WEIDONG TIAN

Department of Finance

Belk College of Business

University of North Carolina at Charlotte

Tel: (704) 687-7702

Email: wtian1@charlotte.edu

CURRENT ACADEMIC POSITION:

Professor of Finance, 2012 -Present
Distinguished Professor in Risk Management and Insurance
University of North Carolina at Charlotte

ACADEMIC EXPERIENCE:

Associate Professor of Finance, 2008 - 2012
Distinguished Scholar in Risk Management and Insurance
University of North Carolina at Charlotte

Associate Professor, 2003-2008
University of Waterloo, Canada

VISITING POSITIONS:

Visiting Research Fellow, SAMSI, Sept 2019 - June 2020

Visiting Scholar, Shanghai Advanced Institute of Finance, China, May 2012 - August 2012

Visiting Scholar, MIT Sloan School of Management, August 2010 - December 2010

Visiting Scholar, Newton Institute of Mathematical Science, Cambridge University, England, May 2006

EDUCATION

PhD, 1999, McGill University, Montreal, Canada

RESEARCH INTERESTS

Asset Price, Derivatives Market, Risk Management, Pension Finance.

PUBLICATIONS

1. Optimal Early Retirement with Target Wealth.
   Katerina Ivanov and *Weidong Tian*
   Journal of Economic Dynamics and Control, 2024.

2. An On-line Machine Learning Return Prediction.
   Yueliang (Jacques) Lu and *Weidong Tian*
   Pacific-Basin Finance Journal, 2023.

3. Limited Diversification, Portfolio Inertia, and Ambiguous Correlation
   Julia Jiang, Jun Liu, *Weidong Tian* and Xudong Zeng
   Journal of Economic Theory, 2022.

4. Optimal Investing after Retirement Under Risk Capacity Constraint.
   Weidong Tian and Zimu Zhu
   Annals of Finance, 2021.

5. An Equilibrium-Based Measure of Systemic Risk.
   Kateria Ivanov, James Schutle, *Weidong Tian* and Kevin Tseng
   Journal of Risk and Financial Management, 2021.

6. A Generalized Stochastic Differential Utility Driven by G-Brownian Motion.
   Qian Lin, Dejian Tian and *Weidong Tian*
   Mathematics and Financial Economics, 2020.

7. ‘Dynamic Asset Allocation with Skewness Preference.
   Congming Mu, *Weidong Tian* and Jinqiang Yang
   Quantitative Finance, 2019.

8. A Consistent Investment Strategy.
   Xianzhe Chen and *Weidong Tian*
   Journal of Investment Strategy, 2019.

9. Semi-Nonparametric Approximation and Index Options.
   Julia Jiang and *Weidong Tian*
   Annals of Finance, 2018.

10. The Financial Market: Not as Big as You Think.
    Weidong Tian
    Mathematics and Financial Economics, 2018.

11. Callable Contingent Capital: Valuation and Default Risk.
    Weidong Tian
    Management Science, 64 (1), 112-120, 2018.

12. Model Uncertainty Effects on Asset Prices.
    Junya Jiang and *Weidong Tian*
    International Review of Finance, 17 (2), 205-233, 2017.

13. Comparative Statistics under κ-Knightian Ambiguity for Log-Brownian Asset Prices.
    Dejian Tian and *Weidong Tian*
    International Journal of Economic Theory, 12 (4), 361-378, 2016.

14. Optimal Risk-Sharing under Sharing Mutual Singular Beliefs.
    Dejian Tian and *Weidong Tian*
    Mathematical of Social Science, 2014.

15. Equilibrium Analysis of one Aggressive Investment Strategy.
    Junya Jiang and *Weidong Tian*
    Journal of Financial Engineering, 1 (4), 2014.

16. Spanning with Indexes.
    Weidong Tian
    Journal of Mathematical Economics, 53, 111-118, 2014.

17. Contingent Capital As An Asset Class.
    Weidong Tian
    Journal of Investing, 2014, Spring.

18. A Welfare Analysis of Capital Insurance.
    Ekaterina Panttser and *Weidong Tian*
    Risks, 1(2), 57-80, 2013.

19. Optimal Portfolio Choice and Consistent Performance.
    Xianzhe Chen and *Weidong Tian*
    Decisions in Economics and Finance, 2013.

