# Sudip Gupta

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## **Education**

- Ph.D. Economics, University of Wisconsin-Madison, 2005
- M.S. Economics, University of Wisconsin-Madison, 2002

#### Academic Appointments

- Associate Professor of Practice, Carey Business School, Johns Hopkins University, 2021-
- Director of MS in Quant Finance (MSQF) Program, Gabelli School of Business 2018-2021
- Clinical Associate Professor of Finance, Gabelli School of Business, Fordham University 2018-2021
- Visiting Assistant Professor of Finance, Gabelli School of Business, Fordham University 2016-2018
- Visiting Assistant Professor of Finance, Kelley School of Business, Indiana University 2013-2016
- Visiting Assistant Professor of Finance, Stern School of Business, NYU 2012-13
- Visiting Assistant Professor of Finance, Robert H. Smith School of Business, University of Maryland, 2008-2009
- Assistant Professor of Finance, Indian School of Business (ISB), 2006-2012

# **Research and Teaching Interests**

• Auctions, Artificial Intelligence-Machine Learning, Corporate Finance, Credit Derivatives, Fintech, Healthcare, Market Microstructure

## **Honors and Awards**

- Finalist: Best Paper Award, Financial Management Association (FMA) Annual Meeting, 2023
- Finalist: Carey Faculty Service and Mentorship Award, 2023
- Best Paper Published in Quarterly Journal of Finance in 2022
- Dean's Impact Award for Excellence in Research, Teaching & Service, GSB-Fordham (2022)
- Finalist, Best Paper Award, Financial Management Association (FMA) Annual Meeting, 2020
- Finalist, Best Paper Award, Financial Management Association (FMA) Annual Meeting, 2016
- Trustee Teaching Award Finalist; Kelly School of Business, Indiana University (2015)

#### **Grant Awards**

- Co-Principal Investigator: Nexus (Convening) Award for Artificial Intelligence for Health Equity Research (AIHE) at 555 Penn, Johns Hopkins University, 2023 (\$100,000)
- National Stock Exchange (NSE) India and New York University (NYU)- Stern Award for Research on Indian Economy, 2013, 2016, 2019 (\$7500 each award)
- Young Economist Travel Award, Econometric Society, 2005 (\$1000)

## MS (Finance) Teaching

- 1. *Empirical Finance*, Carey Business School, Johns Hopkins University, Spring 2022, Spring 2023, Rating 4.52/5
- 2. Linear Econometrics for Finance, Carey Business School, Johns Hopkins University, Fall 2021, 2022 Rating 4.1/5
- 3. *Investments*, Carey Business School, Johns Hopkins University, Fall 2021, Fall 2023 Rating 5/5
- 4. Advanced Financial Modeling Gabelli School of Business, Fordham University, Fall 2020 (New Course) (New Prep) Rating 4.5/5
- 5. Machine Learning & Econometrics Gabelli School of Business, Fordham University, Fall 2018, 2019 (New Course) (New Prep), Rating 4.5/5
- 6. Fintech: Contemporary Issues in Global Finance, Gabelli School of Business, Fordham University, Summer 2017, 2018, 2019 (New Prep) 4.75/5
- 7. Computational Finance, Gabelli School of Business, Fordham University, Spring 2018 (New Course) (New Prep) Rating 4.6/5
- 8. Algorithmic Trading and Market Making, Gabelli School of Business, Fordham University, Spring 2019, 2020 (New Course) (New Prep) Rating 4.5/5
- 9. Financial Econometrics I, Gabelli School of Business, Fordham University, Fall 2017 (New Course) (New Prep) Rating 4.38/5
- 10. Computational Finance with R, Gabelli School of Business, Fordham University, Spring 2017 (New Course) (New Prep) Rating 4.29/5
- 11. Computational Finance with Python, Gabelli School of Business, Fordham University, Spring 2017 (New Course) (New Prep) Rating 4.3/5
- 12. Research Seminar Gabelli School of Business, Fordham University, Fall and Spring 2018, 2019, 2020 (New Prep) Rating 4.88/5
- 13. Basics of Statistics Gabelli School of Business, Fordham University, Summer 2017, 2018, 2019 (New Prep) Rating 4.69/5
- 14. Reinforcement Learning for Finance Gabelli School of Business, Fordham University, Spring 2021 (New Course) (New Prep)

