## FARID AITSAHLIA

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# **DOCTORAL EDUCATION**

#### Stanford University, Stanford, California

 Doctor of Philosophy, Operations Research, March 1995
Dissertation: Optimal Stopping and Weak Convergence Methods for Some Problems in Financial Economics
Advisor: T. L. Lai, Dept. of Statistics

## ACADEMIC EXPERIENCE

- 8/24 <u>Clinical Associate Professor and James G. Richardson Faculty Fellow</u>, Department of Finance Insurance & Real Estate, Warrington College of Business University of Florida, Gainesville, Florida.
- 8/09 8/24 <u>Clinical Assistant Professor/Visiting Assistant Professor/Lecturer/ and James G. Richardson</u> <u>Faculty Fellow</u>, Department of Finance Insurance & Real Estate, Warrington College of Business University of Florida, Gainesville, Florida.
- 8/04 7/09 <u>Assistant Professor</u>; <u>Co-director</u>, Risk Management and Financial Engineering Laboratory. Department of Industrial and Systems Engineering, University of Florida, Gainesville, Florida.
- 9/03 8/04 Visiting Scholar, Department of Statistics, Stanford University, Stanford California.
- 10/95 6/96 Adjunct Assistant Professor, School of Operations Research and Industrial Engineering, Cornell University, Ithaca, New York.

#### **INDUSTRY EXPERIENCE**

- 3/02 9/03 Senior Scientist, DemandTec (now part of IBM), San Carlos, California.
- 6/99 12/01 Research Associate, Financial Engines, Palo Alto, California.
- 6/88 6/99 Researcher/Project Leader, Hewlett-Packard Laboratories, Palo Alto, California.

#### BOOKS

- 1. *Elementary Probability Theory with Stochastic Processes and an Introduction to Mathematical Finance*, (with K. L. Chung), Springer-Verlag, March 2003. (Russian edition appeared in 2007, Chinese edition appeared in 2010.)
- 2. Selected Works of Kai Lai Chung, (with E. Hsu and R. Williams), World Scientific Press, October 2008.
- 3. Options on Extremes and Averages, World Scientific Press, to appear (under contract).

## **ARTICLES AND BOOK CHAPTERS**

- 1. "Stochastic Optimal Stopping: Problem Formulations", *Encyclopedia of Optimization* (3rd edition), Panos Pardalos and Oleg Prokopyev (editors), Springer Nature. To appear.
- 2. "Stochastic Optimal Stopping: Numerical Methods", *Encyclopedia of Optimization* (3rd edition), Panos Pardalos and Oleg Prokopyev (editors), Springer Nature. To appear.
- 3. "Menu Simplification for Portfolio Selection Under Short-Sales Constraints" (with Tom Doellman and Sabuhi Sardarli), *European Financial Management*, 29.1 (2023): 3-21.
- 4. "Implementing Mean-Variance Spanning Tests with Short-Sales Constraints" (with Tom Doellman and Sabuhi Sardarli), *Journal of Investment Strategies*, 12.2 (2023): 1-12.
- 5. "Information Stages in Efficient Markets" (with J-H Yoon), Journal *of Banking and Finance*, 69 (2016), pp. 84-94.
- 6. "Optimal Crop Planting Schedules and Financial Hedging Strategies Under ENSO-based Climate Forecasts" (with C-J Wang, V. Cabrera, S. Uryasev, and C. Fraisse), *Annals of Operations Research*, vol. 190 (2011), pp. 201-220.
- "American Option Pricing Under Stochastic Volatility: An Efficient and Accurate Numerical Scheme", (with M. Goswami and S. Guha), *Computational Management Science*, vol. 7, 2 (2010), pp. 171-187.
- 8. "American Option Pricing Under Stochastic Volatility: An Empirical Evaluation", (with M. Goswami and S. Guha), *Computational Management Science*, vol. 7, 2 (2010), pp. 189-206.
- 9. "Discretely monitored options," *Encyclopedia of Quantitative Finance,* (R. Cont, ed.), Wiley, (2010).
- 10. "Stochastic Optimal Stopping: Problem Formulations," *Encyclopedia of Optimization*, (C. A. Floudas and P. M. Pardalos, eds.), Springer, (2009).
- 11. "Stochastic Optimal Stopping: Numerical Methods," *Encyclopedia of Optimization*, (C. A. Floudas and P. M. Pardalos, eds.), Springer, (2009).
- 12. "Optimal Execution of Time-Constrained Portfolio Transactions," (with Y-C Sheu, and P. M. Pardalos), *Computational Methods in Financial Engineering*, E. J. Konthoghiorges, B. Rustem, and P. Winker (eds.), Springer-Verlag, 2008.
- 13. "Corrected Random Walk Approximations to Free Boundary Problems in Optimal Stopping" (with T. L. Lai and Y. C. Yao), *Advances in Applied Probability*, vol. 39, 3 (2007), 753-775.
- 14. "A Canonical Optimal Stopping Problem for American Options under a Double-Exponential Jump-Diffusion Model" (with A. Runnemo), *Journal of Risk*, Vol. 10, 2007, pp. 85-100.
- 15. "Pricing and Hedging American Knock-In Options" (with L. Imhof and T. L. Lai), J. of Derivatives, Vol. 11, 2004, pp 44-50.
- 16. "Fast and Accurate Valuation of American Barrier Options" (with L. Imhof and T. L. Lai), *J. Computational Finance*, vol. 7, 2003, pp 129--145.