20. Optimal Stopping with Reward Constraints.
    Jerome Detemple, *Weidong Tian* and Jie Xiong
    Finance and Stochastics, 16, 2012, 423-448.

21. Optimal Insurance Design under Ambiguity.
    Carole Bernard,Ji Shaolin and *Weidong Tian*
    Decisions in Economics and Finance, 36 (2), 2013, 99-124.

22. Stock and Option Proportions in Executive Compensation.
    Phelim Boyle, Ranjini Jha, Shannon Kennedy and *Weidong Tian*
    Quarterly Journal of Finance, 1 (1), 2011, 169-203.

23. Insurance Market Effects of Risk Management Metrics.
    Carole Bernard and *Weidong Tian*
    Geneva Risk and Insurance Review, 35 (1), 2010, pp. 47 - 80.

24. Optimal Reinsurance Arrangements Under Tail Risk Measure.
    Carole Bernard and *Weidong Tian*
    Journal of Risk and Insurance, 76 (3), 2009, pp. 253 - 280.

25. Optimal Design of Equity Linked Structured Products under Probability.
    Phelim Boyle and *Weidong Tian*
    Scandinavian Actuarial Journal, 4, 2009, October, pp. 253-280.

26. Robust Stochastic Discount Factors.
    Phelim Boyle, Shui Feng, *Weidong Tian* and Tan Wang
    Review of Financial Studies, 21 (3), 2008, pp. 1077 - 1122.

27. The Design of Equity Indexed Annuities.
    Phelim Boyle and *Weidong Tian*
    Insurance: Mathematics and Economics, 43 (3), 2008, 303 - 315.

28. Portfolio Management with Constraints.
    Phelim Boyle and *Weidong Tian*
    Mathematical Finance, 17 (3), 2007, 319-343.

29. Constructing Default Boundaries.
    Houben Huang and *Weidong Tian*
    Banque & Marches, Jan-Feb, 2006, 21-28.

30. Employee-Stock Option: A Firm Value Approach.
    Phelim Boyle and *Weidong Tian*
    Journal of Derivative Accounting, v2 (2), 2005, 189-201.

31. The Valuation of American Call Options on the Minimum of Two Dividend-paying Assets.
Jerome Detemple, Feng Shu and *Weidong Tian*
Annals of Applied Probability, 12 (3), 2003, 953-983.

32. The Valuation of American Option for a Class of Diffusion Process.
Jerome Detemple and *Weidong Tian*
Management Science, 48, 2002, 917-937.

33. The Riccati Equation in Mathematical Finance.
Phelim Boyle, Fred Guan and *Weidong Tian*
Journal of Symbolic Computation, 33, 2002, pp. 343-355.

34. Calibrating the Black-Derman-Toy model: some theoretical results.
Phelim Boyle, Ken Seng Tan and *Weidong Tian*
Applied Mathematical Finance, 8, 2001, 27-48.

35. Quadratic Interest Rate Models as Approximations to Effective Rate Models.
Phelim Boyle and *Weidong Tian*
Journal of Fixed Income, vol 9, December 1999, 69-80.

REFERRED PUBLICATIONS (CHAPTERS IN BOOKS)

1. The Bank Capital: an Insurance Perspective.
Ekaterina Panttser and Weidong Tian
Challenges to Financial Stability - Perspective, Models and Policies, 2014.

2. Optimal Stopping Rules meet Ambiguity.
Chen Zhijing and Zhao Guoqing and Weidong Tian
Real Options,Ambiguity,Risk and Insurance, 2013.

3. Large Deviation Techniques and Finance Applications.
Phelim Boyle, Feng Shui and Weidong Tian
Handbook of Operation Research and Management Science, Elsevier, 2006.

EDITED BOOKS

1. Commercial Banking Risk Management: Regulation in the Wake of the 2008 Financial Crisis.
Weidong Tian
Palgrave Macmillan, 2016; **China Finance Publication** (in Chinese Version), 2019.

2. Systemic Risk and Reinsurance.
   Weidong Tian
   MDPI, 2020.

AWARDS AND GRANTS

- *Best Paper Award*, Limited Diversification, Portfolio Inertia, and Ambiguous Correlation, University of North Carolina at Charlotte, 2023.