# **Undergraduate Teaching**

- 15. Investments and Security Analysis, Gabelli School of Business, Fall 2016 Rating 4.3/5
- 16. Equity and Fixed Income Investments, Kelley School of Business 2014, 2015 (New prep in Fall 2014) Rating 6.74/7 (finalist for Trustee teaching award)
- 17. Intermediate Corporate Finance, Kelley School of Business (New prep in Spring 2014) 2014, 2015 Rating 6.3/7 (finalist for Trustee teaching award)
- 18. Foundations of Finance, Stern School of Business, New York University (New prep: 2012) Rating 6.2/7

- 19. International Finance, Smith School of Business, University of Maryland, Fall 2008, Spring 2009 (New Prep in Fall 2008) Rating 4.47/5
- 20. *Investments*, **Smith School of Business**, **University of Maryland** Fall 2007 (New Prep) Rating: **3.75**/5
- 21. Head Teaching Assistant: *Microeconomics*, **University of Wisconsin Madison** (Econ 101), Spring 2004, Fall 2003, Spring 2003, Spring 2001, Fall 2000 (Ratings between **3.93/5-4.1/5**)

### MBA Teaching

- 22. Advanced Portfolio Management, Indian School of Business, 2007, 2008, 2010 (New Prep in 2007) (Rating: 5.5/7)
- 23. Behavioral Finance, Indian School of Business, 2006, 2007, 2008, 2010 (Developed as a New Course in 2006) (rating: 5.1/7)
- 24. Global Economics, Indian School of Business, 2009, 2010

#### **Graduate (Ph.D.) Teaching**

- 25. Financial Econometrics I: First Year Graduate Econometrics course for Ph.D. Students of Gabelli School of Business, Fordham University, Spring 2017, 2019
- 26. Financial Econometrics II, Gabelli School of Business, Fordham University, Fall 2017,
- 27. Financial Econometrics: Graduate level Econometrics course for Post-Doctoral Fellows and Academic Associates of Indian School of Business, Fall 2006 (Rating: 7/7)

## **Executive MBA Teaching**

- 28. Valuations, Country Program, Gabelli School of Business, Fordham University
- 29. Private Equity and Middle Market Deal Making ACG –Fordham Program, Gabelli School of Business, Fordham University
- 30. Valuation and Real Options ONGC Program, ISB; Global Economics, Mckinsey Program: ISB

## Research

#### **Peer Reviewed Publications**

- "Financial Inclusion and Alternate Credit Scoring: Role of Big Data and Machine Learning in Fintech" (with Sumit Agarwal, Shashwat Alok and Pulak Ghosh) (2023) *Journal of Money Credit and Banking*, forthcoming (2023)\_ <a href="https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=3507827">https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=3507827</a>
- 2. Shareholder Litigation Rights and Firm Productivity, (with Alona Bilokha) (Revise and resubmit), **Financial Markets, Institutions & Instruments**, (2023) https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=3926241
- 3. "Public vs. Private Information: Firm Disclosures, SEC Letters and the JOBS Act" (with Sumit Agarwal and Ryan Israelsen) *Quarterly Journal of Finance*, September (2022), 12-03, pp. 1-42
  <a href="https://www.worldscientific.com/toc/qjf/12/03">https://www.worldscientific.com/toc/qjf/12/03</a>
- 4. "Underwriting Government Debt Auctions" (with Rangarajan K Sundaram and Suresh M. Sundaresan) *Management Science* (2021) 675, pp. 2657-3320 <a href="https://pubsonline.informs.org/doi/10.1287/mnsc.2019.3565">https://pubsonline.informs.org/doi/10.1287/mnsc.2019.3565</a>
- 5. "Strategic Overbidding in Dynamic Auctions: Structural Estimation of the Value of Synergy", *Production and Operations Management*, (2021), 30-2, pp. 584-605\_

