



Florian Ingels

Education

- 2019-2022 **PhD in Mathematics**, Inria team Mosaic, École Normale Supérieure de Lyon.
Thesis : *On the similarities of trees : the interest of enumeration and compression methods.* Advisors : Christophe Godin & Romain Azaïs. Funded by European Commission's H2020 project ROMI.
- 2018-2019 **Master's Degree 2nd year in Operations Research, Combinatorics and Optimization**, Université Joseph Fourier, Grenoble.
Valedictorian. 6 month internship at Inria team Mosaic, under the supervision of Romain Azaïs.
- 2017-2018 **Master's Degree 1st year in Applied Mathematics and Statistics**, Université Claude Bernard, Lyon.
Valedictorian. Participation in the 2018 Data Challenge organized by the French Society of Statistics. 3 month internship at Inria team Mosaic, under the supervision of Romain Azaïs.
- 2015-2016 **Bachelor's Degree in Advanced Mathematics**, École Normale Supérieure de Lyon.
Participation in a study group on mathematical tools for the study of big data. 3 month internship at LAMA, Université de Savoie Mont-Blanc, under the supervision of Jean-Louis Verger-Gaugry.
- 2012-2015 **Classe préparatoire aux grandes écoles**, Lycée Berthollet, Annecy, MPSI/MP*.
Intensive study course preparing for the competitive entrance examinations to the French “Grandes Écoles” (the top French and highly-selective institutions). Major in Mathematics, minor in Computer Science.

Teaching

University lectures

- 2021-2022 **Optimization & Operations Research**, Université Claude Bernard, Lyon.
30h. For Master's students ; Computer Science department.
- 2020-2021 **Numerical algorithms & optimization**, Université Claude Bernard, Lyon.
30h. For Bachelor's students ; Computer Science department.
Fundamental mathematical techniques, Université Claude Bernard, Lyon.
18h. For Bachelor's students ; Mathematics department.
Optimization & Operations Research, Université Claude Bernard, Lyon.
15h. For Master's students ; Computer Science department.
- 2019-2020 **Numerical algorithms & optimization**, Université Claude Bernard, Lyon.
30h. For Bachelor's students ; Computer Science department.
Statistics for Computer Science & Probability, Université Claude Bernard, Lyon.
22h. For Bachelor's students ; Mathematics department.
Recursive programming & algorithms, Université Claude Bernard, Lyon.
12h. For Bachelor's students ; Computer Science department.

Others

- 2016-2021 **Private teacher**.
350h+. Mentoring for online mathematics and computer science courses.
- 2015-2016 **Examiner for “classe préparatoire aux grandes écoles”**, Lycée St-Just, Lyon.
3h/week. Graded individual exams (mathematics exercises) for business students.

Publications

- 2022 **Enumeration of Irredundant Forests**, Florian Ingels & Romain Azaïs.
Theoretical Computer Science, volume 922, pages 312-334.
- 2021 **Isomorphic Unordered Labeled Trees up to Substitution Ciphering**, Florian Ingels & Romain Azaïs.
Combinatorial Algorithms, IWOCA 2021. Lecture Notes in Computer Science, volume 12757.
- 2020 **The Weight Function in the Subtree Kernel is Decisive**, Romain Azaïs & Florian Ingels.
Journal of Machine Learning Research, volume 21.
- 2019 **treex : a Python package for manipulating rooted trees**, Romain Azaïs, Guillaume Cerutti, Didier Gemmerlé & Florian Ingels.
Journal of Open Source Software.

Talks

- July 2021 **Isomorphic Unordered Labeled Trees up to Substitution Ciphering**, Florian Ingels & Romain Azaïs.
32nd International Workshop on Combinatorial Algorithms (IWOCA), Online
- December 2020 **A Reverse Search Method for the Enumeration of Unordered Forests using DAG Compression**, Florian Ingels & Romain Azaïs.
4th International Workshop on Enumeration Problems and Applications (WEPA), Online
- June 2019 **De l'importance de la fonction de poids dans le noyau des sous-arbres**, Florian Ingels & Romain Azaïs.
51e Journées de Statistiques, Nancy