- *Belk Summer Grant* Belk College of Business, University of North Carolina at Charlotte. Project (principal investigator): *Return Predictability and Efficient Use of Information in Optimal Portfolio*, 2023.

- *Belk Summer Grant* Belk College of Business, University of North Carolina at Charlotte. Project (principal investigator): *What is the Time Series Regression of the Stock Market Return*, 2021

- *Best Paper Award*, Momentum, Reversal and the Firm Fundamental Cycle, World Finance Association, 2019.

- *Belk Summer Grant*, Belk College of Business, University of North Carolina at Charlotte. Project (co-principal investigator): *Momentum, Reversal and the Firm Fundamental Cycle*, 2019.

- *Belk Summer Grant*, Belk College of Business, University of North Carolina at Charlotte. Project (co-principal investigator): *Diversification Premium or Diversification Discount?*, 2019.

- *Dean's Scholar Grant*, Belk College of Business, University of North Carolina at Charlotte. Project (co-principal investigator): *Dynamic Asset Prices under Heterogeneous Habit formation*, 2016.

- *Best Paper Award,* Callable Contingent Capital: Valuation and default Risk, University of North Carolina at Charlotte, 2016.

- *Belk Summer Grant*, Belk College of Business, University of North Carolina at Charlotte. Project (co-principal investigator): *Asset Prices and Correlated Risk Uncertainty*, 2015.

- *Belk Summer Grant*, Belk College of Business, University of North Carolina at Charlotte. Project (co-principal investigator): *The Role of Debt i Times of Financial Distress*, 2014.

- *Distinguished Scholar Award*, University of North Carolina at Charlotte, 2013.
- *Belk Summer Grant*, Belk College of Business, University of North Carolina at Charlotte. Project (principal investigator): *A Welfare Analysis of Capital Insurance*, 2012.
- *Distinguished Professor in Risk Management and Insurance*, University of North Carolina at Charlotte, 2012- present.
- *Distinguished Scholar in Risk Management and Insurance*, University of North Carolina at Charlotte, 2008 - 2012.
- *Dean's Scholar Grant*, Belk College of Business, University of North Carolina at Charlotte. Project (principal investigator): *Contingent Capital Bonds with Endogenous Trigger Safety Covenants*, 2011.
- Research Grant of Tata Consultancy Services (principal investigator): *Derivatives Hedging Strategy under Model Uncertainty*, 2007 - 2008.
- Research Grant of TD Security Research Project Fund (principal investigator): *Asset Allocation Implication of High Frequency Financial Data*, 2007 - 2009.
- Research Grant of IQFI, University of Waterloo (principal investigator): *Corporate Securities Valuation* and *Hedging of Structured Notes*, September 2006 - April 2008.
- Research Grant of the Natural Science and Engineering Research Council of Canada (principal investigator): *Problems in Mathematical Finance*, April 2007- March 2011.
- Canada Foundation for Innovation: *Providing Research Infrastructure for Mathematical Excellence*, 2005-2010.
- Research Grant of the Natural Science and Engineering Research Council of Canada (principal investigator): *Probability Models in Continuous-Time Finance*, April 2004 - March 2007.
- Start up Research Grant of University of Waterloo, 2003-2004.

COURSES TAUGHT

University of North Carolina at Charlotte

- Financial Economic Theory (PhD)
- Advanced Asset Pricing (Continuous-time) (PhD)
- Advanced Risk Management (PhD)
- Financial Economic Theory (Graduate)
- Quantitative Risk Management (Graduate)
- Financial Econometrics (Graduate)
- Derivative (Graduate)
- Investment Management (MBA)
- Financial Management (MBA)

University of Waterloo

- Asset and Liability Management
- Mathematical Models in Finance
- Continuous-Time Finance (Graduate)
- Fixed Income Modeling (Graduate)
- Corporate Finance
- Modeling and Management of Economic Capital (Professional course)

ACADEMIC ACTIVITIES

Ad-Hoc Referee: Journal of Finance, Review of Financial Studies, Mathematical Finance, Management Science, Finance and Stochastics, Journal of Economic Theory, Journal of Economic Dynamics and Control, Journal of Financial and Quantitative Analysis, Journal of Banking and Finance, Journal of Corporate Finance, Journal of Risk and Insurance, Journal of Derivatives, Journal of Derivative Accounting, International Journal of Theoretical and Applied Finance, Insurance: Mathematics and Economics, Economic Inquiry, Journal of Future Market, Decision in Economics and Finance, Financial Review, Financial Management, Geneva Risk and Insurance Review, Quantitative Finance, Applied Mathematical Finance, North American Actuarial Journal, SIAM Journal of Applied Probability, Mathematics and Financial Economics, Journal of Asset Management, Journal of Investing, International Review of Finance, European Financial Management, Risks, Research Grant Council of Canada (NSERC and SSHRC).

