

Employment

- 2025-now **Assistant professor**
University of Alabama at Birmingham (AL)
- 2024-2025 **Postdoctoral Scholar**
Yale University (CT).
- 2021-2024 **Postdoctoral Scholar**
University of Washington (WA).

Education

- 2016-2021 **PhD in Mathematics**
Stanford University, Stanford (CA).
Advisor: Persi Diaconis.
Thesis: *Birthday problems and rates of convergence for Gibbs sampling.*
- 2014-2016 **Master degree in Mathematics (Laurea Magistrale)**
Univeristà degli Studi di Trieste/SISSA, Trieste (Italy).
110/110 cum laude.
Advisor: Alessandro Michelangeli.
Thesis: *Self-adjoint extensions theories and zero-range interaction models.*
- 2011-2014 **Bachelor degree (Laurea triennale) in Mathematics**
Università degli studi di Milano, Milano (Italy).
110/110 cum laude.

Research interests

I work on probability and optimal transport, with application to fields such as statistics, combinatorics, and economics. I also work on quantum mechanics and associated problems in operator theory.

Grants and awards.

- 2023-2025 AMS-Simons Travel Grant
- 2014-2016 SISSA Scholarship at University of Trieste
- 2011-2014 INdAM (Istituto Nazionale di Alta Matematica) Scholarship.

Preprints

- 2026 A. Ottolini, S. Starr
Pal's permanent conjecture: proof for block uniform matrices
- 2025 J. Boerma, A. Ottolini, A. Tsyvinski
Multidimensional sorting: comparative statics

Accepted papers

- 2025 R. Chen, A. Ottolini
Cutoff in total variation for the shelf shuffle
Electronic Communications in Probability, 30, 1-10 (2025)
- A. Ottolini, S. Steinerberger
Greedy Matching in Optimal Transport with concave cost
Annales Fennici Mathematici, 50(2), 549-562 (2025)

- A. Ottolini
Hitting times on the stochastic block model
Journal of combinatorics, 16(4), 531–551 (2025)
- B. Gerencsér, A. Ottolini
Cutoff for a class of auto-regressive models with vanishing additive noise
Scandinavian Journal of Statistics, 52(1), 314–331 (2025)
- 2024 A. Ottolini, S. Steinerberger
Concentration of Hitting Times in Erdős Rényi graphs
Journal of Graph Theory 107(2), 245–262 (2024)
- K. Devriendt, A. Ottolini, S. Steinerberger
Graph curvature via resistance distance
Discrete Applied Mathematics 348, 68–78 (2024).
- A. Ottolini, R. Tripathi
Central limit theorem in complete feedback games.
Journal of Applied Probability, 61.2, 654–666 (2024)
- 2023 J. He, A. Ottolini
Card guessing and the birthday problem for sampling without replacement.
The Annals of Applied Probability, 33(6B), 5208–5232, (2023).
- B. Gerencsér, A. Ottolini
Rates of convergence for Gibbs sampling in the analysis of almost exchangeable data
Stochastic Processes and their Applications, 165, 440–464, (2023)
- A. Ottolini, S. Steinerberger
Guessing cards with complete feedback.
Advances in Applied Mathematics, 150, 102569 (2023).
- N. A. Caruso, A. Michelangeli, A. Ottolini
On a comparison between absolute and relative self-adjoint extension schemes
Quaestiones Mathematicae, 47(1), 1–19 (2023).
- 2021 A. Ottolini
Spectral properties of point interactions with fermionic symmetries.
Mathematical Challenges of Zero-Range Physics: Models, Methods, Rigorous Results, Open Problems. Springer International Publishing, (2021).
- M. Gallone, A. Michelangeli, A. Ottolini
Krein-Visik-Birman self-adjoint extension theory revisited.
Mathematical Challenges of Zero-Range Physics: Models, Methods, Rigorous Results, Open Problems. Springer International Publishing, (2021).
- 2020 A. Ottolini
Oscillations for order statistics of some discrete processes
Journal of Applied Probability, 57.3, 703–719 (2020)
- 2018 S. Becker, A. Michelangeli, A. Ottolini
Spectral analysis of the 2+1 fermionic trimer with contact interactions
Mathematical Physics, Analysis and Geometry 21(4), 1–42 (2018)
- A. Michelangeli, A. Ottolini, R. Scandone
Fractional powers and singular perturbations of quantum differential Hamiltonians
Journal of Mathematical Physics 59(7), 072106(2018).
- A. Michelangeli, A. Ottolini
Multiplicity of self-adjoint realisations of the (2+1)-fermionic model of Ter-Martirosyan-Skornjakov type.
Reports on Mathematical Physics 81(1), 1–38 (2018)
- 2017 A. Michelangeli, A. Ottolini
On point interactions realized as Ter-Martirosyan-Skornjakov Hamiltonians.
Reports on Mathematical Physics 79(2), 215–260 (2017)

