

Yilin YE

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Education

École Polytechnique (X) - Institut Polytechnique de Paris (IP Paris) Laboratoire de Physique de la Matière Condensée (UMR 7643), CNRS Doctoral Researcher , Statistical Physics. Supervisor: Denis S. GREBENKOV	Palaiseau, France Oct. 2023 - Sept. 2026
École Normale Supérieure (ENS) - Université Paris Sciences et Lettres (PSL) Master 2 (M2), Physics, ICFP (Soft matter & Biophysics). <u>Mention</u> : Bien (Good). Master 1 (M1), Chemistry. <i>Suspension for COVID-19.</i> Diplôme de l'ENS (DENS), <u>Major/Minor</u> : Physics/Chemistry.	Paris, France Sept. 2022 - Jun. 2023 Sept. 2021 - Jun. 2022 Sept. 2020 - Jun. 2021 Sept. 2019 - Jun. 2023
Xiamen University Bachelor , Chemistry. <u>Honor</u> : Outstanding Graduate.	Xiamen, China Sept. 2015 - Jun. 2019

Publications

8. Ye, Y.; Grebonkov, D. S. (2025) Local persistence exponent and its log-periodic oscillations in self-similar boundaries. *Phys. A: Stat. Mech. Appl.*, submitted. (arxiv: 2507.08628)
7. Ye, Y.; Amarouchene, Y.; Sarfati, R.; Dean, D. S.; Salez, T. (2025) Brownian motion near a soft surface. *Comptes Rendus Physique*, submitted. (arxiv: 2507.03403, hal-05143181)
6. Ye, Y.; Grebonkov, D. S. (2025) Boundary local time on wedges and prefractal curves. *J. Phys. A: Math. Theor.*, submitted. (arxiv: 2505.19748)
5. Maïda, M.; Fahmy, A.; Fatras, J.-L.; Ye, Y. (2025) Large deviations in Coulomb gases: a mathematical perspective. *SciPost Phys. Lect. Notes*, In refereeing.
4. Ye, Y.; Chaigneau, A.; Grebonkov, D. S. (2025) Escape-from-a-layer approach for simulating the boundary local time in Euclidean domains. *J. Comput. Phys.*, **537**, 114099.
3. Ye, Y.; Chaigneau, A.; Grebonkov, D. S. (2025) First-passage times to a fractal boundary: local persistence exponent and its log-periodic oscillations. *Phys. Rev. E*, **111**, 014153. (Editors' Suggestion)
2. Zhang, F.; Niu, Y.; Hong, D.; Ye, Y.; Hua, Y.; Ding, S.; Zhang, Y. (2021) *Chinese Chemical Letters*, **32**(2), 668-671.
1. Li, J.; Ye, Y.; Zhang, Y. (2018) *Organic Chemistry Frontiers*, **5**(5), 864-892.

Researches

Probabilistic Approach to Diffusion-Mediated Surface Phenomena (M2, PhD thesis) Supervisor Denis S. GREBENKOV, PMC (UMR 7643), CNRS, École Polytechnique > Statistics of the first-passage time (FPT) to fractal boundaries (Koch snowflakes); [3,8] > Efficient numerical approach to simulate the boundary local time on smooth & polygonal domains; [4,6] > Time-dependent reactivity in diffusion-controlled reactions;	Palaiseau, France Apr. 2023 - Present
Brownian Motion near a Soft Surface (M1) Supervisor Thomas SALEZ, LOMA (UMR 5798), CNRS, Université de Bordeaux > Theoretical and numerical analyses of non-linear coupled equations for cylindrical particle's movement; [7]	Talence, France Feb. 2022 - Jul. 2022
Study of $\eta^{(\prime)} \rightarrow \pi^+ \pi^- \gamma^{(*)}$ Decays by Effective Field Theory Supervisor Lingyun DAI, Hunan University	Changsha, China Mar. 2021 - Aug. 2021

Simulation of Vibrational ICD on Model Systems with Reduced Dimensions (DENS)	<i>Remote</i>
Supervisor Jérémie CAILLAT, LCPMR (UMR 7614), CNRS, Sorbonne Université	Jun. 2020 - Jul. 2020
Research towards Total Synthesis of Atkamine (Undergraduate thesis) [2]	Xiamen, China
Supervisor Yandong ZHANG, Xiamen University	Jan. 2018 - May 2019
Research towards Total Synthesis of Phainanoid A (Summer research)	Chicago, USA
Supervisor Guangbin DONG, University of Chicago	Jul. 2018 - Sept. 2018
Research towards Total Synthesis of (–)-Actinophyllic Acid [1]	Xiamen, China
Supervisor Yandong ZHANG, Xiamen University	Jul. 2016 - Jan. 2018

Conferences

National Conference on Statistical Physics and Complex System (8th)	Ningbo, China.
Poster: FPT to a fractal boundary: local persistence exponent and its log-periodic oscillations	Jul. 30-Aug. 1, 2025
International Conference on Statistical Physics (29th)	Florence, Italy.
Poster: FPT to a fractal boundary: local persistence exponent and its log-periodic oscillations	Jul. 13-18, 2025
Statistical Aspects of Nonlinear Physics (IHES Summer School)	Bures-sur-Yvette, France.
Oral: FPT to a fractal boundary: local persistence exponent and its log-periodic oscillations	Jun. 23-Jul. 4, 2025
School on Non-Equilibrium Statistical Physics	Barcelona, Spain.
	Apr. 7-11, 2025
Journées de Physique Statistique (44th)	Paris, France.
Oral: FPT to a fractal boundary: local persistence exponent and its log-periodic oscillations	Jan. 30-31, 2025
Conference of Condensed Matter Physics (CCMP)	Liyang, China.
Poster: EFL approach for simulating the boundary local time in Euclidean domains	Aug. 4-9, 2024
Theory of Large Deviations and Applications (Summer school) [5]	Les Houches, France.
Poster: EFL approach for simulating the boundary local time in Euclidean domains	Jul. 1-26, 2024
Journées de Physique Statistique (43th)	Paris, France.
Oral: Encounter-based approach for diffusion-mediated surface phenomena	Jan. 25-26, 2024
Journées de Physique Statistique (42th)	Paris, France.
Oral: Brownian motion near a soft surface	Jan. 26-27, 2023
Journées de la Matière Condensée (18th, MC24: Simulation des colloïdes)	Lyon, France.
Oral: Brownian motion near a soft surface	Aug. 22-26, 2022

Selected Awards

Best Poster (20 in 111)	Aug. 2025
Best Poster (10 in 199), CCMP 2024	Aug. 2024
Normalien Scholarship , ENS (International Selection)	Sept. 2019
China National Scholarship (×3)	Nov. 2016 & Nov. 2017 & Nov. 2018
Wenqing Scholarship (18 in 14181), Xiamen University	Apr. 2018

Languages

Chinese (Native), English (C1), French (B2)

C, Fortran, L^AT_EX, Mathematica, Matlab, Pascal, Python, R