- https://onlinelibrary.wiley.com/doi/10.1111/poms.13282)
- 6. "Mispricing and Arbitrage in CDS Auctions" (with Rangarajan K Sundaram) *Journal of Derivatives*, (2015), 22-4, pp. 79-91\_ https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=2722542
- 7. "Inventory Effects, The Winner's Curse and Bid Shading in CDS Auctions Outcomes" (with Rangarajan K Sundaram) *Journal of Derivatives*, (2015), 23-2, pp. 36-52 https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=1972801
- 8. A Simplified Framework to Simulate the Impact of a Merger, *Review of Market Integration*, (2011), Lead Article, 3, pp. 1-15

## Completed Working Papers for/under Submission

- 1. "Emerging Firms' Cost of Audit and Audit Quality" (with Joseph Micale, Ashok Rubin and Rong Yang) (Revise and resubmit) **Accounting and Business Review, 3<sup>rd</sup> round**
- 2. "JOBS Act Spillover Effect in the Syndicated Loan Market" (with Matthew Billett and Chiyoung Cheong)\_ https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=2913788
- 3. "Product Market Competition, Management Disclosure, and Analyst Coverage: Evidence from the XBRL Adoption" (with Sris Chatterjee and Joon Ho Kong)\_https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=3245627
- 4. "The Impact of the JOBS Act on the M&A" (with J. Aswani, Iftekhar Hasan and A. Saunders)\_ https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=3512491
- 5. "Why and When to Go Public: Evidence from Structural Estimation" (with John Rust)
- 6. "Informativeness of Orders: A Revealed Preference Framework" (with Pradeep Yadav)

#### **Works in Progress**

- 7. Algorithmic Bias in Fintech Lending (with NR Prabhala and Pulak Ghosh)
- 8. Financial Intermediary Competition and Asset Prices
- 9. Nowcasting with Alternative data and Machine Learning

#### **Non-Peer Reviewed Publications**

- 10. Irrational Minds and Corporate Decision Making, ISB Insight, 2009
- 11. Auctions of Mortgage-Backed Securities, Economists Ink, 2008
- 12. Simulating the Effects of a Merger, ISB Insight, 2007
- 13. The Widening Scope of Simulation Analysis, Winter 2006, Economists Ink

## **Invited Presentations**

- 1. Financial Management Association (FMA), North American Annual Conference, New York, October 2023, "Financial Intermediary Competition and Asset Prices"
- 2. IIT Madras and RBC Data Science and AI Institute (RBCDSAI) and Centre for Responsible AI (CERAI); Aug 2023, "Artificial Intelligence and Health Equity"
- 3. IFC-World Bank Research Group, Jun 2023; "Financial Inclusion and Alternate Credit Scoring: Role of Big Data and Machine Learning in Fintech"
- 4. UC Berkeley's Financial Innovation Conference: June 16th, 2023; "Alternative Data and ESG"
- 5. Eagle Alpha Conference, New York, January 2023; "Financial Inclusion and

