Christian Serio

Contact Information	Department of Mathematics 450 Jane Stanford Way Building 380, 381D Stanford, CA 94305	cdserio@stanford.edu

Mathematical Interests

Probability theory and mathematical/statistical physics: scaling limits, universality, Gibbs measures, line ensembles, spin systems, random polymers.

Education

Stanford University (2021-present)

PhD Candidate in Mathematics
Advisor: Amir Dembo

Columbia University (2017-2021)

BA in Mathematics with Honors, summa cum laude, Phi Beta Kappa

Publications

- ❏ "Uniform convergence of Dyson Ferrari-Spohn diffusions to the Airy line ensemble," with E. Dimitrov. To appear in *Ann. Inst. H. Poincaré Probab. Statist.*
- ❏ "Scaling limit for line ensembles of random walks with geometric area tilts." *Electron. J. Probab.* 28: 1-14 (2023).
- ❏ "Tightness of discrete Gibbsian line ensembles." *Stoch. Process. Their Appl.* 159: 225-285 (2023).
- ❏ "Tightness of Bernoulli Gibbsian line ensembles," with E. Dimitrov, X. Fang, L. Fesser, C. Teitler, A. Wang, and W. Zhu. November 2021. *Electron. J. Probab.* 26: 1-93 (2021).

Invited Talks

- ❏ Stanford University, Probability Seminar, October 2023.
- ❏ Columbia University, Columbia Probability Workshop, May 2023.

Academic Programs

- ❏ Seminar on Stochastic Processes. University of Arizona (March 8-11, 2023). Poster presenter.
- ❏ Random Media & Large Deviations, conference in honor of Ofer Zeitouni's 60th birthday. Courant Institute (Oct 21-24, 2022). Participant.
- ❏ University of Michigan Summer School on Random Matrices (June 13-24, 2022). Participant.
- ❏ Columbia University Mathematics REU, Summer 2020. Participant in Evgeni Dimitrov's "Asymptotics of Bernoulli Gibbsian line ensembles" research group.
- ❏ Columbia University Mathematics REU, Summer 2019. Participant in Kyle Hayden's "Surgery on knots and exotic phenomena in 3- and 4-manifolds" research group.

Academic Awards

- ❏ John Dash Van Buren Jr. Prize in Mathematics, Columbia College, April 2021. Awarded to one student for an outstanding senior thesis, "Tightness of discrete Gibbsian line ensembles."
- ❏ Van Amringe Mathematical Prize, Columbia Mathematics Department, May 2020. Awarded to the student deemed most proficient in their class in designated mathematical subjects.

Teaching Experience	❏ TA at Stanford, MATH 53: Ordinary Differential Equations, Winter 2023
	❏ CA at Stanford, MATH 136: Stochastic Processes, Fall 2022
	❏ CA at Stanford, MATH 158: Basic Probability and Stochastic Processes with Engineering Applications, Spring 2022
	❏ CA at Stanford, MATH 19: Calculus I, Fall 2021
	❏ TA at Columbia, MATH UN1201: Calculus III, Summer 2020
	❏ TA at Columbia, MATH GU4061-4062: Intro to Modern Analysis I & II, Spring 2019-Spring 2021
Service	❏ Stanford Student Probability Seminar. Organizer, Fall 2022-present.
	❏ Columbia University Mathematics REU, Summer 2021. Graduate student mentor for Carsten Chong's "Hurst index estimation under measurement errors" undergraduate research group.
References	**Amir Dembo**, Professor, Mathematics Department, Stanford University, adembo@stanford.edu.
	Ivan Corwin, Professor, Mathematics Department, Columbia University, ic2354@columbia.edu.
	Evgeni Dimitrov, Assistant Professor, Mathematics Department, University of Southern California, edimitro@usc.edu.