# Yueliang (Jacques) Lu
## Curriculum Vitae

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## EDUCATION

**2018 - 2023**   **Ph.D. in Business Administration (Finance)**   University of North Carolina at Charlotte
Chair: Drs. Yufeng Han & Weidong Tian (Co-Chair)
Committee Members: Drs. I-Hsuan Ethan Chiang, Steven Clark and Christopher M. Kirby
Informal Advisor: Dr. Guofu Zhou (WUSTL)

**2016 - 2017**   **M.Sc. in Quantitative Finance & Risk Analytics**   Rensselaer Polytechnic Institute
Advised by Prof. Aparna Gupta

**2012 - 2016**   **B.A. in Finance and Economics**   Beijing Foreign Studies University
Dual degree in English Language & Literature

## PROFESSIONAL POSITIONS

**2021 - 2023**   **Lecturer of Finance**, Department of Finance, UNC Charlotte
**2018 - 2023**   **Research/Teaching Assistant**, Department of Finance, UNC Charlotte
**2019**   **Summer Research Assistant**, Department of Management, UNC Charlotte
**2017**   **Teaching Assistant**, Department of Mathematical Sciences, Rensselaer Polytechnic Institute
**2017**   **Summer Research Assistant**, Lally School of Management, Rensselaer Polytechnic Institute
**2017**   **Research Fellow**, Global Association of Risk Professionals (June 2017 - December 2017)

## RESEARCH INTERESTS

- Empirical (and Theoretical) Asset Pricing, Return Predictability, Derivatives and Options

## PUBLICATIONS

1. Addressing Systemic Risk Using Contingent Convertible Debt - A Network Analysis, ***European Journal of Operational Research***, *2021, Vol 290, Issue 1, pp. 263-277* (with Aparna Gupta and Runzu Wang).

   - Best Paper Award, FMA Annual Meeting, 2018
   - Best Student Paper Award Finalist, INFORMS Annual Meeting, 2018
   - Masters Research Fellowship, Global Association of Risk Professionals (GARP), 2017

## WORKING PAPERS

1. Macroeconomic Extrapolation, Machine Learning, and Equity Risk Premium Forecast (*with Yufeng Han*)

   - **Job Market Paper**
   - Presented at 2022 Financial Markets and Corporate Governance Conference conference (*Scheduled*)
   - We present a macroeconomic trend extrapolation approach that utilizes all economic fundamentals of different time periods simultaneously in the aggregate market. We demonstrate that the trend-pooling method statistically and economically outperforms the historical average that assumes a constant equity risk premium, as well as Rapach, Strauss, Zhou's (2010) mean combination that ignores the historical information in the macroeconomics. We further find that extrapolating via neural network produces out-of-sample $R^2_{OS}$ statistic as high as 4% and generates substantial economic value. Extrapolating economic fundamentals with

a grid of moving averages more closely tracks important macroeconomic fluctuations and more effectively regulates the forecast variability, thereby generating superior and robust forecasting gains consistently over time.

2. The Conditional Expected Return and Autocorrelation from the Derivatives (*with Weidong Tian*)

- Presented at SoFiE 2022 (*Scheduled*), FMCG 2022 (*Scheduled*), AFA 2022 (Ph.D. Poster), 2021 CICF (China International Conference in Finance), 7th International Young Finance Scholars' Conference, 2021 World Finance Conference, UNC Charlotte Finance Seminar, Shanghai University of Finance and Economics
- We express conditional expected future returns and stock market autocorrelations with publicly available derivatives data. Our approach is model-free, robust to pricing kernel process choice, and provides a real-time conditional point of view. We demonstrate a moderate short-term reversal of market returns with this approach. Furthermore, our approach implies comparable autocorrelation by statistical inference model with a gradually fading memory feature. We construct a reversal signal based on this approach and show that the corresponding market timing strategy outperforms the buy-and-hold strategy overall. Finally, we demonstrate that the term structure of one-month future returns is pro-cyclical.

3. Mispricing and Anomalies: An Exogenous Shock to Short Selling from JGTRRA (*with Yufeng Han, Weike Xu & Guofu Zhou*)

- Presented at SFS Cavalcade North America 2021, AFA 2021 (Ph.D. Poster), MFA 2021, FMA 2021, CIRF 2021, SFA 2020, WashU Olin Finance Brownbag, and UNC Charlotte Finance Seminar
- Whether anomalies are due to mispricing or risk is an important question. We examine the causal effect of a novel shock to short selling, the Job and Growth Tax Relief Reconciliation Act (JGTRRA) of 2003 and persistent to today, on an extensive set of 182 anomalies. We find that anomalies become stronger after the dividend record months in the post-JGTRRA periods, driven by stronger mispricing and the mispricing is mainly from the overpriced stocks. We also find that while most anomalies are likely due to mispricing, valuation anomalies are unlikely, as they are not affected by the dividend taxation effect.

4. **An On-line Machine Learning Return Prediction** (*with Weidong Tian*)

- Presented at INFORMS 2020, International Risk Management Conference 2020
- This paper presents a new prediction methodology on relative stock index return - the ratio of a stock index return to an interest rate. The prediction methodology relies on the on-line universal portfolio construction. We derive a closed-form predicting formula whose coefficients are solely determined by historical data and demonstrate that the average daily predictive error in 2010-2018 can be as small as 2 percent. This approach provides a promising application of on-line machine learning to return prediction.