Talks

- Jan 2026 Speaker at Probability Seminar, UW (Seattle)
- Jan 2026 Speaker at NOMADS seminar, GSSI (l'Aquila)
- Oct 2025 Speaker at 37th Joint Applied Math Meeting, UAB (Huntsville)

June 2024 Speaker at SED conference, UAB (Barcelona)
 May 2024 Speaker at Malliavin Calculus and its Applications, Kiev (on Zoom).
 Feb 2024 Speaker at Probability Seminar, NC State (Raleigh).
 Jan 2024 Speaker at Postdoc Seminar, University of Washington (Seattle).
 Speaker at JMM (San Francisco).
 Nov 2023 Speaker at Probability Seminar, University of Maryland (DC).
 Speaker at NEPS (New York).
 Speaker at Probability Seminar, University of Washington (Seattle).
 Oct 2023 Speaker at Probability Seminar, CUNY (New York).
 Speaker at Probability Seminar, University of Lehigh (Betlemme).
 Feb 2023 Speaker at Probability Seminar, MIT (Boston).
 Speaker at Probability Seminar, University of British Columbia (Vancouver).
 Speaker at Probability Seminar, University of Washington (Seattle).
 Oct 2022 Speaker at Northwestern Probability Seminar, University of Washington (Seattle).
 May 2022 Speaker at Victoria Probability Day, University of Victoria (Victoria).
 Feb 2022 Speaker at Probability Seminar, University of Washington (Seattle).
 Nov 2021 Speaker at Probability Seminar, Renyi Institute (Budapest).
 Mar 2021 Speaker at Seminars in Statistics, Collegio Carlo Alberto (Torino).
 Jul 2018 Speaker at Mathematical Challenges of Zero-Range Physics, INDAM (Roma).
 Nov 2016 Speaker at Trieste Quantum Days, SISSA (Trieste).

Teaching experience

Spring 2026 Principal Instructor at UAB Math 260 (HON), Intro to Linear Algebra
 Fall 2025 Principal Instructor at UAB Math 225 (HON), Intro to Calculus
 Spring 2025 Principal Instructor at Yale University Math 481, Intro to Optimal Transport
 Spring 2024 Principal Instructor at University of Washington. Math 209, Linear Analysis.
 Principal Instructor at University of Washington. Math 395, Multivariate probability.
 Fall 2023 Principal Instructor at University of Washington. Math 209, Linear Analysis.
 Principal Instructor at University of Washington. Math 381, Discrete Mathematical modelling.
 Summer 2023 Principal Instructor at University of Washington. Math 394, Introduction to probability.
 Spring 2023 Principal Instructor at University of Washington. Math 396, Finite Markov Chains.
 Principal Instructor at University of Washington. Math 209, Linear Analysis.
 Fall 2022 Principal Instructor at University of Washington. Math 209, Linear Analysis.
 Spring 2022 Principal Instructor at University of Washington. Math 209, Linear Analysis.
 Winter 2022 Principal Instructor at University of Washington. Math 209, Linear Analysis.
 Spring 2021 Course Assistant at Stanford University. Math 159, Discrete probabilistic methods.
 Winter 2021 Course Assistant at Stanford University. Math 151, Introduction to Probability Theory.
 Fall 2020 Teaching Assistant at Stanford University. Math 53, Ordinary differential equations with linear algebra.
 Summer 2020 Principal instructor at Stanford University. Math 53, Ordinary differential equations with linear algebra.
 Winter 2020 Course Assistant at Stanford University. Math 131P, Partial differential equations.
 Fall 2019 Teaching Assistant at Stanford University. Math 53, Ordinary differential equations with linear algebra.
 Summer 2019 Principal instructor at Stanford University. Math 53, Ordinary differential equations with linear algebra.
 Winter 2019 Course Assistant at Stanford University. Math 131P, Partial differential equations.
 Fall 2018 Teaching Assistant at Stanford University. Math 53, Ordinary differential equations with linear algebra.
 Spring 2018 Teaching Assistant at Stanford University. Math 53, Ordinary differential equations with linear algebra.
 Winter 2018 Course Assistant at Stanford University. Math 131P, Partial differential equations.
 Spring 2017 Course Assistant at Stanford University. Math 171P, Fundamental concepts of analysis.
 Fall 2016 Course Assistant at Stanford University. Math 131P, Partial differential equations.

Service

2024-now PhD supervisor of Grigorii Buklei, PhD student at GSSI
Spring 2026 Supervisor of MATH460 reading seminar on optimal transport.
Spring 2024 Supervisor of a WXML project with undergraduate students at University of Washington.
Spring 2023 Supervisor of a WXML project with undergraduate students at University of Washington.
Fall 2022 Supervisor of a WXML project with undergraduate students at University of Washington.
2017-2018 Organizer of Student Probability Seminar at Stanford University.