- Alternate Credit Scoring: Role of Big Data and Machine Learning in Fintech"
- 6. MIT Quant Finance Conference, Boston, December 2022; "Alternative Data and Asset Pricing"
- 7. Monthly Keynote Speaker: International Association of Quantitative Finance (IAQF), New York, Dec. 2022; "Financial Inclusion and Alternate Credit Scoring for the Millennials: Role of Big Data and Machine Learning in Fintech"
- 8. Cornell Financial Engineering Conference, New York, September 2022; "Machine Learning and Data Science in Finance"
- 9. American Finance Association (AFA), North American Annual Conference, Boston, January 2022; "Financial Intermediary Competition and Asset Prices"
- 10. Financial Management Association (FMA), North American Annual Conference, New York, October 2021; "Financial Inclusion and Alternate Credit Scoring: Role of Big Data and Machine Learning in Fintech"
- 11. Paris Fintech Conference, April 2021; "Financial Inclusion and Alternate Credit Scoring: Role of Big Data and Machine Learning in Fintech"
- 12. Eagle Alpha Data Hackathon on ESG and Alternative Data, May 2021; "Alternative Data and ESG Ratings"
- 13. Financial Management Association (FMA), North American Annual Conference, New York, October 2020; "Financial Inclusion and Alternate Credit Scoring: Role of Big Data and Machine Learning in Fintech"
- 14. New York Fed Fintech Conference, 2020; "Financial Inclusion and Alternate Credit Scoring: Role of Big Data and Machine Learning in Fintech"
- 15. Fifth Annual Conference on Alternative Finance, Cambridge, 2020; "Financial Inclusion and Alternate Credit Scoring: Role of Big Data and Machine Learning in Fintech"
- 16. American Finance Association (AFA), North American Annual Conference, San Diego, January 2020; "Financial Inclusion and Alternate Credit Scoring: Role of Big Data and Machine Learning in Fintech"
- 17. NYU-NSE Conference 2019, December 2019; "Financial Inclusion and Alternate Credit Scoring: Role of Big Data and Machine Learning in Fintech"
- 18. Financial Management Association (FMA), North American Annual Conference, New Orleans, October 2019; "Product Market Competition, Management Disclosure, and Analyst Coverage: Evidence from the XBRL Adoption"
- 19. AAA-Impact the Future Conference, 2019; "Product Market Competition, Management Disclosure, and Analyst Coverage: Evidence from the XBRL Adoption"
- 20. Indian Institute of Management (IIM) Bangalore, 2018, "CDS Auctions and Informative Biases"
- 21. Financial Management Association (FMA), North American Annual Conference, San Diego, October 2018; "The Impact of the JOBS Act on the M&A"
- 22. American Accounting Association Annual Meeting 2018; "Product Market Competition, Management Disclosure, and Analyst Coverage: Evidence from the XBRL Adoption"
- 23. Australasian Finance and Banking Conference, Sydney, Australia, December 2018; "The Impact of the JOBS Act on the M&A"
- 24. Triple Crown Conference, Fordham University, May 2018; "Product Market

- Competition, Management Disclosure, and Analyst Coverage: Evidence from the XBRL Adoption"
- 25. Midwest Finance Association, March 2018; "The Impact of the JOBS Act on the M&A"
- 26. Theory and Inference in Capital Market Research Conference, Stanford University Graduate School of Business, Dec 2017; "Why and When to Go Public: Evidence from Structural Estimation"
- 27. NYU-NSE Conference on Indian Capital Market, Dec 2017, "Informativeness of Orders: A Revealed Preference Framework"
- 28. CAFRAL, Reserve Bank of India, Dec 2017; "Underwriting Government Debt Auctions"
- 29. NYU-IIMC India Conference, October 2017; "Informativeness of Orders: A Revealed Preference Framework"
- 30. Centre for Analytical Finance Annual Conference, ISB Hyderabad, 2017, "JOBS Act Spillover Effect in the Syndicated Loan Market"
- 31. Financial Management Association (FMA), North American Annual Conference, Las Vegas 2016, "Underwriting Government Debt Auctions"
- 32. Centre for Analytical Finance Annual Conference, ISB Hyderabad, 2016; "Underwriting Government Debt Auctions"
- 33. Washington University- St Louis, Spring 2015; "Indirect Costs of JOBS Act"
- 34. Securities and Exchange Commission and University of Maryland, Second Annual Conference on Securities Market Regulation, May 2015, "Indirect Costs of JOBS Act"
- 35. Moody's/Stern Credit Risk Conference 2015; "Underwriting Government Debt Auctions"
- 36. NYU-NSE Conference on Indian Capital Markets, 2014; "Underwriting Government Debt Auctions"
- 37. ITAM Finance Conference, 2014; "Inventory Effects, The Winner's Curse and Bid Shading in CDS Auctions Outcomes" (with Raghu Sundaram)
- 38. American Finance Association Annual Meeting, Jan 2014; "Inventory Effects, The Winner's Curse and Bid Shading in CDS Auctions Outcomes"
- 39. Kelley School of Business, Fall 2013; "Inventory Effects, The Winner's Curse and Bid Shading in CDS Auctions Outcomes"
- 40. Georgia Tech University Fall 2013; "CDS Auctions and Informative Biases"
- 41. Conference on Securities Market and Auctions, Kellogg, Nov 2012; "Inventory Effects, The Winner's Curse and Bid Shading in CDS Auctions Outcomes"
- 42. Fourth Risk Management Conference: Mont Tremblant, Mar 2012; "Inventory Effects, The Winner's Curse and Bid Shading in CDS Auctions Outcomes"
- 43. Commodities and Futures Trade Commission (CFTC), Washington D.C. 2011; "Inventory Effects, The Winner's Curse and Bid Shading in CDS Auctions Outcomes"
- 44. Oklahoma University, Price College of Business, (Finance), 2011; "Value of Information in Endogenously Asymmetric Auctions"
- 45. Conference on Econometrics of Demand, MIT- NBER, May 2011; "Why" and When to Go Public: Evidence from Structural Estimation"
- 46. Moody's Credit Risk Conference, London Business School, May 2011; "Inventory Effects, The Winner's Curse and Bid Shading in CDS Auctions Outcomes"
- 47. International Conference on Contract Procurement and Public Private

