

Yu-Jui Huang

- CONTACT INFORMATION** Department of Applied Mathematics *Phone:* +1 734-272-8869
University of Colorado *E-mail:* yujui.huang@colorado.edu
Boulder, CO 80309, USA *Website:* www.yujui-huang.com
- RESEARCH AREAS** Mathematical finance, stochastic control, optimal stopping, applied probability.
- EMPLOYMENT**
- University of Colorado**, Boulder, USA
Assistant Professor, Department of Applied Mathematics **Aug. 2016 onward**
- Dublin City University**, Dublin, Ireland
Lecturer in Financial Math., School of Mathematical Sciences **Sep. 2013-Aug. 2016**
- EDUCATION**
- University of Michigan**, Ann Arbor, USA (2008-2013)
Ph.D., Applied and Interdisciplinary Mathematics **May 2013**
- **Advisor:** Prof. Erhan Bayraktar
 - **Dissertation:** "Topics in Stochastic Control with Applications to Finance"
- National Taiwan University**, Taipei, Taiwan (2002-2007)
B.S., Mathematics **June 2007**
B.B.A., Finance **June 2007**
- GRANTS**
- National Science Foundation, Division of Mathematical Sciences**
Stochastic Games for Intergenerational Equity in Mathematical Finance
[DMS-1715439](#), PI, \$186,166 2017-2020
- AWARDS**
- 2015 Bruti-Liberati Fellowship**
Quantitative Finance Research Centre, University of Technology Sydney
- WORKING PAPERS**
- Martingale Optimal Transport for General Measurable Claims
(with Arash Fahim), first draft in preparation.
- SUBMITTED PAPERS**
- Yu-Jui Huang and Zhou Zhou (2018)
[Strong and Weak Equilibria for Time-Inconsistent Stochastic Control in Continuous Time](#)
 - Yu-Jui Huang and Saeed Khalili (2018)
[Optimal Consumption in the Stochastic Ramsey Problem without Boundedness Constraints](#)
 - Yu-Jui Huang, Shih-Chun Lin, and Yu-Chih Huang (2018)
[On Multi-Hypothesis Byzantine Sequential Change Detection](#)
 - Yu-Jui Huang and Zhou Zhou (2017)
[Optimal Equilibria for Time-Inconsistent Stopping Problems in Continuous Time](#)
Minor revision with **Mathematical Finance**
 - Yu-Jui Huang, Adrien Nguyen-Huu, and Xunyu Zhou (2017)
[General Stopping Behaviors of Naïve and Non-Committed Sophisticated Agents, with Application to Probability Distortion](#)
Minor revision with **Mathematical Finance**
 - Paolo Guasoni and Yu-Jui Huang (2016)
[Healthcare and Consumption with Aging](#)
Minor revision with **Finance and Stochastics**

PUBLICATIONS

- Yu-Jui Huang and Zhou Zhou (2018)
[The Optimal Equilibrium for Time-inconsistent Stopping Problems - the Discrete-Time Case](#)
SIAM Journal on Control and Optimization, forthcoming.
- Yu-Jui Huang and Adrien Nguyen-Huu (2018)
[Time-consistent Stopping under Decreasing Impatience](#)
Finance and Stochastics, Vol. 22, Issue 1, pp 69–95.
- Xiaoshan Chen, Yu-Jui Huang, Qingshuo Song, and Chao Zhu (2017)
[The Stochastic Solution to a Cauchy Problem for Degenerate Parabolic Equations](#)
Journal of Mathematical Analysis and Applications, Vol. 451, Issue 1, pp 448-472.
- Arash Fahim and Yu-Jui Huang (2016)
[Model-independent Superhedging under Portfolio Constraints](#)
Finance and Stochastics, Vol. 20, No. 1, pp. 51–81.
- Erhan Bayraktar, Yu-Jui Huang, and Zhou Zhou (2015)
[On Hedging American Options under Model Uncertainty](#)
SIAM Journal on Financial Mathematics, Vol. 6, No.1, pp. 425-447.
- Erhan Bayraktar and Yu-Jui Huang (2013)
[Robust Maximization of Asymptotic Growth under Covariance Uncertainty](#)
Annals of Applied Probability, Vol. 23, No. 5, pp. 1817–1840.
- Erhan Bayraktar and Yu-Jui Huang (2013)
[On the Multi-Dimensional Controller-and-Stopper Games](#)
SIAM Journal on Control and Optimization, Vol. 51, No. 2, pp. 1263–1297.
- Erhan Bayraktar, Yu-Jui Huang, and Qingshuo Song (2012)
[Outperforming the Market Portfolio with a Given Probability](#)
Annals of Applied Probability, Vol. 22, No. 4, pp. 1465–1494.