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- 17. "Exercise Boundaries and Efficient Approximations to American Option Prices and Hedge Parameters" (with T. L. Lai), *J. Computational Finance*, vol. 4, 2001, pp 85--103.
- 18. "A Canonical Optimal Stopping Problem for American Options and its Numerical Solution" (with T. L. Lai), *J. Computational Finance*, vol. 3, Winter, 1999/2000, pp 33--52.
- 19. "Random Walk Duality and the Valuation of Discrete Lookback Options" (with T. L. Lai), *Applied Mathematical Finance*, vol. 5, 1998, pp 277--340.
- 20. "Valuation of Discrete Barrier and Hindsight Options" (with T. L. Lai), *J. Financial Engineering*, vol. 6, 1997, pp. 169--177.
- 21. "American Options: A Comparison of Numerical Methods" (with P. Carr), in *Numerical Methods in Finance*, C. Rogers and D. Talay (eds.), Cambridge University Press, 1997.
- 22. "Is Concurrent Engineering Always a Sensible Proposition?" (with E. Johnson and P. Will), *IEEE Transactions on Engineering Management*, vol. 42, 1995, pp 166--170.

## MANUSCRIPTS IN PROGRESS

- 1. "American Options Under Stochastic Volatility: Parameter Estimation and Pricing Efficiency," (with M. Goswami and S. Guha; targeted for *The Journal of Computational Finance*.)
- 2. "Liquidity and Risk Management: Crossing Networks Impact"
- 3. "Everybody's Doing it: The Effect of Index Investing"
- 4. "Spline Approximations for Efficient American Option Pricing in a Jump-Diffusion Model"
- 5. "Discretely Monitored Look-Back Option Prices and their Sensitivities in Lévy Models" (with G. Gylfadóttir)

#### Students advised at the University of Florida:

- Sam Lopez (DBA, Spring 2020)
- Philip Garton (DBA, Summer 2020)
- Brad Labrum (DBA, Summer 2020)
- Pete Garcia (DBA, Summer 2020)
- Manisha Goswami (Ph.D., December 2008; placed at University of Notre Dame)
- Suchandan Guha (Ph.D., August 2008; now with Barclays Capital, New York)
- Joon-Hui Yoon (Ph.D., August 2009; now with Hana Financial Group, Seoul)
- Guðbjört Gylfadóttir (Ph.D., August 2010; now with Bloomberg, New York)
- Andrew Romich (B.S., Summa Cum Laude, Honors Thesis, May 2008)
- Advised more than a dozen students in the M.S./M.B.A., Outreach Engineering Management program (between Spring 2005 and Spring 2009)

#### Selected courses taught at the Warrington College of Business, University of Florida:

• Asset Pricing Theory; Corporate Finance; Financial Management; Derivatives Securities; Investments; Financial Risk Management; Intro. Comp. Methods for Derivatives; Fintech and Machine Learning for Finance

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## ACADEMIC SERVICE

- Editor-in-Chief:
  - Journal of Risk (since November 2009)
- Guest Editor:
  - Journal of Banking and Finance (volume 31, issue 11, November 2007)
- Referee:
  - Review of Financial Studies; Mathematical Finance; Journal of Economic Dynamics and Control; Management Science; Journal of Computational Finance; Journal of Banking and Finance; Operations Research; Optimization Letters; Annals of Operations Research; International Journal of Theoretical and Applied Finance; Computational and Applied Mathematics; Managerial Finance; Naval Research Logistics; Journal of Applied Probability; Journal of Engineering and Technology Management; National Science Foundation; MIT Press; Chapman and Hall (CRC Press); National Science Foundation; European Financial Management; North American Journal of Economics and Finance
- Conference organization:
  - o Risk Management and Quantitative Finance Conference, Gainesville, FL (Spring 2005).
  - o International Conference on Financial Engineering, Gainesville, FL (Spring 2006).
  - Workshop on New Directions in Quantitative Finance, Paris, France (Spring 2008).
- Departmental/University Service:
  - o Graduate Committee (Industrial and Systems Engineering)
  - Undergraduate Committee (Industrial and Systems Engineering)
  - University of Florida Faculty Preview Advisor (to entering freshmen)
  - Doctor of Business Administration Committee

#### SELECTED PRESENTATIONS

- Robust Techniques in Quantitative Finance, Oxford University, September 3-7, 2018.
- 8th International Finance Conference, IFC8, Paris, 12-14 March 2015
- Society for Industrial and Applied Mathematics, Financial Mathematics and Engineering, San Francisco, November 2010
- Daiwa Young Researchers' International Workshop on Finance, March 2008, Kyoto University, Japan.
- Risk 2001 Europe and Risk 2001 USA (Risk magazine 6th Annual Derivatives and Risk Management Congress), April 2001, Paris, France, and June 2001, Boston.
- Computational and Quantitative Finance Conference (organized by Risk Publications), September 1999, New York.
- Quantitative Methods in Finance, December 1998, University of Technology, Sydney, Australia.
- Institute of Mathematical Statistics, Asian and Pacific Regional Meeting, July 1997, Taipei, Taiwan.
- Financial Mathematics Program, I. Newton Institute, April 1995, Cambridge University, Cambridge, United Kingdom.
- Seminars:
  - New York University (Tandon School of Engineering, February 2024)
  - Stony Brook University (Quantitative Finance, February 2024)
  - Luxembourg School of Finance (June 2009)
  - Princeton University (ORFE dept., April 2008),
  - Columbia University (IEOR dept., April 2008),
  - o University of Michigan (Mathematics dept., October 2006),
  - New York University (Courant Institute, March 2003)
  - o University of British Columbia (Management Science, 2002),
  - University of Chicago (Statistics, 1998)