NIKOLAOS DIMOU

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Education

PhD - Statistics and Operations Research — Chapel Hill, NC, US
4^{th} year PhD student, University of North Carolina at Chapel Hill, STOR Department — August 2023 – Present

Proffesional Diploma - Basketball Coaching — Athens, Greece
Greek Basketball Coaching Association — September 2022 – June 2023

BSc - Pure and Applied Mathematics — Athens, Greece
National and Kapodistrian University of Athens, GPA: 8.48/10.00 (4^{th}/239) — September 2018 – April 2022

Working Papers

[6] **N. Dimou**, and M. J. O'Neill, An Inexact Line Search SQP Algorithm for Equality Constrained Optimization, *in preparation*, 2026.

[5] **N. Dimou**, P. Saptarshi, and A. McAvoy, Inequality incentives and nonlinear payoff constraints in repeated games, *in preparation*, 2026.

[4] **N. Dimou**, and A. McAvoy, Equilibria in memory-one learning strategies, *in preparation*, 2026.

[3] P. Andreou, **N. Dimou**, and A. Sakanaveeti, Homogeneity Fusion for Factor Models through the lens of Sequential Optimization, *working paper*, 2026+.

[2] **N. Dimou**, and A. McAvoy, Convex payoff control in repeated games, *working paper*, 2026+.

[1] **N. Dimou**, Computing Nash Equilibria in Conic Network Games, *working paper*, 2026+.

Publications & Preprints

[4] **N. Dimou**, A branch-and-filter method for mixed-integer linear programming, *submitted for publication*, *arXiv:* https://arxiv.org/abs/2610.32165, 2026.

[3] **N. Dimou**, and M. J. O'Neill, A Sequential Cubic Optimization Method with Second-Order Complexity Guarantees for Equality Constrained Optimization, *submitted for publication*, *arXiv:* https://arxiv.org/abs/2604.02747, 2026.

[2] **N. Dimou**, and A. McAvoy, Expectation-enforcing strategies for repeated games, *minor revisions in Games and Economic Behaviour*, *arXiv*: https://arxiv.org/abs/2511.19828, 2026.

[1] **N. Dimou**, On the Equivalence of Zero-Sum Games and Conic Programs, *Mathematics of Operations Research,* DOI: https://doi.org/10.1287/moor.2025.0926, 2026.

Referee Services

- **Journals:** *Mathematics of Operations Research, Journal of Theoretical Biology, Computational Optimization and Applications.*
- **Conferences:** INFORMS Optimization Society Conference.

Student Academic Visits

- University of Pennsylvenia, Department of Biology — October 2026
  Invited by Prof. Joshua B. Plotkin. — Philadelphia, US
- Tel Aviv University, School of Mathematical Sciences — August 2022
  Invited by Prof. Eilon Solan. — Tel Aviv, Israel

Talks & Presentations

- International Symposium on Mathematical Programming *(upcoming)* — July 2027
  Invited Talk — Amsterdam, Netherlands
- INFORMS Annual Meeting [slides] — November 2026
  Invited Talk — San Francisco, US
- Graduate Student Seminar *(blackboard talk)* — September 2026
  Contributed Talk — UNC, US
- Third Congress of Greek Mathematicians [slides] — July 2026
  Contributed Talk — Athens, Greece
- SIAM Conference on Optimization [slides] — June 2026
  Contributed Talk — Edinburgh, UK
- Evolutionary Games: Mathematical Theory and Biological Insights [slides] — May 2026
  Invited Talk — Chicago, US
- Mathematics in Data Science Seminar [slides] — April 2026
  Contributed Talk — UNC, US
- INFORMS Optimization Society Conference [slides] — March 2026
  Invited Talk — Atlanta, US
- Graduate Student Seminar *(blackboard talk)* — February 2026
  Contributed Talk — UNC, US
- INFORMS Annual Meeting [slides] — October 2025
  Invited Talk — Atlanta, US
- BIOS-STOR Seminar *(blackboard talk)* — October 2025
  Invited Talk — UNC, US
- Data Science Day [poster] — September 2025
  Poster Presentation — UNC, US
- YinzOR Conference [slides] — August 2025
  Contributed Talk — CMU, US
- Graduate Student Seminar *(blackboard talk)* — March 2024
  Contributed Talk — UNC, US
- STORFEST Conference [poster] — September 2023
  Poster Presentation — UNC, US

