Daniel de la Riva Massaad

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Academic Formation :

- **Bacharel** of **Mathematics**, Pontifícia Universidade Católica do Rio de Janeiro
  Grant: Bolsa Arquimedes**. GPA**: 3.7/4.0
- **Master** of **Mathematics (Probability)**, Pontifícia Universidade Católica do Rio de Janeiro.
  Grants: Bolsa CAPES | Bolsa Aluno Nota 10 (High Performance Grant) FAPERJ. **GPA**: 4.0/4.0
- **Ph.D**. in **Mathematical Statistics**, Stockholm University (01/09/2020-01/04/2022, transferred to UBC)
  Grant: Swedish Research Council grant. **GPA**: N/A
- **Ph.D**. in **Mathematics (Probability)**, University of British Columbia (Expected to graduate in 2026)
  Grants: Faculty of Science PhD Tuition Award | President's Academic Excellence Initiative PhD Award | International Tuition Award. **Current GPA:** 4.33/4.33 (Only 500 level courses count for my degree)

Skills:

- **Programming**: LaTeX, MatLab, C++, **Python**, **Pandas, NumPy, GitHub, Data Science**.
- **Research Expertise**: **Probability**, **Noise Sensitivity,** Percolation Theory, **Opinion Dynamics**, Interacting Particle Systems, Graph Theory, Spin Glasses.
- **Other**: Problem-solving, Multitasking, **Communication**, Project Management, **Leadership**, Volunteering.

Language Skills:

- **Portuguese**: Native | **English** : Fluent | **Spanish**: Advanced | **French**: Intermediate | **Mandarin**: Beginner | **Korean**: Beginner

Completed Courses (Graduate Level):

- **Probability** | Logic | Proof Theory | **Networks and Epidemics** | **Brownian Motion** | **Data Science** | **Stochastic Differential Equations** | **Stochastic Processes** | Interactive Particle Systems | Schramm-Loewner Evolution | Mathematical Statistics | Markov Chains | High-Dimensional Percolation.

Courses taught (as Teaching Assistant):

- **Stochastic Processes, and Mathematical proof** at UBC | **Probability 3 (Masters Level),** and **Probability 1** at Stockholm University.

Experience:

- **Mathematics:** As a Ph.D., I have been i**nvolved in multiple research projects**, significantly improving my **teaching and communication skills** by presenting articles and results at renowned conferences. In addition, l**earning in depth the mathematical foundations** involved in **Probability**, and **Statistics.**
- **Leadership:** Organized seminars and readings and actively participated in research groups throughout my university years at PUC-Rio, SU, and UBC. I am extremely **proactive**, always seeking to **learn**, and constantly **managing** and **organizing** groups and workshops in multiple areas.
- **Communication:** Attending numerous mathematics conferences, **presenting** seminars, **teaching**, and participating in workshops in **English** poetry and translation have improved my **communication** skills.

Academic Production :

- **Published Articles**:
  1. D. Ahlberg, D. de la Riva, and S. Griffiths, "On the rate of convergence in Quenched Voronoi Percolation," ***Electronic Journal of Probability.***
  2. D, Ahlberg. D. de la Riva, "Is 'being above the median' a noise sensitive property?," ***Transactions of the American Mathematical Society,*** to appear.
- **Preprint**:
  1. G. Amir, O. Angel, R. Baldasso, D. de la Riva, "Voter Model stability with respect to conservative noises," ***arXiv.***
- **Work in progress:**
  "Existence and Sharpness of Phase Transition of Frog Models on Transitive Graphs." "On the fluctuations for the REM."
- **Master's Thesis**:
  "An invitation to Noise Sensitivity and Applications to Quenched Voronoi Percolation."
  Link: https://www.maxwell.vrac.puc-rio.br/49615/49615.PDF
- **Undergraduate Research Project:** "Boolean Functions and Noise Sensitivity."
- **Poster**: "Wavelet Theory and its connection with Art History."

Talks :

- **XXVIII Brazilian School of Probability:** "Sharpness of the phase transition for the Frog Model on transitive graphs." 2025, Short Talk.
- **Canadian Mathematical Society:** "Voter Model Stability with respect to conservative noises." 2024, CMS 2024 Winter Meeting, Discrete Probability Session.
- **UVIC:** "Exclusion Stability for the Voter Model." 2024, Probability Seminar.
- **Institut Fourier Grenoble:** "Exclusion Sensitivity and Stability for the Voter Model." 2024, Probability Seminar.
- **CIRM Marseille:** "Noise Sensitivity beyond the Boolean setting." 2023, Percolation and Interactions.
- **UBC:** "Is being above the median a Noise Sensitive property?" 2022, PIMS Summer School.
- **ETH Zurich:** "On the rate of convergence in Quenched Voronoi Percolation," 2021, Percolation Today. Link: https://percolation.ethz.ch/zoom-talks/d-ahlberg-and-d-de-la-riva-on-the-rate-of-convergence-in-quenched-voronoi-percolation/

Organizer:

- **2025 PIMS-CRM Summer School in Probability:** Helped organize the logistics for the summer school.

Prizes in Mathematics Competitions:

- **Certificate of Appreciation: Undergraduate Poster Competition** | KAUST | Jeddah 2018.
- **Honorable Mention: CIIM** | **South American Mathematical Olympiad** | Quito 2017.
- **Honorable Mention: CIIM** | **South American Mathematical Olympiad** | Manaus 2016.
- **Honorable Mention**: **Mathematics PUC-Rio Challenge** | 2015.
- **Honorable Mention**: **Rio de Janeiro Mathematical Olympiad** | 2014.

Other Awards :

- **Key Capabilities in Data Science**, Awarded for completing UBC's Data Science extension learning program, UBC, November 2024.
- **Chinese Bridge Competition: Speaking Contest**, First Place, VIFF , April 2024
- **Multilingual Poetry Slam Contest** (Translation), Second Place, UBC, November 2022.
- **IELTS**: 8,5 out of 9,0, August 2024.
- **Certificate of Appreciation: "Accessibility: Inclusion of people with physical and visual disabilities,"** PUC-RJ, June 2019.