Ahmet Goncu
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Education

Florida State University, USA
- Doctor of Philosophy Degree (PhD) in Financial Mathematics **2006 - 2009**

Florida State University, USA
- Master of Science (MS) in Financial Mathematics **2004 - 2006**

Boğaziçi University, Turkey
- Master of Arts (MA) in Economics **2002 - 2004**
- Bachelor of Arts (BA) in Economics **1997 - 2002**

Experience

Xi'an Jiaotong-Liverpool University, Department of Mathematical Sciences
- **Associate Professor** **2014-present**
- **Lecturer** **2011-2014**
- **Director of the financial mathematics undergraduate programme** **2012-present**

Florida State University, Department of Mathematics
- Visiting Scholar **June 2012**

Shandong University, Center for Economic Research
- Assistant Professor **2009-2011**

Boğaziçi University, Center for Economics and Econometrics **2010-present**
- Research Associate

Boğaziçi University, Department of Economics
- Adjunct Faculty **2007 Summer**

Florida State University, Department of Mathematics
- Teaching Assistant **2004 - 2009**

Boğaziçi University, Department of Economics
- Research Assistant **2002 – 2004**

Research Interests

Computational finance, financial engineering, statistical arbitrage, risk management, Monte Carlo/quasi-Monte Carlo methods, stochastic modelling in finance, and empirical finance

PhD Students

Supervising PhD candidate, Yurun Yang, at Xian Jiaotong Liverpool University.
Project Title: Stochastic modeling of energy prices and consumption

Journal Publications

1) On pricing discrete barrier options using conditional expectation and importance sampling Monte Carlo (Feb 2008) ***Mathematical and Computer Modelling (SCI)***, Volume 47, Issues 3-4, Pages 484-494 (with G. Okten and E. Salta)

2) Pricing of Temperature-based Weather Options for Turkey (2011) ***Iktisat Isletme ve Finans (SSCI)***, Vol 26, Issue 309, Pages 33-50 (with T. U. Kuzubas and M. O. Karahan)

3) Generating low-discrepancy sequences from the normal distribution: Box Muller or inverse transform? (2011) ***Mathematical and Computer Modelling (SCI)***, Volume 53, Pages 1268-1281 (with G. Okten)

4) Pricing temperature-based weather contracts: an application to China (2011) ***Applied Economics Letters (SSCI),*** Volume 18, Issue 14, Pages 1349-1354

5) Pricing temperature-based weather derivatives in China (2011) ***Journal of Risk Finance***, Vol 13, Issue **1,** Pages 32-44

6) Modeling and pricing precipitation-based weather derivatives (2011) ***Financial Mathematics and Applications***, vol. 1 (1)

7) An analysis of the extreme returns distribution: the case of the Istanbul Stock Exchange (2012) ***Applied Financial Economics***, Vol. 22, Issue 9, Pages 723-732 (with A. Karaman Akgul, O. Imamoğlu, M. Tiryakioğlu and M. Tiryakioğlu)

8) Modelling Temperatures in Shanghai using Fractional Brownian Motion (2012) ***Far East Journal of Mathematical Sciences***, Vol. 70, Issue 2, Pages 251-260.

9) Comparison of temperature models using heating and cooling degree days futures (2013) ***Journal of Risk Finance,*** *Vol.*14, Issue 2, Pages 159-178.

10) Pricing Futures and Options on a Basket of Temperature Indices (2013), ***Review of Futures Markets,*** Vol. 21, Issue 2 (August), Pages 151-171 (with Ph.D. candidate Zong Lu)

11) A stochastic model for natural gas consumption: an application for Turkey (2013), ***Iktisat Isletme ve Finans (SSCI),*** (with M.O. Karahan and T. U. Kuzubas), Vol. 28 (332), Pages 33-56.

12) A New Interpretation of the Logistic Model in Estimating Seasonal and Yearly Natural Gas Consumption (2013), ***Research in Applied Economics***, Vol. 5, No 4, Pages 97-106.

13) Efficient simulation of a multi-factor stochastic volatility model (2014), ***Journal of Computational and Applied Mathematics (SCI)***, (with G. Okten), Vol. 259, Part B, Pages 329-335.

14) Uniform point sets and the collision test (2014), ***Journal of Computational and Applied Mathematics (SCI)***, (with G. Okten), Vol. 259, Part B, Pages 798-804. http://dx.doi.org/10.1016/j.cam.2013.07.019

15) Fitting the Variance-Gamma Model: A goodness-of-fit check for emerging markets (2013), ***Bogazici Journal of Economics and Administrative Sciences***, (with T.U. Kuzubas and M.O. Karahan) Vol. 27 (2), Pages 1-18.

16) Pricing Portfolios of Contracts on Cumulative Temperature with Risk Premium Determination (2014) ***Risk and Decision Analysis***, (with Srdjan Stojanovic), Vol. 5(1), Pages 75-98.

17) Fitting the Heston Stochastic Volatility Model to Chinese Stocks, International Finance and Banking, (with Hao Yang), Vol. 1(1), Pages 74-85.

