

# Haoyang Liu

---

CONTACT INFORMATION      Research and Statistics Group (Capital Markets)      (212) 720-2976  
Federal Reserve Bank of New York      haoyang.liu@ny.frb.org  
33 Liberty Street      liuhy@berkeley.edu  
New York, NY, 10045      liuhy.weebly.com

RESEARCH INTERESTS      Mortgage Finance, MBS, Financial Econometrics, Machine Learning

PROFESSIONAL EXPERIENCE      **Federal Reserve Bank of New York**  
Financial Economist,    July 2018 - Present

**Florida State University**  
Assistant Professor in Finance,    August 2017 - May 2018

EDUCATION      **University of California at Berkeley**  
Ph.D., Finance and Real Estate,    August 2013 - May 2017  
    • Committee: Nancy Wallace (Co-chair), Christopher Palmer (Co-chair), Amir Kermani

**University of California at Davis**  
Ph.D., Applied Mathematics,    January 2011 - June 2013  
    • Committee: Debashis Paul (Co-chair), Alexander Aue (Co-chair)  
M.S., Electrical and Computer Engineering,    September 2009 - December 2010

**Shanghai Jiao Tong University**  
B.S., Electrical Engineering,    September 2005 - June 2009

WORKING PAPERS      **Errors in the Dependent Variable of Quantile Regression Models**, *with Jerry Hausman, Ye Luo and Christopher Palmer, revise and resubmit, at Econometrica*  
*Presented at: Cornell; Harvard; MIT; Princeton; UC Davis; UCL; UCLA*

**Villains or Scapegoats? The Role of Subprime Borrowers during the Housing Boom**, *with James Conklin, Scott Frame, and Kristopher Gerardi*  
*Presented at: WFA 2018; Federal Reserve Bank of New York; AREURA 2019*

**Moving to Better Opportunities? Housing Market Responses to the Top X Percent Policy**, *with Yang Song and Xiaohan Zhang*  
*Presented at: Association for Education Finance and Policy 2018; UC Riverside*

**Estimation of Quadratic Forms for High Dimensional Time Series: Correcting Finite Sample Bias in the Mean Variance Frontier**, *with Alexander Aue and Debashis Paul*  
*Presented at: NBER-NSF Time Series Conference 2016, Columbia University; UC Berkeley Risk Management Seminar; USC Marshall, Data Sciences and Operations*

WORK IN PROGRESS    **Households' Response to Changes in LTV Requirements, with James Conklin and Calvin Zhang**

JOURNAL PUBLICATIONS    **On Marcenko-Pastur Law for Linear Time Series, with Debashis Paul and Alexander Aue, *Annals of Statistics*, vol. 43, no. 2, pp. 675-712, 2015.**

*Presented at: NBER-NSF Time Series Conference 2013, Federal Reserve Board*

**Learning in A Changing World: Restless Multi-Armed Bandit with Unknown Dynamics with Keqin Liu and Qing Zhao, *IEEE Transactions on Information Theory*, vol. 59, no. 3, pp. 1902-1916, March 2013.**

ACADEMIC PRESENTATIONS (INCLUDES SCHEDULED)

**2018**

WFA\*, Coronado

Association for Education Finance and Policy\*, Portland

Federal Reserve Bank of New York, New York

**2017**

Florida State University, Tallahassee

New York University, New York

Federal Reserve Bank of Cleveland, Cleveland

Loyola Marymount University, Los Angeles

UC Riverside\*, Riverside

BlackRock, New York

**2016**

NBER-NSF Time Series Conference, Columbia University, New York

UC Berkeley Real Estate Seminar, Berkeley

University of Waterloo, Department of Statistics and Actuarial Science\*, Waterloo, Canada

**2015**

UC Berkeley Risk Management Seminar, Berkeley

USC Marshall School of Business, Data Sciences and Operations\*, Los Angeles

**2013**

NBER-NSF Time Series Conference, Federal Reserve Board, D.C.

(\* indicates presentation by coauthor)

TEACHING EXPERIENCE

Florida State University

*Instructor*

Investments (Undergraduate)

January - May 2018

Asset Pricing (Ph.D.)

January - May 2018

University of California, Berkeley

*Graduate Student Instructor (Teaching Assistant)*

MFE Asset Backed Securitization

August - October 2015, August - October 2016

MFE Investment and Derivatives

April - May 2015

MBA Real Estate Investment and Market Analysis

January - May 2015

GRANTS AND  
AWARDS

Berkeley New Faculty Advisee Research Grant  
Fisher Center for Real Estate and Urban Economics Research Grant  
NBER-NSF Young Researcher Travel Grant (twice)  
UC Berkeley Graduate Division Travel Grant

REFERENCES

**Nancy Wallace (Co-chair)**

Professor, Lisle and Roslyn Payne Chair  
in Real Estate Capital Markets  
Haas School of Business  
University of California, Berkeley  
Berkeley, CA 94720-1900, USA  
wallace@haas.berkeley.edu  
+1 (510) 642-4732

**Christopher Palmer (Co-chair)**

Assistant Professor  
MIT Sloan School of Management  
100 Main Street  
Cambridge, MA 02142  
cjpalm@mit.edu  
+1 (617) 324-3901

**Amir Kermani**

Assistant Professor  
Haas School of Business  
University of California, Berkeley  
Berkeley, CA 94720-1900, USA  
kermani@berkeley.edu  
+1 (510) 664-4139