Conferences, Summer Schools, & Workshops

- 28^{th} Triangle Lectures in Combinatorics, UNC, US — September 2026
- 19^{th} National Conference of Mathematical Analysis, NTUA & NKUA, Greece — December 2025
- 2^{nd} Workshop of Greek Women in Mathematics, NKUA, Greece — July 2024
- 7^{th} MATH Summer school "Mathematical Analysis", NTUA, Greeoce — June 2024

Awards & Fellowships

- John McNeely DuBose Fellowship — June 2026
  Travel Fund Award for presenting publication [1] at SIOPT 2026, in Edinburgh, UK.
- First Place Award at the 2025 YinzOR Conference Flash-Talk Competition — August 2025
  For giving a 10-minute contributed talk on publication [1].
- Hellenic Petroleum S.A., Program of Social Responsibility Scholarship 2021 — December 2021
  For attaining an excellent GPA of at least 8.5/10 throughout an academic year.
- Hellenic Petroleum S.A., Program of Social Responsibility Scholarship 2020 — December 2020
  For attaining an excellent GPA of at least 8.5/10 throughout an academic year.

Teaching & Research Experience

- Research Assistant (under the supervision of advisor Alex McAvoy) — Fall 2026 – Spring 2027
- Instructor for the "Optimization" section of the 2026 UNC Comprehensive Written Exams — Summer 2026
- Research Assistant (under the supervision of advisor Michael J. O'Neill) — Summer 2026
- Tutor for undergraduate students from UNC, STOR Department — Spring 2026
  Tutoring undergraduate students introductory courses of Linear Algebra and Optimization.
- Research Assistant (under the supervision of advisor Alex McAvoy) — Fall 2024 – Spring 2026
- Instructor for the "Optimization" section of the 2025 UNC Comprehensive Written Exams — Summer 2025
- Instructor Assistant for STOR 155 "Introduction to Statistics" — Summer 2024
- Instructor Assistant for STOR 315 "Discrete Mathematics for Data Science" — Spring 2024
- Instructor Assistant for STOR 215 "Foundations of Decision Sciences" — Fall 2023
- Tutor for undergraduate students from the NKUA, Department of Mathematics — Spring 2022
  Tutoring undergraduate students courses of Linear Algebra, Calculus, and Geometry.
- Tutor for high school students — 2020–2022
  Tutoring high school students subjects of Euclidean Geometry and Algebra.

Course Research Projects

- Optimization Theory for Noise-Contrastive Estimation: from Exponential Families to Equality-Constrained Formulations [report] — Spring 2026
- From Implicit Rewards to Explicit Objectives for Human Preference Alignment [report] — Fall 2025
- A Statistical Analysis on a Brain Mass Dataset [report] — Fall 2024
- The Power of the Truncated Nuclear Norm in the Matrix Recovery Problem [report] — Fall 2024
- Evolutionary dynamics on a cycle and fixation probabilities under a Birth-death rule with the presence of a controller [report] — Spring 2024
- A measure-theoretic proof of the Radon-Nikodym Theorem [report] — Spring 2024

Working Services & Volunteering

- Basketball Coach at Dafni Dafniou B.C. — 2018–2023
  Mentoring and teaching boys and girls of ages 5–15 the fundamentals of basketball.
- Basketball Assistant Coach of men's U18 Team, A national league, at Dafni Dafniou B.C. — 2018–2023
  Assistant coach and team stats analyst for the men's U18 team at the top national level.
- Participant of the Youth Academy Summer Camp and Development Program at Dafni Dafniou B.C. — 2018–2020
  Mentoring and teaching boys and girls of ages 5–7 the fundamentals of basketball, social communication skills and helping them understand the benefits of cooperation, mutual effort and support under a team environment.

Other Skills

Software: MATLAB, AMPL, Python, R, LaTeX, TeX, MS Office.
Languages: English (C2 level proficiency–Michigan University, TOEFL iBT: 110/120), Greek (native).