

# Indranil SenGupta: Graduate Student & Postdoc Mentoring

---

GRADUATE  
STUDENT AND  
POSTDOC  
MENTORING

- **Current Ph.D. students:**

1. Mulue Gebreslasie, Research supervision: Spring 2024- present, Department of Mathematics, NDSU<sup>1</sup>.
2. Ridhima Nehra, Research supervision: Fall 2024- present, Department of Mathematics, NDSU.
3. Randolph Vaughan Russell, Research supervision: Fall 2024- present, Department of Mathematics and Statistics, FIU<sup>2</sup>.

- **Previous postdoc:**

- Dr. Giancarlo Sanchez, Department of Mathematics and Statistics, FIU. 2023-2024.  
*Job Placement after postdoc:* **Research Staff Member (data scientist), US Department of Defense.**

- **Previous Ph.D. students:**

1. Semere Habtemicael (other last name used: Gebresilasie), Ph.D., December **2015**, Mathematics, NDSU.  
*Dissertation Title:* Modeling financial swaps and geophysical data using the Barndorff-Nielsen and Shephard model.  
*First Job Placement:* **Research Fellow at the Ragon Institute of MGH, MIT and Harvard, and Harvard Medical School.**
2. Aziz Issaka, Ph.D., May **2018**, Mathematics, NDSU.  
*Dissertation Title:* Analysis of variance based financial instruments and transition probability densities: swaps, price indices, and asymptotic expansions.  
*First Job Placement:* **Assistant Professor (tenure-track) at the Department of Mathematics and Statistics, University of North Carolina at Charlotte.**
3. Michael Roberts, Ph.D., August **2021**, Mathematics, NDSU.  
*Dissertation Title:* Hypothesis testing on time series driven by underlying Lévy processes, with machine learning applications.  
*First Job Placement:* **Visiting Assistant Professor at the Department of Mathematics and Statistics, Wake Forest University.**
4. Shantanu Awasthi, Ph.D., December **2021**, Mathematics, NDSU.  
*Dissertation Title:* The first exit-time analysis of an approximate Barndorff-Nielsen and Shephard model, with data science-based applications in the commodity market.  
*First Job Placement:* **Data Scientist, at Medallia INC.**
5. Humayra Shoshi, Ph.D., August **2022**, Mathematics, NDSU.  
*Dissertation Title:* Data-science-driven refinements of stochastic models with applications in oil data, short maturity Asian options, and yield prediction.  
*First Job Placement:* **Assistant Vice President of Credit & Obligor Risk Analytics, at Citi.**

---

<sup>1</sup>NDSU= North Dakota State University

<sup>2</sup>FIU= Florida International University

6. Nicholas Salmon, Ph.D., December **2022**, Mathematics, NDSU.  
*Dissertation Title:* Financial analysis with the fractional Barndorff-Nielsen and Shepherd model and hypergraphs: applications in swaps, hedging, classification, and clustering.  
*First Job Placement:* **Associate Data Scientist, at Experience IT.**
7. Minglian Lin, Ph.D., May **2025**, Mathematics, NDSU.  
*Dissertation Title:* Lévy process driven analysis of optimal portfolio and Value-at-Risk estimation with applications to commodity markets.  
*First Job Placement:* **Adjunct Faculty at the Department of Mathematical Sciences, University of Texas- El Paso.**

• **Previous M.S. students:**

1. Taylor Houtz, M.S., August **2024**, Mathematics and Statistics, FIU.  
*MS Paper Title:* Deep-Belief Network: construction and application.  
*First Job Placement:* Internship at NASA in *Application of Formal Methods to Autonomous Systems*. After that, Data Analyst for *Bridger Photonics*.
2. Adam Diaz, M.S., December **2024**, Mathematics and Statistics, FIU.
3. Austin Uden, M.S., May **2022**, Mathematics, NDSU.  
*Thesis Title:* Stochastic processes, and development of the Barndorff-Nielsen and Shephard model for financial markets.  
*First Job Placement:* High school Math teacher at *Lincoln High School*. Also, continuation of education in the Initial Certification at the Advanced Level at *Doane University*.

• **Visiting Ph.D. student supervision:**

- Xianfei Hui (School of Management, Harbin Institution of Technology, China), Visiting Ph.D. student supported by China Scholarship Council. (January 2020-December 2020).

• **Graduate supervisory committee:**

– *Ph.D. supervisory committee member:*

1. Jorge N. Hernandez . *Mathematics and Statistics*, FIU, graduated: 2025.
2. Pratyush Mishra, *Mathematics*, NDSU, graduated: 2023.
3. Kwame Asiam Addey, *Statistics*, NDSU, graduated 2022.
4. Eric Sarfo Amponsah, *Mathematics*, NDSU, graduated 2020.
5. Anirban Ghosh, *Electrical & Computer Engineering*, NDSU, graduated 2018.
6. Guilherme Volpe Bossa, *Physics*, NDSU, graduated 2017.

– *Master's supervisory committee member:*

1. Shane Specht, *Software Engineering*, NDSU, graduated: 2023.
2. Ogunjemilua Oluwafemi, *Agribusiness and Applied Economics*, NDSU, graduated: 2023.
3. Kimia Zaman, *Computer Science*, NDSU, graduated: 2023.
4. Bismark Asante, *Agribusiness and Applied Economics*, NDSU, graduated: 2023.
5. Noah Carlson, *Agribusiness and Applied Economics*, NDSU, graduated 2021.
6. Caleb Larson, *Mathematics*, NDSU, graduated 2018.
7. Eric Kubischta, *Electrical & Computer Engineering*, NDSU, graduated 2018.
8. Noopur Modi, *Electrical & Computer Engineering*, NDSU, graduated 2015.
9. Peter Martin, *Statistics*, NDSU, graduated 2015.

10. Mohammad Kamal Hossan, *Electrical & Computer Engineering*, NDSU, graduated 2014.

• **External examiner<sup>3</sup>:**

- *Ph.D. dissertation*: Milan Kumar Das, *Mathematics*, Indian Institutes of Science Education and Research (IISER) Pune, India, graduated 2019.
- *Master's thesis*: Shreyash Kharat, *Statistics*, Indian Statistical Institute, Kolkata, India, expected graduation: 2025.
- *Master's thesis*: Aakaash K. Gupta, *Statistics*, Indian Statistical Institute, Kolkata, India, graduated: 2021.
- *Master's thesis*: Pavuluri Sushhma Seshu, *Mathematics*, Indian Institute of Science Education and Research (IISER) Tirupati, India, graduated: 2022.
- *Master's thesis*: Siddhesh Sundar, *Mathematics*, Indian Institute of Science Education and Research (IISER) Pune, India, graduated: 2023.

---

<sup>3</sup>The external examiner plays an important role in all degree level examinations in higher education in various countries such as India and UK. One of the purposes of having an external examiner is to ensure that standards are kept the same across universities.