERIENCE

Princeton University (Assistant in Instruction) 2016 - Present
Probability and Stochastic Systems (ORF 309, three times),
Stochastic Calculus (ORF 527, three times),
Probability theory (ORF526, once)

PROFESSIONAL ACTIVITIES

Referee for the SIAM Journal on Financial Mathematics