Agreements, Paris, May 2012; Collusion in Highway Procurement Auctions

48. Indian Statistical Institute, Delhi Annual Conference, Dec 2011; Collusion in Highway Procurement Auctions

Indian Statistical Institute, Delhi Annual Conference, Dec 2009, 2010; American Economic Association (AEA) North American Annual Meeting Jan 2008; Econometric Society South and South-East Asia Meeting, December 2006, Chennai, India; Centre for Analytical Finance, ISB, Winter Meeting on Market Microstructure, December 2006 (Discussant); Centre for Analytical Finance, ISB, Summer Meeting on Corporate Finance and Corporate Governance, August 2006 (Discussant); Econometric Society Summer Conference, June 2006, University of Minnesota; Econometric Society World Congress, Aug. 2005, London, UK; Fourth Villa Mondragone Workshop in Economic Theory and Econometrics, July, 2004, Rome; Econometric Society Summer Conference, June 2004, Brown University, University of Maryland, Department of Economics, College Park, 2009; University of California, Riverside, Dec 2007; Birmingham University, (Economics) U.K. 2007; University of Maryland, Smith School of Business (Finance), 2007; Oklahoma University, Price College of Business, (Finance), 2007; Hong Kong University of Science and Technology (Joint Finance and Economics), 2007; George Washington University (Economics), 2006; Indian School of Business (at Kellogg School of Management, Northwestern University), 2005

#### <u>Service</u>

- Member: MS Finance Task Force, Carey Business School, Johns Hopkins University, 2021-
- Member: Curriculum subcommittee of Finance & Accounting, Carey Business School, Johns Hopkins University, 2021-
- Member: Faculty Advisory Board of Student Management Investment Fund (SMIF), Carey Business School, Johns Hopkins University, 2023-
- Member: Student Management Investment Fund (SMIF) Task Force, Carey Business School, Johns Hopkins University, 2022
- Member: NSF panel on training the next generation workforce in the age of AI/ML in India, Bangalore, 2023 August
- Member, Practice Track Faculty Search Committee, 2022-23
- Editorial Board Member: Journal of Financial Data Science
- Director of MSQF, Gabelli School of Business, 2018-2021
  - o Successful rollout of AI/ML and algorithmic trading in the curriculum
  - Leading the curriculum change (approved by the NY state education (NYSED))
  - Significant improvement in rankings (MSQF featured first time as top 15 global MS in Finance program by Risk.net; according to Risk.net: "...based on interviews with course directors..." a key component in ranking)
  - o Increased enrollment, more diverse student body
  - New international partnership and Fintech program with Indian Institute of Management (IIM-B)
  - New international collaboration with S.P. Jain Institute of Management, India
- Reviewer: Management Science, Journal of Money Credit and Banking, Journal of Corporate Finance, Journal of Real Estate Finance, Journal of Accounting and Public Policy