RESEARCH VISITS

- | | |
|--|----------------------|
| University of Technology Sydney , Sydney, Australia
Quantitative Finance Research Centre | December 2015 |
| City University of Hong Kong , Hong Kong, China
Department of Mathematics | May-June 2013 |

INVITED TALKS
(2011-2018)

- | | |
|--|--------------------------|
| <ul style="list-style-type: none"> • <i>AIMS Conference on Dynamical Systems, Differential Equations and Applications</i>
Taipei, Taiwan | July 6, 2018 |
| <ul style="list-style-type: none"> • <i>Symposium on Optimal Stopping — in Memory of Larry Shepp</i>
Rice University | June 28, 2018 |
| <ul style="list-style-type: none"> • <i>Applied Mathematics Colloquium</i>
The Hong Kong Polytechnic University | May 21, 2018 |
| <ul style="list-style-type: none"> • <i>Byrne Workshop on Stochastic Analysis in Finance and Insurance</i> (Plenary speaker)
University of Michigan | May 9, 2018 |
| <ul style="list-style-type: none"> • <i>Mathematical Finance and Applied Probability Seminar</i>
University of Connecticut | April 11, 2018 |
| <ul style="list-style-type: none"> • <i>Mathematical Finance and Probability Seminar</i>
Rutgers University | March 20, 2018 |
| <ul style="list-style-type: none"> • <i>Probability Seminar</i>
University of Colorado, Boulder | November 16, 2017 |
| <ul style="list-style-type: none"> • <i>Mathematical Finance Seminar</i>
Columbia University | November 9, 2017 |
| <ul style="list-style-type: none"> • <i>Seminar on Financial Mathematics</i>
National Center for Theoretical Sciences, Taipei, Taiwan | July 11, 2017 |
| <ul style="list-style-type: none"> • <i>Stochastic Analysis and Financial Mathematics Common</i>
Worcester Polytechnic Institute | March 27, 2017 |

- *SIAM Conference on Financial Mathematics and Engineering*
Austin, Texas **November 19, 2016**
- *Mathematical Finance Colloquium*
University of Southern California **September 26, 2016**
- *Stochastics Seminar*
National Central University, Taoyuan, Taiwan **June 3, 2016**
- *Probability Seminar*
Academia Sinica, Taipei, Taiwan **May 30, 2016**
- *Mathematical Finance Seminar*
Boston University **February 1, 2016**
- *Statistics Seminar*
University of Toronto **January 28, 2016**
- *Special Mathematics Departmental Seminar*
Rutgers University **January 26, 2016**
- *Nicola Bruti-Liberati Lecture*
Quantitative Methods in Finance Conference (QMF), Sydney **December 18, 2015**
- *Special Applied Mathematics Departmental Seminar*
University of Colorado at Boulder **December 1, 2015**
- *Nomura Seminar in Mathematical Finance*
University of Oxford **June 4, 2015**
- *ORFE Colloquium*
Princeton University **January 30, 2015**
- *Mathematics Colloquium*
Florida State University **January 16, 2015**
- *Financial Mathematics Seminar*
Florida State University **January 15, 2015**
- *Seminar on Probability and Statistics with Applications*
National Chiao Tung University, Hsinchu, Taiwan **January 5, 2015**
- *One-Day Course in Financial Mathematics*
National Tsing Hua University, Hsinchu, Taiwan **December 17, 2014**
- *Mathematical Finance Seminar*
The Hebrew University of Jerusalem **May 26, 2014**
- *Joint Financial Mathematics and Risk Stochastics Seminar*
London School of Economics **March 3, 2014**
- *Mathematics Colloquium*
Dublin City University, Dublin, Ireland **October 24, 2013**
- *Probability Seminar*
Academia Sinica, Taipei, Taiwan **June 27, 2013**
- *Mathematical Finance Seminar*
University of Texas at Austin **April 12, 2013**
- *AMS Sectional Meeting (Special Session on Financial Mathematics)*
Boston College, Chestnut Hill **April 7, 2013**
- *Probability and Statistics Seminar*
Wayne State University, Detroit **March 20, 2013**
- *SIAM Conference on Financial Mathematics and Engineering*
Minneapolis **July 9 & 10, 2012**
- *Financial and Actuarial Mathematics Seminar*
University of Michigan **September 29, 2011**
- *7th International Congress on Industrial and Applied Mathematics (ICIAM)*

Vancouver **July 21, 2011**

CONTRIBUTED
PRESENTATIONS
(2010-2016)