Member: American Finance Association, Western Finance Association, Financial Management Association, Midwest Finance Association, European Finance Association, American Risk and Insurance Association, Econometric Society, Bachelier Finance Society, Applied Probability Society of INFORMS.

Conference Organizer and Session Organizer: Financial Management Association Conference (2010-2016, 2018); Midwest Finance Association (2012-2016); Asian Financial Conference (2010-2018); Easter Finance Association (2015-2016); Model Risk Conference (UNCC and International Review of Finance, 2016); Fixed Income Conference (USC - UNCC, 2014, 2015); International Symposium on Risk Management and Derivatives (UNCC and Xiamen University 2011, 2009); Distinguished PhD seminar advisor (EFMA, 2014).

Ph.D. DISSERTATION ADVISING

University of North Carolina at Charlotte

Chair of PhD Dissertation Committees: *Minghao Cai (2012), Geroge Chen (2016), Katerina Ivanov (2016), Julia Jiang (2018).*

Members of PhD Dissertation Committees: *Xinde Zhang (2009), Jun Chen (2013), Yiying Chen (2013), Samuel Abamkwa (2014), Xi Mo (2019).*

University of Waterloo

Members of PhD Dissertation Committees: *Chantal Labbe (2005), Diego Hernandez Rangel (2006), Joonghee Hub (2007).*

UNIVERSITY SERVICES

- Program Director, Master Science of Mathematical Finance, University of North Carolina at Charlotte, 2012-2020. Top 15 in North America; dual-degree with Shanghai University of Finance and Economics (SUFE); University of Cattolica del Sacro Cuore (UCSC).
- PhD Finance Program Committee, 2009 - 2017.
- MAFI Program Committee, 2009-2022.
- College Review Committee, 2014-2019, 2022-2023,
- Department Review Committee, 2020 - 2022, 2011-2013.

- University representatives of PhD programs (ad hoc), more than 20 students
- University Industry Partnership Committee, 2017-2019.
- Finance Faculty Recruiting Committee (ad hoc): University of North Carolina at Charlotte, 2009-2022; University of Waterloo, 2004 - 2008.

PRESENTATIONS/SEMINARS (A partial list)

- “What is the Time Series Regression of the Stock Market Return?”, FMA, 2022, Derivative Youth Forum (4 th), 2022, PKU-NUS Annual ICQF 2022, FMAE 2022, CICF 2021, WFC, 2021.
- “An On-line Machine Learning Return Prediction”, CIRF, 2022, INFORM 2020, IRMC, 2020.
- “Dynamic Financial Decisions under Financial Risks”, Invited Talk on SAMSI Program in Games and Decisions in Risk and Reliability, Duke University, August 2019.
- “Momentum, Reversal and the Firm Fundamental Cycle”, SoFIE 2019, CICF 2019.
- “Optimal Consumption and Savings with Switching Preferences for Assets”, Seminar in University of Cattolica del Sacro Cuore 2019, CMTU 2019.
- “Correlation Uncertainty and Asset Pricing”, CICF 2016; SFS Cava;cade Finance Conference 2016; European Economics Conference, 2017; FMA 2017.
- “Asymmetric Effect of Information Transfer Uncertainty”, European Economics Conference, 2017; FMA 2017.
- “Spanning with Index”, European Economics Conference, 2014, World Finance Association Conference 2014.
- “Neural Network and Asset Finance”, Seminar in Ningbo University 2019, NC State University 2017.
- “Optimal Capital Insurance and Systemic Risk”, Shanghai Jiao Tong University (2016); CICF 2015; Midwest Finance Association Conference 2015; EFA 2014.
- “Contingent Capital”, Seminars at USC (2014), Xiamen University (2014), UNCC (2014), SAIF (2015).

