

SCHABANEL Juliette

PhD student in LaBRI, Bordeaux, France

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Studies

- **2024-2027 :** PhD thesis advised by Mireille Bousquet-Mélou and Baptiste Louf on the *enumeration of maps* in LaBRI (Bordeaux, France).
- **2020-2024:** Student at the Department of Computer Science of École Normale Supérieure de Paris:
 - Parisian Master of Research in Computer Science (MPRI) and equivalent M1 of Mathematics (2021-2024).
 - Bachelors of Computer Science and Mathematics.
- **2018-2020:** Undergraduate studies CPGE MPSI (Majors Mathematics and Physics, minor Computer Science) at Lycée du Parc (Lyon).

Research Experiences

- **March-July 2024:** Research internship in LaBRI on *enumerative and bijective properties of combinatorial maps*, supervised by Baptiste Louf.
- **May-July 2023 :** Research internship at IRIF on *eulerian orientations of planar maps*, supervised by Marie Albenque.
- **February-July 2022:** Research internship at the University of Turku on the *solitaire of independence* (symbolic dynamics), supervised by Ville Salo.
- **June-July 2021:** Research internship in the COATI team of INRIA in Sophia Antipolis, on *dicoloration of digraphs*, supervised by Frédéric Havet and François Pirot, in collaboration with Pierre Aboulker.

Journal papers

- ***Solitaire of Independence***, with Ville Salo, in *Natural Computing* (2024) (<https://arxiv.org/abs/2409.19360>).
- ***Minimum acyclic number and maximum dichromatic number of oriented triangle-free graphs of a given order***, with Pierre Aboulker, Frédéric Havet and François Pirot, in *The Electronic Journal of Combinatorics* (2025) (<https://arxiv.org/abs/2403.02298>).

Conference papers

- ***Pattern avoiding 3D permutations and triangle solitaire***, at FPSAC 2025 (<https://arxiv.org/abs/2502.14657>).
- ***Triangle Solitaire***, with Ville Salo, presented at AUTOMATA 2023 (<https://arxiv.org/abs/2206.04219>).

Preprints

- ***Slit-Slide-Sew bijection for planar bipartite maps with prescribed degree***, (<https://arxiv.org/abs/2502.07582>).

Teaching

- **2025-2026:** Teaching assistant for the courses *Functional Programming* (Bachelor 3) and *Web Programming* (Bachelor 1) at University of Bordeaux (32h programming sessions each).
- **2024-2025:** Teaching assistant for the course *Probabilities, Statistics and Combinatorics* (Bachelor 2) at University of Bordeaux (64h exercise sessions).

Talks

- **09/01/2026** : « *Gasket decomposition of 3-colored planar maps* », at SPACE seminar (Institut Poisson, Tours, France).
- **21/07/2025** : « *Pattern avoiding 3D permutations and triangle solitaire* », at FPSAC (Sapporo, Japan).
- **18/06/2025** : « *Pattern avoiding 3D permutations and triangle solitaire* », at MAD days (Rouen, France).
- **20/05/2025** : « *Slit-Slide-Sew bijections for planar bipartite maps with prescribed degrees* », at CALIN seminar (LIPN, Villetaneuse, France).
- **20/03/2025** : « *Pattern avoiding 3D permutations and triangle solitaire* », at ALEA Days (CIRM, Marseille, France).
- **10/03/2025** : « *Pattern avoiding 3D permutations and triangle solitaire* », at Combiné Days (ICJ, Lyon, France).
- **20/01/2025** : « *Pattern avoiding 3D permutations and triangle solitaire* », at CI seminar (LaBRI, Bordeaux, France).
- **14/11/2024** : « *Pattern avoiding 3D permutations and triangle solitaire* », at PRoGRAM workshop (CIRM, Marseille, France).
- **08/07/2024** : « *Bijections “fermeture éclair” pour les cartes biparties planaires à degrés prescrits* », at CI seminar (LaBRI, Bordeaux, France).
- **31/08/2023** : « *Triangle Solitaire* », at AUTOMATA 2023, University of Trieste (Italy).

Other Competences

- **Languages written and spoken:** French (native language), English, Spanish, German, beginner in Japanese.
- **Programming languages mastered:** Python, OCaml, LaTeX, HTML, some bases in C++.
- Formation in 3D modeling with Maya.
- Formation for First Aid in Mental Health (PSSM).