

Curriculum Vitae

Personal Information

Tao Chen, Ph.D.

Address: South Hall 5607A, Department of Statistics and Applied Probability, University of California, Santa Barbara, CA 93106

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Current Appointment

Visiting Assistant Professor
Department of Statistics and Applied Probability
University of California, Santa Barbara

July 2017 - Present

Past Appointments

Adjunct Professor
Department of Applied Mathematics
Illinois Institute of Technology

June 2017 – July 2017

Visiting Assistant Professor
Department of Applied Mathematics
Illinois Institute of Technology

August 2016 – May 2017

Education

Doctor of Philosophy: Applied Mathematics, Illinois Institute of Technology, USA, 2016

- Thesis: Dynamic Conic Finance via Backward Stochastic Differential Equations and Recursive Construction of Confidence Regions
- Advisors: Tomasz Bielecki, Igor Cialenco

Professional Master: Mathematical Finance, Illinois Institute of Technology, USA, 2012

Master of Science: Applied Mathematics, Nanjing University, China, 2010

Bachelor of Science: Applied Mathematics, Southeast University, China, 2007

Research Interests

Dynamic Risk Measures, Dynamic Acceptability Indices, Backward Stochastic Differential Equations, Derivative Pricing, Model Risk, Model Uncertainty, Stochastic Control, Statistical Inference.

Publications

Dynamic Conic Finance via Backward Stochastic Difference Equations (with Tomasz Bielecki and Igor Cialenco) SIAM J. Fin. Math. 6(1), 1068-1122. (55 pages), 2015.

Recursive Construction of Confidence Regions (with Tomasz Bielecki and Igor Cialenco) Electron. J. Statist. 11(2), 4674-4700. (27 pages), 2017

Adaptive Robust Control under Model Uncertainty (with Tomasz Bielecki, Igor Cialenco, Areski Cousin and Monique Jeanblanc) submitted for publication (22 pages), 2017

Presentations and Posters

Adaptive Robust Hedging under Model Uncertainty
Mathematical Finance Colloquium, University of Southern California, 2017

Market Making via Sub-scale Invariant Dynamic Acceptability Indices
CFMAR Seminar, University of California, Santa Barbara, 2017

Adaptive Robust Hedging under Model Uncertainty
SIAM Conference on Financial Mathematics & Engineering, Austin, 2016

Dynamic Conic Finance via Backward Stochastic Difference Equations
Methods of Mathematical Finance, Pittsburgh, June 2015

Conferences and Summer Schools

Robust Methods in Probability & Finance, Providence, 2017

SIAM Conference on Financial Mathematics & Engineering, Austin, 2016

Methods of Mathematical Finance, Pittsburgh, 2015

SIAM Conference on Financial Mathematics & Engineering, Chicago, 2014

SIAM Conference on Financial Mathematics & Engineering, Minneapolis, 2012

The 13th National Mathematics Graduate Summer School, 2008

- Dynamical Systems
- Courses: Differential Dynamical Systems, KAM Theory, Complex Systems

Awards

Applied Math McMorris Summer Stipend Award, 2012

Excellent Thesis, 2007

Jiangsu Provincial First Prize in China Undergraduate Mathematical Contest in Modeling, 2005

Academic Services

Reviewer for Scientific Journals

SIAM Journal on Control and Optimization

Journal of Banking and Finance

Teaching Experience

Department of Statistics and Applied Probability, University of California, Santa Barbara

- PSTAT 120A (Probability and Statistics) Fall 2017
- PSTAT 170 (Introduction to Mathematical Finance) Winter 2018

Department of Applied Mathematics, Illinois Institute of Technology

- MATH 252 (Introduction to Differential Equations) Fall 2016, Spring 2017
- MATH 333 (Matrix Algebra and Complex Variables) Spring 2017
- MATH 474 (Probability and Statistics) Summer 2017

Non-academic Professional Experience

Quantitative Risk Research Intern, CME Group, March 2012 - May 2012

- Data cleaning
- Constructing historical curves of major currencies

Other Experience

Research/Teaching Assistant, Illinois Institute of Technology, 2012 - 2016

Treasurer of IIT SIAM Student Chapter, 2012 - 2013

Grader at Department of Applied Mathematics, Illinois Institute of Technology, 2011-2012

Teaching Assistant, Department of Mathematics, Nanjing University, 2007 - 2010