- Member, Program Committee, Financial Management Association (FMA) North American Conference, 2010, 2011, 2012, 2016, 2017, 2018, 2019, 2020, 2023
- Member, Program Committee, Financial Management Association (FMA) Asia Conference 2010
- Member, Program Committee, Midwest Finance Association Annual Meeting, 2010
- Member, Site Selection Committee, Financial Management Association (FMA) 2009-11
- Local Area Coordinator: Finance & Economics, Indian School of Business, 2009-2011
- Editor: Review of Market Integration, Sage Publication, 2009-
- Program Committee Member, Centre for Analytical Finance Summer Research Conference, 2006, ISB
- Post-Doctoral Supervision: Dr. Madhavi Sethi, ISB 2006-2008 (Placement: Assistant Professor: XLR Institute of Management)
- Member, Academic Committee, ISB 2011-12, 2010-11, 2009-10, 2007-2008, 2006-2007
- Interviewing and Evaluation of Faculty Candidates, ISB 2006-2011

## **Other Professional/Industry Associations:**

- Honorary Faculty Fellow: Centre for Responsible AI, IIT Madras, 2023-
- Member: Working group on Guidelines for usage of AI/ML Applications in the Indian Securities Market, Securities and Exchange Board of India (SEBI): Jan 2022-Dec 2022

#### Role:

- To study the Indian, global best practices.
- To prepare the guidelines for usage of AI / ML applications.
- To address the concerns / issues due to using AI / ML applications.
- Member: Big Data Task Force Group, State of Karnataka Knowledge Commission, 2018-19
  - Karnataka is a major state of India (capital city: Bangalore) and hub of IT and AI-ML start-ups.
  - Role: Advise the State Government on the use of big data and machine learning in governance and policy making. Wrote a concept note on how to design and use blockchain technology in governance like land registration, venture finance, peer to peer loans, etc., presented in a workshop and next steps are being designed.
- Special Consultant: Economists Inc., 2009-
- Faculty Expert: Berkeley Research Group, 2022-
- Expert Advisor: Vega Economics, 2017-
- Advisor: Competition Commission of India 2010-2012
  - Role: Member of a high-level three-member advisory board to help develop the merger approval process (equivalent to DOJ approval in US).
     Providing expert opinion in various high profile financial and economic antitrust cases.

Visiting Faculty: CAFRAL, Reserve Bank of India

#### **Professional Associations**

 Member: Econometric Society, American Economic Association, American Finance Association, Financial Management Association, Midwest Finance Association

#### **Consulting Experience**

- Consulting Areas:
  - o Antitrust: Bid rigging, Collusion, Merger Simulations
  - o **Finance**: Alternative Data, Credit Derivatives, Fintech & Social Network, Machine Learning, Merger & Acquisitions (M&A), Risk Management, Trading Strategies, Textual Analysis, Valuations
  - o Expert in a multi-billion-dollar financial class action lawsuit
- Advisor to Competition Commission of India (CCI: The Federal authority of Competition regulation in India; equivalent to DOJ/FTC in US)
  - o One of the three-member board of advisors of the CCI during their inception stage
  - o Advised CCI on various antitrust cases as an expert
  - o Taught merger simulation, bid rigging identification techniques, etc., in their capacity building endeavors
- Extensive experience in development and application of merger simulation models
- Worked as a lead expert in various cases and advised the regulatory authority
- Led team of research associates in economic and financial consulting
- Barclays Bank, Chicago Mercantile Exchange (CME), Genesis Analytics, Morgan Stanley, Royal Bank of Scotland,
  - o Multiple financial consulting engagements involving M&A, market design, risk management, trading strategies, valuations etc.

#### **A Sample of Consulting Expert Experience**

- Gave expert opinion in a case of abuse of dominance against a premier internet company
- Gave expert opinion in a case of abuse of dominance against a major stock exchange
- Gave expert opinion in a case of cartelization and price fixing against a group of regional cement producers
- Gave expert opinion in a case on whistleblowing