Working Papers (submitted)

1. Statistical Arbitrage in the Black-Scholes Framework, http://arxiv.org/abs/1406.5646

2. Statistical Arbitrage Portfolios in the Black-Scholes Framework, with Erdinc Akyildirim.

3. Forecasting Daily Residential Natural Gas Demand: A Dynamic Modelling Approach (with U. Kuzubas and M. O. Karahan from Bogazici University)

4. Pricing Contingent Claims on Natural Gas Consumption (with Prof. Srdjan Stojanovic from University of Cincinnati)

5. Sobol' Sensitivity Analysis in Weather Derivatives (with Prof. Yousuff Hussaini, Prof. Giray Okten and Ph.D. candidate Yaning Liu from Florida State University)

6. Estimating Sensitivities of Weather Derivatives (with Prof. Giray Okten and Ph.D. candidate Wei Yuan from Florida State University)

Conference Proceedings

1. An ARMA Model for Natural Gas Consumption, *3rd International Conference on Energy and Environmental Science*, IPCBEE Vol 54, IACSIT Press Singapore, 2013, DOI: 10.7763/IPCBEE

2. Monte Carlo simulation of a two-factor stochastic volatility model, *IAENG International Conference on Operations Research (ICOR'12)*, Hong Kong, March 14-16, 2012

3. Pricing weather derivatives in China, Hong Kong Polytechnic University, *International Conference on Applied Statistics and Financial Mathematics,* Hong Kong, December 2010

4. An application of temperature-based weather contracts: the case of Turkey, *EURO Working Group on Financial Modelling*, Prague, Czech Republic, October 2010

5. Pricing Weather Derivatives: An Example from Beijing, China, *International Conference on Institutional Economics*, Jinan, China, May 2010

6. Transformation methods and error bounds for low discrepancy sequences in pricing derivatives, Giray Okten, Ahmet Goncu, *Workshop on Recent Developments in Financial Mathematics and Stochastic Calculus,* METU, Ankara, Turkey, July 2008

Grants & Awards

Highly Commended Article Award Winner at the Literati Awards for Excellence 2013

- My publication entitled "Pricing temperature-based weather derivatives in China" has been selected by the Emerald Literati Network as the highly Commended Article of 2012 in the Journal of Risk Finance

Jiangsu Province Natural Science Research Programme (PI)

- Project: Stochastic modeling of natural gas consumption
  - Amount: 32,000 RMB **2013 – 2015**

Xi'an Jiaotong-Liverpool University, Research Development Fund (PI)

- Project: Pricing weather derivatives in China
  - Amount: 36,000 RMB **2011 – 2012**

Xi'an Jiaotong-Liverpool University, Research Development Fund (PI)

- Project: Sensitivity analysis in financial engineering problems
  - Amount: 12,000 RMB **2012 – 2014**

National Science Foundation of China (PI)

- International Young Scientists Grant **2010 – 2011**
- Amount: 200,000 RMB, http://www.nsfc.gov.cn/Portal0/InfoModule_396/30139.htm

Shandong University Grant (PI)

- Title: Monte Carlo Simulation of Multi-factor Stochastic Volatility Models
- Amount: 30,000 RMB **2009 – 2010**

Florida State University, Office of Graduate Studies

- Dissertation Research Grant **2008 – 2009**

Florida State University, Department of Mathematics

- Teaching assistantship **2004 - 2009**

Teaching Experience

Xi'an Jiaotong-Liverpool University, Department of Mathematical Sciences

- Introduction to Statistics, Linear Statistical Models **2011-present**

Shandong University, Center for Economic Research (graduate level)

- Financial Economics I-II, Options and Futures, Time Series **2009-2011**

Florida State University, Department of Mathematics

- Calculus II, Pre-calculus, Trigonometry **2004-2009**

Boğaziçi University, Department of Economics

- Macroeconomics, Microeconomics **2002-2004**
- Special Topics in Financial Markets (summer schools) **2012-present**

Professional and Administrative Work

- Reviewer for The Journal of Risk, Empirical Economics, Journal of Computational and Applied Mathematics, Stochastic Environmental Research and Risk Assessment, Journal of Reviews on Global Economics, Asia-Pacific Journal of Financial Studies, Bogazici Journal, International Conference on Mathematical Finance and Economics (ICMFE), 2011; International Conference on Institutional Economics, 2010, Shandong University, and others.

- Session Chair: IAENG International Conference on Operations Research (ICOR'12), 2012; International Conference on Institutional Economics, 2010, Shandong University
- Director of the Financial Mathematics undergraduate programme, Xian Jiaotong Liverpool University (2012- to present)
- Learning and Teaching officer: Chairing the departmental Learning and Teaching Committee meetings and representing the Department of Mathematical Sciences at the university level meetings, Xian Jiaotong-Liverpool University (2012 – to present)
- Member of the University Module and Programme Review Committee, Xian Jiaotong-Liverpool University (2012 – 2013)
- Internal Reviewer for the MSc Programme in Urban Planning, Xian Jiaotong-Liverpool University (2012-2013)
- Member of Departmental Student Progression Committee, Xian Jiaotong-Liverpool University (2012-2013)
- Academic Advisor Year 4 Leader, Department of Mathematical Sciences, Xian Jiaotong-Liverpool University (2011-2012)
- Organizer of the Research Seminars, Department of Mathematical Sciences, Xian Jiaotong-Liverpool University (2011-2013)
- Supervised one student for the summer undergraduate research project (SURF) (2012)

Skills

Computer Skills:	C++, Excel VBA, Matlab
Languages:	Turkish (Native), English (Fluent), Chinese (Intermediate)
Maritial status:	Married, one child