## CONFERENCE AND SEMINARS (*presented by co-authors)

**2022**     American Finance Association (AFA) annual meeting (Ph.D. Poster), *Virtual*
        Society for Financial Econometrics (SoFiE) annual conference, *Scheduled*
        Financial Markets and Corporate Governance (FMCG) annual conference (**x2 papers**), *Scheduled*

**2021**     SFS Cavalcade North America*, *Virtual*
        China International Conference in Finance (CICF), *Virtual*
        American Finance Association (AFA) annual meeting (Ph.D. Poster), *Virtual*
        Financial Management Association (FMA) annual meeting, Denver CO
        Midwest Finance Association (MFA) annual meeting*, *Virtual*
        World Finance Conference, *Virtual*
        China International Risk Forum, *Virtual*
        International Young Finance Scholars' Conference, *Virtual*
        Shanghai University of Finance and Economics Finance Seminar*
        Wuhan University Finance Seminar*
        UNC Charlotte Finance Seminar (x2 papers)

**2020**     Washington University in St. Louis Olin Finance Brownbag
        Southern Finance Association annual meeting, *Virtual*
        INFORMS annual meeting, *Virtual*
        International Risk Management Conference, *Virtual*
        European Financial Management Association annual meeting *(canceled due to COVID-19)*
        Financial Management Association European annual meeting *(postponed due to COVID-19)*

**2019**     UNC Charlotte Joint Doctoral Workshop

**2018**     Financial Management Association (FMA) annual meeting*, San Diego CA
        European Financial Management Association annual meeting*, Milan Italy
        International Risk Management Conference annual meeting*, Paris France
        INFORMS annual meeting, Phoenix AZ

## PROFESSIONAL SERVICE

**Journal Referee**

  International Review of Economics & Finance

**Conference Discussant**

  2022:  Financial Markets and Corporate Governance (FMCG) annual conference (x2 papers)
  2021:  Financial Management Association Meeting (x2 papers)
  2020:  Financial Management Association Meeting, Southern Finance Association Meeting

**Conference Session Chair**

  2021:  Financial Management Association Meeting
  2020:  Financial Management Association Meeting, Southern Finance Association Meeting

**Conference Paper Reviewer**

  2021:  Southern Finance Association Meeting, Eastern Finance Association Meeting

## FELLOWSHIPS, GRANTS, AND AWARDS

Ph.D. Graduate Assistantship, University of North Carolina at Charlotte                    2018 - 2023

Belk College Summer Research Grant, University of North Carolina at Charlotte          2021
Ph.D. Travel Grant, American Finance Association (AFA) Annual Meeting                  2020
Seth Bonder Foundation Ph.D. Student Grant, INFORMS Annual Meeting                    2020
Summer Research Assistantship, University of North Carolina at Charlotte              2019
Best Paper Award, Financial Management Association (FMA) Annual Meeting               2018
Best Student Paper Award Finalist, INFORMS Annual Meeting (Finance Section)           2018
Outstanding Graduate Student Featured on Rensselaer Polytechnic Institute Admissions 2018
Masters Research Fellowship Award, Global Association of Risk Professionals (GARP)    2017
Graduate Teaching Assistantship, Rensselaer Polytechnic Institute                    2017
Summer Research Assistantship, Rensselaer New Knowledge and Innovation Program        2017
Masters' Scholars Research Program Award, Lally School Rensselaer Polytechnic Institute 2017

## TEACHING

### University of North Carolina at Charlotte

**Lecturer of Finance**

1. FINN 3226 Financial Theory & Practice

   - Modern financial theory and its applications, including market equilibrium asset pricing models, efficient market theory, derivatives and financial risk management

2. FINN 3120 Financial Management

   - Key topics include: The Time Value of Money, Interest Rates and Bond Valuation, Equity Markets and Stock Valuation, Risk and Return, and Cost of Capital

**Guest Lecturer**

1. FINN 6216 Quantitative Risk Management (with Prof. Weidong Tian)

   - Topic 1: Volatility Trading: Implied volatility, VIX options, VIX futures, and Volatility derivatives pricing
   - Topic 2: Historical Simulation in the risk management (Value-at-Risk), Back testing, Stress testing
   - Topic 3: Credit Risk: Structural (Merton) model, Reduced-Form model, and Altman's Z-Score method
   - Recitation class: 2-hour class, and four times per semester

2. FINN 3226 Financial Theory & Practice (with Prof. Lloyd Blenman)

   - Topic 1: Binomial Lattices and American Option Pricing

**Teaching Assistant**

1. BPHD 8220 Financial Economic Theory II (Second-year Ph.D. course)
2. BPHD 8200 Financial Economic Theory I (First-year Ph.D. course)
3. FINN 6216 Quantitative Risk Management (M.S. in Math Finance)
4. FINN 3233 International Financial Management

### Rensselaer Polytechnic Institute

**Teaching Assistant with Recitations**

1. Math 1010 Calculus I (with 4-hour recitation class to 120 students per week)

## SKILLS AND CERTIFICATIONS

**Certifications** FRM Passed Part I and Part II, CFA Level III Candidate, Bloomberg Market Concept Certified
**Technical Skills** Numerical/Simulation Analysis, Computational Optimization, Stochastic Calculus, Network Science, Bayesian/Time Series Analysis, Machine Learning
**Programming** R, MATLAB, Python, Jupyter Notebook, Stata, Neo4j, Gephi, AMPL, and LaTeX
**Languages** Native in Chinese, fluent in English and active learner in Spanish

## PROFESSIONAL MEMBERSHIP

American Finance Association (AFA)
Society for Financial Studies (SFS)
Financial Management Association (FMA)
Global Association of Risk Professionals (GARP)
Institute for Operations Research and the Management Sciences (INFORMS)

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## REFERENCES

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