

Daniel de la Riva Massaad

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Academic Formation :

- **Bachelor 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)
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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.
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Language Skills:

- **Portuguese:** Native | **English :** Fluent | **Spanish:** Advanced | **French:** Intermediate | **Mandarin:** Beginner | **Korean:** Beginner
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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.
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Courses taught (as Teaching Assistant):

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

- **Mathematics:** As a Ph.D., I have been **involved in multiple research projects**, significantly improving my **teaching and communication skills** by presenting articles and results at renowned conferences. In addition, **learning 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.
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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. and D. de la Riva, "Is 'being above the median' a noise sensitive property?," ***Transactions of the American Mathematical Society***.
- **Preprint:**
 1. G. Amir, O. Angel, R. Baldasso, and D. de la Riva, "Voter Model stability with respect to conservative noises," ***arXiv***.
 2. O. Angel, D. de la Riva, J. Hermon, and Y. Shi, "Existence and sharpness of the phase transition for the Frog Model on transitive graphs." ***arXiv***.
- **Work in progress:**
 1. " A new proof of the finite-size corrections for the REM," joint work with G. Genovese, J. Kim, and F. Tosello.
 2. "Exceptional times for anisotropic percolation," joint work with D. Ahlberg and R. Baldasso

- **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.”
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Talks :

- **University of Warwick:** “Existence and sharpness of the phase transition for the Frog Model.” 2025, joint seminar with Omer Angel, University of Warwick Probability Seminar.
 - **UBC:** “Existence and sharpness of the phase transition for the Frog Model.” 2025, The University of British Columbia Probability Seminar.
 - **NITMB:** “Sharpness and existence of the phase transition for the Frog Model.” 2025, Northwestern University Probability Seminar.
 - **XXVIII Brazilian School of Probability:** “Sharpness of the phase transition for the Frog Model on transitive graphs.” 2025, Short Talk, UFMG.
 - **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/>
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Organizer:

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