Curriculum Vitae

Andrew Papanicolaou

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1 Contact Information

Department of Mathematics

North Carolina State University

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2 Employment

- **North Carolina State University** (August 2023–Present)
  Associate Professor, Department of Mathematics
- **North Carolina State University** (August 2020–August 2023)
  Assistant Professor, Department of Mathematics
- **New York University Tandon School of Engineering** (September 2015–August 2020)
  Assistant Professor, Department of Finance and Risk Engineering
- **The University of Sydney** (July 2013–June 2015)
  Lecturer, School of Mathematics and Statistics
- **Princeton University** (September 2010–June 2013)
  Postdoctoral Researcher and Lecturer, Department of Operations Research and Financial Engineering

3 Education

- **Brown University**
  Ph.D. in Applied Mathematics, May 2010
  Dissertation: *New Methods in Theory and Applications of Nonlinear Filtering*
  Advisor: Boris Rozovsky
- **University of Southern California**
  M.S. in Financial Mathematics, May 2007
- **University of California, Santa Barbara**
  B.S. in Mathematical Sciences, June 2003

4 Awards

- NSF DMS-2319419, Conference: 7th Eastern Conference on Mathematical Finance, 2023–2024
- John Griggs Faculty Award, North Carolina State University, 2022
- NSF DMS-1907518, Deep Neural Networks for Solving Non-Markov Optimization Problems, 2019–2022
- University Research Challenge Fund, NYU Provost, 2019–2020
- Goddard Junior Faculty Fellowship, NYU Steinhardt, 2018
- Institute for Pure and Applied Mathematics (IPAM), NSF Research Fellowship, 2015

5 Selected Publications

1. Dai, Bolun, Prashanth Krishnamurthy, Andrew Papanicolaou, and Farshad Khorrami.
   "State constrained stochastic optimal control for continuous and hybrid dynamical systems using DFBSDE."
   Automatica, 155 (2023).
   DOI: 10.1016/j.automatica.2023.111146
2. Papanicolaou, Andrew, Hao Fu, Prasanth Krishnamurthy, Brian Healy, and Farshad Khorrami.
   "An optimal control strategy for execution of large stock orders using long short-term memory networks."
   Journal of Computational Finance, 26(4), 2023.
   DOI: 10.21314/JCF.2023.003

3. Avellaneda, Marco, Brian Healy, Andrew Papanicolaou, and George Papanicolaou.
   "Principal eigenportfolios for US equities."
   SIAM Journal on Financial Mathematics, 13(3), 2022.
   DOI: 10.1137/20m1383501

4. Amir-Ghassemi, Faryan, Andrew Papanicolaou, and Michael Perlow.
   "Aggregate alpha in the hedge fund industry: a further look at Best Ideas."
   The Journal of Portfolio Management, 48(3), 2022. DOI: 10.3905/jpm.2021.1.313

5. "A functional analysis approach to the static replication of European options."
   Bossu, Sébastien, Peter Carr, and Andrew Papanicolaou.
   Quantitative Finance 21, no. 4 (2021)
   DOI: 10.1080/14697688.2020.1810857

6 Recent Talks and Seminars

- Banco Central do Brasil (May 2025) Brasilia, Brasil.
- Stanford Applied Math Seminar (December 2025) Stanford, CA.
- Collegio Carlo Alberto Seminars in Statistics (October 2025) Torino, Italy.
- XXV Encontro Brasileiro de Finanças (July 2025) São Paulo, Brazil.
- Duke Probability Seminar (April 2023) Durham, NC.

7 Students

7.1 Ph.D. Students

- Soham Mudalgikar, May 2025
- Yangfan Cui, expected December 2026
- Sebastien Bossu, October 2021
- Thomas Nanfeng Li, May 2019

7.2 Master's Thesis Students

- Yangfan Cui, NYU Tandon (2019)
- Chang Liu, NYU Tandon (2018)
- Kourosh Ghobadi, NYU Tandon (2018)
- Lucas Amaral Rabechini, NYU Tandon (2017)

8 Service Activities

- Conference Organizer, 7th Annual Eastern Conference on Mathematical Finance, 2023
- Associate Editor, *Stochastic Models*, 2020–Present
- Associate Editor, *Risk and Decision Analysis*, 2017–2019