- *9th World Congress of the Bachelier Finance Society*
New York, USA **July 19, 2016**
- *8th World Congress of the Bachelier Finance Society*
Brussels, Belgium **June 5, 2014**
- *AMS Sectional Meeting (Special Session on PDE and stochastic Analysis)*
Temple University, Philadelphia **October 13, 2013**
- *Probability, Control and Finance, a conference in honor of Ioannis Karatzas*
Columbia University **June 5, 2012**
- *Workshop on Stochastic Analysis in Finance and Insurance*
University of Michigan **May 18, 2011**
- *Mathematical Finance and Partial Differential Equations Conference*
Rutgers University **December 10, 2010**
- *6th World Congress of the Bachelier Finance Society*
Toronto, Canada **June 23, 2010**

STUDENTS

University of Colorado

Ph.D. students:

- Joshua Aurand (Department of Applied Mathematics)
- Saeed Khalili (Department of Mathematics)
- Zhenhua Wang (Department of Mathematics)

Undergraduate research students:

- Trevor McCord on the project “Merton’s Problem with Human Capital Investment”
(Discovery Learning Apprenticeship Program) **August 2016-April 2017**

Dublin City University

Internship students:

Monitored the progress of internship students in financial firms. Duties include communications/meetings with students and their supervisors, and on-site visits to the companies.

- Michael Flynn, Sean McCarthy, and Thomas Quinn
@ Office of the Comptroller and Auditor General, Ireland **February-September 2016**
- Adelle Heskin
@ AIG Asset Management **February-September 2015**
- Damian Murphy and Eoin Phelan
@ SCOR Global Life Reinsurance Ireland **February-September 2015**
- Jenifer Black
@ Hannover Re (Ireland) Limited **February-September 2014**

SERVICES

Academia

Panelist for:

- National Science Foundation, Division of Applied Mathematics.

Associate Editor of:

- Proceedings of 2018 IEEE Conference on Decision and Control (CDC 2018).

Organizer of conferences/symposiums:

- Co-organize (with Chao Zhu) the special session “Recent Developments in Stochastic Analysis, Stochastic Control and Related Fields” in the AIMS Conference on Dynamical Systems,

Differential Equations and Applications (Taipei, Taiwan, July 5-9, 2018).

- Co-organize (with Adrien Nguyen-Huu) the minisymposium “Stochastic Control and Stopping under Time Inconsistency” in the SIAM Conference on Financial Mathematics and Engineering (Austin, Texas, November 17-19, 2016).
- Co-organize (with Arash Fahim) the minisymposium “Robust Hedging and Pricing under Model Uncertainty” in the SIAM Conference on Financial Mathematics and Engineering (Chicago, November 13-15, 2014).

Reviewer of journal articles for:

- Advances in Applied Probability
- Annals of Applied Probability
- Finance and Stochastics
- Games and Economic Behavior
- Journal of Applied Probability
- Journal of Mathematical Analysis and Applications
- Mathematical Finance
- Mathematics and Financial Economics
- Mathematics of Operations Research
- Methodology and Computing in Applied Probability
- Nonlinear Analysis: Hybrid Systems
- Probability, Uncertainty and Quantitative Risk
- SIAM Journal on Control and Optimization
- SIAM Journal on Financial Mathematics
- Stochastic Processes and their Applications

University of Colorado

Department of Applied Mathematics:

- Serving on Undergraduate Committee (August 2016-December 2018)
- Serving on Probability/Statistics Preliminary Exam Committee (January 2017, August 2018)
- Serving on Applied Analysis Preliminary Exam Committee (August 2017)

Outreach

2018 Boulder STEM Camp:

- Teaching “Introduction to Machine Learning” to high school and middle school students (at Trail Ridge Middle School, Longmont, Colorado, on June 22, 2018).

TEACHING

University of Colorado

- Stochastic Analysis for Finance (Fall 2017, Fall 2018)
- *Operations Research* (Spring 2017)
- *Integral Calculus* (Fall 2016, Spring 2017)

Dublin City University

- *Probability and Finance I* (Fall 2015)
A measure-theoretic probability course for graduate students, with common financial models introduced as applications.
- *Probability I* (Spring 2016, Spring 2015, Spring 2014)
An introductory probability course for undergraduate students.
- *Data Analysis and Statistics* (Fall 2014)
A statistics course for biological engineering students, with a focus on analyzing biological and medical data.
- *Statistics I* (Fall 2013)
An introductory statistics course for undergraduate students.

University of Michigan

- *Integral Calculus* (Fall 2011, Winter 2010).
- *Differential Calculus* (Fall 2009, Winter 2009).
- *Pre-calculus* (Fall 2008).

LAST UPDATED December 5, 2018