

# Ludovic Maisonneuve

Post Doc

✉ ludovic.maisonneuve.2015@polytechnique.org | 🏠 ludovic-maisonneuve.github.io | 📺 Ludovic-Maisonneuve | 🐦 @lmaisonneuve5

## Professional Experience

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- 2022-now **Post-doc in collaboration with Laurent Lehmann**, Université de Lausanne
- 2019-2022 **PhD supervised by Violaine Llaurens and Charline Smadi**, Sorbonne Université
- 2019 **Research intern**, Evo-Eco-Paléo, Université de Lille
- 2018 **Research intern**, Institut de Systématique, Évolution, Biodiversité, Muséum National d'Histoire Naturelle, Paris
- 2017 **Data scientist intern**, Abaka (Start up), London

## Education

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### Sorbonne Université

Paris, France

#### PHD EVOLUTIONARY BIOLOGY

2019 - present

- "On the conflict between disassortative mating and local adaptation: a mathematical approach"
- Advisors: Dr. Violaine Llaurens and Dr. Charline Smadi

### Université Paris-Saclay

Gif-sur-Yvette, France

#### MSC APPLIED MATHEMATICS

2018 - 2019

- Mathematics for Life Sciences

### Ecole polytechnique

Palaiseau, France

#### DEGREE OF ÉCOLE POLYTECHNIQUE

2015 - 2019

- Majoring in Applied Mathematics and Biology

## Publications

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### PUBLISHED

- Maisonneuve, L.**, Elias, M., Smadi, C., Llaurens, V. 2022 The limits of evolutionary convergence in sympatry: reproductive interference and developmental constraints leading to local diversity in aposematic signals. *The American Naturalist*. In press
- Maisonneuve, L.**, Smadi, C., Llaurens, V. 2022. Evolutionary origins of sexual dimorphism: Lessons from female-limited mimicry in butterflies. *Evolution* 76: 2404-2423.
- Sculfort, O., **Maisonneuve, L.**, Elias, M., Aubier, T., Llaurens, V. 2022. Uncovering the effects of Müllerian mimicry on the evolution of conspicuousness in colour patterns. *Oikos* e08680.
- Maisonneuve, L.**, Beneteau, T., Joron, M., Smadi, C., Llaurens, V. 2021. When Do Opposites Attract? A Model Uncovering the Evolution of Disassortative Mating. *The American Naturalist* 198:5, 625-641.
- Billiard, S., Derex, M., **Maisonneuve, L.** and Rey, T. (alphabetical order). 2020. Convergence of knowledge in a stochastic cultural evolution model with population structure, social learning and credibility biases. *Mathematical Models and Methods in Applied Sciences* 30:14, 2691-2723.
- Maisonneuve, L.**, Chouteau, M., Joron, M., Llaurens, V. 2020. Evolution and genetic architecture of disassortative mating at a locus under heterozygote advantage. *Evolution* 75: 149-165.
- Recommended by: Charles Mullon** (2020) Evolutionary insights into disassortative mating and its association to an ecologically relevant supergene. *Peer Community in Evolutionary Biology*, 100109. 10.24072/pci.evolbiol.100109

### PREPRINTS

- Maisonneuve, L.**, Smadi, C., Llaurens, V. How many cues are sexy? Evolution of mate preference towards multiple traits in sympatric species. *BioRxiv* doi.org/10.1101/2022.10.26.513844

## Awards, Fellowships, & Grants

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2019 **Prize of the chair Modelisation, Mathematics and Biodiversity,**

2015 **Laureate,** Georges Besse Foundation

## Presentations

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'Une approche mathématique du conflit entre sélection sexuelle et adaptation'. Seminar 'Histoire du calcul des probabilités et des statistiques' at École des hautes études en sciences sociales (EHESS) 2023

'When do opposites attract? A model uncovering the evolution of disassortative mating'. Talk at the research school of the chair "Modelisation, Mathematics and Biodiversity" 2021.

'When do opposites attract? A model uncovering the evolution of disassortative mating'. Talk at Virtual Evolution 2021.

'The limits of evolutionary convergence'. Talk at Population Genetics Group Meeting 2021.

'Evolution of disassortative mating in a mimetic polymorphic butterfly'. Talk at the research school of the chair "Modelisation, Mathematics and Biodiversity" 2019.

'Evolution of disassortative mating in a mimetic polymorphic butterfly'. Talk at Heliconius Meeting 2018.

## Teaching Experience

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### UNIVERSITÉ DE LAUSANNE

2023-now **Genes, Populations, and Evolution,** Teaching Assistant and oral examiner

2023-now **Population Genetics,** Teaching Assistant

2023 **Biology and society III: analyse and controversies,** Reports examinateur

### SORBONNE UNIVERSITÉ

2019-2022 **Mathematics for sciences (linear algebra and probability),** Teaching Assistant

2019-2021 **Linear and bilinear algebra II,** Oral examiner

2020-2021 **Numerical series and series of functions,** Oral examiner

### HENRI PARRIAT HIGH SCHOOL

2015 **Teaching Assistant in High School,** 6 months of civic duty

## Programming languages

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- Frequently used : Python, Mathematica,  $\text{\LaTeX}$ , html
- Notion : Java, R, MATLAB, SQL

## Mentoring

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2021 **Baptiste Guillaud,** Bachelor Student, INSA Rennes

2020 **Marion Sellier,** Bachelor Student, AgroParisTech

## Outreach & Professional Development

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### SERVICE AND OUTREACH

2021-2022 **Chair Modelisation, Mathematics and biodiversity,** in charge of the website

## PEER REVIEW

Evolution, Philosophical Transactions of the Royal Society B: Biological Sciences, Journal of Evolutionary Biology, Peer Community in Evolutionary Biology, Kinetic & Related Models