

Juliette Luiselli

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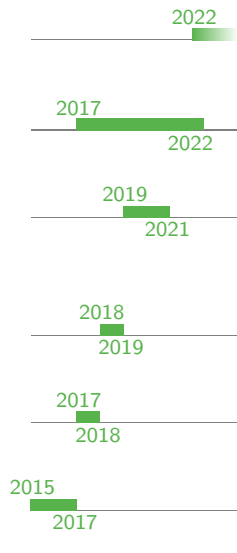
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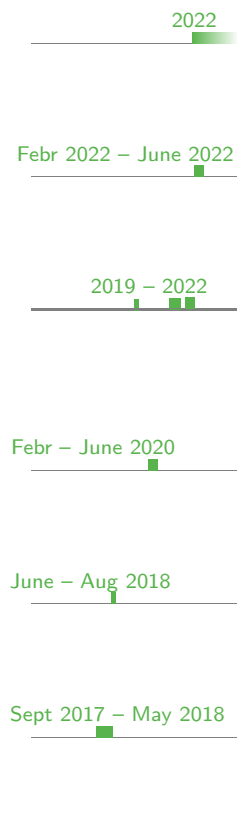
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Education

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- 2022 **PhD thesis, INSA Lyon & INRIA, Lyon**
Under the supervision of Guillaume Beslon and Nicolas Lartillot
- 2017–2022 **ENS Diploma, École Normale Supérieure, Paris**
Biology major, Computer Sciences minor
- 2019–2021 **Interdisciplinary Master in Life Sciences, ENS, Paris**
Major Ecology & Evolution : Evolutionary Biology, Adaptive Dynamics, Evolutionary Ecology, Computational Biology, etc.
- 2018–2019 **Bachelor of Science in Computer Sciences, ENS, Paris**
Compilation, Algorithms, Databases, Machine Learning, Random structures, etc.
- 2017–2018 **Bachelor of Science in Biology, ENS, Paris**
Bioinformatics, Biostatistics, Molecular Biology, Evolution, Genomics, etc.
- 2015–2017 **Higher School Preparatory Classes : Biology, Chemistry, Physics, Mathematics and Earth Sciences, Lycée Saint-Louis, Paris**

Research experiences

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- 2022 **Investing the influence of effective population size on genome architecture, INSA Lyon & INRIA, Lyon, PhD thesis**
Under the supervision of Guillaume Beslon and Nicolas Lartillot
- Febr 2022 – June 2022 **Multilevel stochastic error correction: the role of fission/fusion dynamics in maintaining genome integrity of mitochondria, Utrecht University, Utrecht**
Theoretical Biology and Bioinformatics Team, supervised by Paulien Hogeweg
- 2019 – 2022 **Studying the genome architecture with Aevol, INRIA, Lyon**
Beagle Team, supervised by Guillaume Beslon
3 internships, studying the role of transposable elements, population size, and sex and recombination on genome structure.
- Febr – June 2020 **Distinguishing different forms of competition in a mechanistic model of eco-evolutionary dynamics, Imperial College, London**
Silwood Park – Supervised by James Rosindell
- June – Aug 2018 **The Cretaceous–Paleogene biocalcification crisis, Université Pierre et Marie Curie, Paris, CR2P**
Supervised by Silvia Gardin
- Sept 2017 – May 2018 **Experimental evolution in a fluctuating environment, Institut de Biologie de l'École Normale Supérieure, Paris**
Team of Henrique Teotonio

Teaching experiences

- 2022–
2022–
2022–
Sept 2021 – Janv 2022
July 2020
Sept 2018 – Febr 2020
Sept 2017 – Juin 2019
- Mathematical and software tools**, *IUT Gratte Ciel*, Lyon
Practicals with first year undergraduate students
 - Project supervision of 5th year students**, *INSA Lyon*
Supervision of 3 students in final year of engineering school for a machine learning project
 - C++ practicals**, *INSA Lyon*
C++ discovery with 3rd year students
 - Tutoring and scientific popularization**, *Primary and secondary schools*, Paris
Accompaniment of students with difficulties in secondary school (“ECLOR” association) and discovery of the theory of evolution and scientific method in primary school (“La main à la pâte” association)
 - Sciences and critical thinking**, “*Vacances apprenantes*” with 12 to 14 years old pupils, Arzac
 - Weekly official undergraduate Biology examiner**, *Lycée Saint-Louis*, Paris
Testing groups of 3 students each week on their biology and earth sciences knowledge
 - Private lessons for high school and higher school preparatory classes students**
Mathematics, Physics, Chemistry, Biology, German

Associative commitments

- Déc 2018 – Nov 2020
July 2019
June 2018 – Jan 2019
- Elected member of the Délégation Générale**, *ENS*, Paris, fdfs
The *Délégation Générale* is a group of 4 students who are the main interface between students and the school administration. We are managing the student accommodations, storage rooms and other shared spaces, and taking part to the long term planification of accommodation management. Overall work is described in both year’s activity reports (2019 and 2020). Notable contribution to a comprehensive report on the state of school housing and to a proposal for reform of the housing system.
 - Volunteer in the international Mathematical Models in Ecology and Evolution conference**, *INRIA*, Lyon, France
Helping for the organization of the MMEE conference and attending presentations.
 - Elected member of the student office (Responsible for Arts)**, *ENS*, Paris
The student office is a group of 13 students organizing most of the student cultural life at school.

Skills

Computer Languages Linux, C++, Python (pandas, pytorch, django), JavaScript, OCaml, R, SQL, HTML
French (native), English (fluent), German (fluent), Esperanto (beginner)

Publications

- [1] J. Luiselli, I. Overcast, A. Rominger, M. Ruffley, H. Morlon, and J. Rosindell. Detecting the ecological footprint of selection. *bioRxiv*, 2022. *preprint, 2nd version submitted to Oikos*.
- [2] J. Luiselli, J. Rouzaud-Cornabas, and G. Beslon. Genomes streamlining in prokaryotes: effect of mutation rate and population size on genome size reduction. 2022. *in prep*.