- “Model Uncertainty Effects on Asset Prices”, Model Risk Conference (IRF-UNCC) 2016.
- “Financial Risk Management after Financial-Crisis”, Invited Keynote speaker on Chinese Young Economist Conference (Xiamen) 2015.
- “Time-inconsistent equilibrium”, Seminars at Xiamen University and CMTU 2015.
- “Dynamic Asset pricing under Heterogeneous Internal Habit Formation”, Seminars at UNCC (2016, 2017).
- “Comparative Statistics under Ambiguity”, SIAM Conference (2014).
- “Portfolio choice under consistent performance constraint”, Seminars at Beijing University, Zhong Shan University and Shan dong University (2014); Qinghua University (Taiwan) (2013).
- “Unhedgeable risk and Parameter Uncertainty in Commodity Market,” Third International Financial Risk and Corporate Finance Conference, Dalian, July 2011.
- “Asset Pricing under Model Uncertainty: Non-arbitrage Approach,” Workshop on Nonlinear Expectation and Applications in Financial Econometrics, Beijing, July 2011.
- “Correlation Uncertainty and Equilibrium Asset Prices,” Charlotte, SIAM-SEAS, March 2011; Third Annual Risk Management Conference, Singapore, July 2010.
- “Takeover, Agency Costs and Corporate Governance,” Dalian University of Technology Finance Seminar, July 2010.
- “Optimal Stopping Rule under Ambiguity in Continuous Time,” University of Waterloo, WatRISQ Finance Seminar, May 2010.
- “Heterogeneous Beliefs, Imitation, and the Vulnerability of Financial Innovation,” The 2009 China International Conference in Finance, GuangZhou, July 2009.
- “Heterogeneous Beliefs, Imitation, and the Vulnerability of Financial Innovation,” International Symposium on Risk Management and Derivatives, Xiamen, July 2009.
- “Takeover, Agency Costs and Corporate Governance,” Hong Kong University Finance Seminar, July 2009.

- "Heterogeneous Beliefs, Imitation, and the Vulnerability of Financial Innovation," SIF Capital Markets/Corporate Finance, Shanghai, July 2009.
- "Heterogeneous Beliefs, Imitation, and the Vulnerability of Financial Innovation," 2009 Michigan Mitsui Life Symposium, April 2009.
- "Heterogeneous Beliefs, Imitation, and the Vulnerability of Financial Innovation," International Financial Research Forum, Paris, March 2009.
- "Heterogeneous Beliefs, Imitation, and the Vulnerability of Financial Innovation," University of North Carolina at Charlotte Finance Seminar, Feb 2009.
- "Information Uncertainty, Imitation, and the Survival of Financial Innovation," 1st International Workshop on Model Uncertainty and Risk Control, July 2008.
- "Optimal Insurance Design When Insurer Implement Risk Management Metrics," SSC/SFdS, Ottawa, May 2008.
- "Debt with Trigger Covenants, Default and Corporate Securities Valuation," University of North Carolina at Charlotte, February 2008.
- "Debt with Trigger Covenants, Default and Corporate Securities Valuation,"Wilfrid University Finance Seminar, January 2008.
- "Debt with Trigger Covenants, Default and Corporate Securities Valuation," North American Finance Association Conference, Toronto, November 2007.
- "Stock and Option Proportion in Executive Compensation," North American Finance Association Conference, Toronto, November 2007.
- "Optimal Insurance Design When Insurer Implement Risk Management Metrics," Academic Sinica Finance Seminar, Beijing, October 2007.
- "Optimal Insurance Design When Insurer Implement Risk Management Metrics," Fudan University Finance and Insurance Seminar, Shanghai, October 2007.
- Debt with Trigger Covenants, Default and Corporate Securities Valuation," The 2007 China International Conference in Finance, Chengdou, July 2007.
- "Structured Products and Equity Indexed Annuities: the Quest for Optimality," Festkolloquim in honour of Phelim Boyle, June 2006.

- “Default and Capital Structure with Linked Debt Securities,” Quantitative Finance Conference on Credit Risk, Fields Institute, November 2005.
- “Incomplete Model: Model Mispefications and Stochastic Discount Factors,” Research Center for Stochastic Seminar, Beijing Normal University, July 2005.
- “Default and Capital Structure with Linked Debt Securities,” Newton Institute for Mathematical Science, Cambridge, July 2005.
- “Predictions of Credit Risks in Structural Model,” 13th INFORMS Applied Probability Conference, Ottawa, July 2005.
- “Predictions of Credit Risks in Structural Model,”Workshop on Capital Structure Arbitrage, Evry University, June 2005.
- “Incomplete Model: Model Mispefications and Stochastic Discount Factors,” University of Western Ontario Research Seminar, April 2005.
- “Incomplete Model: Model Mispefications and Stochastic Discount Factors,”CRM-Montreal Seminar, November 2004.
- “Optimal Portfolio Managements: An Uniform Treatment,” Bachelier Finance Society Conference, Chicago, July 2004.
- “Incomplete Model: Model Mispefications and Stochastic Discount Factors,”Bachelier Finance Society Conference, Chicago, July 2004.
- “Optimal Portfolio Managements: A Uniform Treatment,” Risk Management and Insurance Conference, Waterloo, June 2004.
- “The Stock Options Debate in Executive Compensation,” University of Western Ontario Seminar, London, November 2003.
- “The Stock Options Debate in Executive Compensation,” York University Finance Seminar, November 2003.
- “New Closed Form Solutions for the Extended CIR Model,” 10th Annual Derivatives Securities Conference, Boston, April 2000.

CONFERENCE DISCUSSANT/REVIEWER (A partial list)

Conference Reviewer

- Financial Management Association Conference, 2018 - 2012.
- Midwest Finance Association Conference, 2011 - 2017.
- Asian Finance Association Conference, 2012 - 2018.
- Eastern Finance Association Conference, 2014 - 2016.
- European Economics Association, 2015.
- European Financial Management Conference, 2016, 2021-2022.
- Model Risk Conference (UNCC - IRF), 2016.
- Fixed Income Conference (UNCC - USC), 2015.
- China International Conference in Finance, 2009-2011, 2016-2018.
- Third Annual Risk Management Conference, Singapore, July 2010.
- Western Finance Association, Victoria, June 2010.
- International Symposium on Risk Management and Derivatives, Xiamen, 2009, 2011.
- 1'st International Workshop on Model Uncertainty and Risk Control, Qingdao, July 2008.
- North American Finance Association Conference, Toronto, 2017-2019, 2006-2007.

Conference Discussant

- China International Conference in Finance, 2019, 2018, 2016, 2012.
- Financial Management Association Conference, 2017, 2015, 2013, 2012.
- Midwest Finance Association, 2014, 2013.
- Asian Finance Conference, 2018.
- European Economics Conference, 2017, 2015.
- European Financial Management, 2016.
- Eastern Finance Association, Savannah, April 2011.
- SIF Capital Markets/Corporate Finance, Shanghai, July 2010.
- Third Annual Risk Management Conference, Singapore, July 010.
- 6th Bachelier Finance Society Conference, Toronto, June 2010.

- International Symposium on Risk Management and Derivatives, Xiaman, July 2009; July 2011
- The 2008 China International Conference in Finance, Guangzhong, July 2009.
- SIF Capital Markets/Corporate Finance, Shanghai, July 2009.
- 2008 China International Conference in Finance, Dalian, July 2008.
- 1st International Workshop on Model Uncertainty and Risk Control, Qingdao, July 2008.
- 2007 China International Conference in Finance, Chengdu, July 2007.
- North American Finance Association Conference, Toronto, November 2006; November 2007.

RELATED PROFESSIONAL/CONSULTING EXPERIENCES:

June 2019 - December 2019, TIAA-CREF, Consulting.

May 2010 - December 2010, Manulife, Consulting.

August 2007 - June 2008, Royal Bank of Canada, Consulting.

August 2005 - December 2006, Bank of Montreal, Consulting.

November 2002 - July 2003. TD Securities. Head Quant, Numerix-TD Securities Joint Project.

January 2002 - October 2002. Reliant Resource. Senior Quantitative Analyst and Quant Manager.

September 2001 - December 2001. Enron Corps. Credit Risk Manager.

November 2000 - August 2001, Williams Energy Market & Trading. Senior Quantitative Analyst.

January 2000 - Oct 2000. Algorighmics Inc. - IBM. Financial Engineer.

January 1999 - December 1999. Centre for Advanced Studies in Finance, University of Waterloo. Research Fellow.