

## EDUCATION AND ACADEMIC POSITIONS

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<b>Postdoctoral Fellow at the ETH AI Center</b>	Zürich, Switzerland 2023–now
<b>École Polytechnique Fédérale de Lausanne (EPFL)</b> Ph.D. in Theoretical Computer Science, Advisor: Ola Svensson	Lausanne, Switzerland 2018–2023
<b>Université Paris Diderot - École Normale Supérieure Paris</b> M.Sc. in Theoretical Computer Science ( <i>summa cum laude</i> ); GPA: 18.81/20 (rank: 2/63). – Thesis: “Local algorithms in graphs”, Advisor: Louis Esperet	Paris, France 2017–2018
<b>École polytechnique (Engineering diploma)</b> Specialization in Machine Learning and Algorithms.	Paris, France 2014–2018
<b>Lycée Louis-Le-Grand, classe préparatoire MPSI/MP*</b> Training in mathematics and physics for competitive exams to enter “Grandes écoles”.  French “Baccalauréat série S” ( <i>summa cum laude</i> ).	Paris, France 2012–2014  Paris, France 2012


## INTERNSHIPS AND ACADEMIC VISITS

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<b>Academic visit at the Simons Institute</b> Visitor of the “Data-Driven Decision Processes” semester program.	Berkeley, USA Nov. 2022–Dec. 2022
<b>Academic visit at ETH Zürich</b> Visitor of Prof. Rico’s Zenklusen group	Zurich, Switzerland May 2022–June 2022
<b>Research internship G-SCOP</b> Research in the G-SCOP team for combinatorial optimization.  – I investigated what can or cannot be computed by local algorithms in graphs. This project led to two publications in theoretical computer science conferences.	Grenoble, France April 2018–August 2018
<b>Research and software engineering internship, INRIA</b> Research done in the INRIA team NANO-D.	Grenoble, France March 2017–July 2017
<b>Internship at Surrey Satellite Technology Ltd</b> Intern in the OBDH (On-Board Data Handling) team.  – I took part in analyzing circuit designs and optical devices for satellites as well as programming analysis software.	Guildford, England Summer 2017
<b>Military Service</b> Paris Fire Brigade, first fire group.  – Team leader of a rescue team of 3 people in case of accident, dangerous disease, or fire.	Paris, France September 2014–April 2015

## FUNDING AND RECOGNITION

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- Invitation to ACM TALG for paper 4 (Top 10% of accepted papers) 2024
- ETH AI Center Postdoctoral fellowship 2023-2025
- Grant from the Bernoulli Center to organize the ALPS  workshop (~30000 chf) 2022
- NeurIPS oral presentation for paper 9 (Top 1% of submissions) 2020
- NeurIPS spotlight presentation for paper 10 (Top 4% of submissions) 2020
- EPFL IC School 1-year Fellowship 2018
- Citation for outstanding service in my unit during military service 2015

## PUBLICATIONS

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1. Étienne Bamas, Lars Rohwedder, Sarah Morell “The Submodular Santa Claus Problem”, 36<sup>th</sup> *ACM-SIAM Symposium on Discrete Algorithms*, SODA 2025.
2. Étienne Bamas, “Lift-and-Project Integrality Gaps for Santa Claus” , 36<sup>th</sup> *ACM-SIAM Symposium on Discrete Algorithms*, SODA 2025.
3. Étienne Bamas, Sai Ganesh Nagarajan, Ola Svensson, “An Analysis of  $D^\alpha$  seeding for  $k$ -means” , 41<sup>st</sup> *International Conference in Machine Learning*, ICML 2024.
4. Étienne Bamas, Alexander Lindermayr, Nicole Megow, Lars Rohwedder, Jens Schlöter, “Santa Claus meets Makespan and Matroids: Algorithms and Reduction” , 35<sup>th</sup> *ACM-SIAM Symposium on Discrete Algorithms*, SODA 2024.  
**Invited to the ACM Transactions on Algorithms special issue of SODA** (top 5-10% of accepted papers).
5. Étienne Bamas, Lars Rohwedder, “Better Trees for Santa Claus” , 55<sup>th</sup> *Annual ACM Symposium on Theory of Computing*, STOC 2023.
6. Étienne Bamas, Marina Drygala, and Ola Svensson, “A Simple LP-Based Approximation Algorithm for the Matching Augmentation Problem” , 23<sup>rd</sup> *Conference on Integer Programming and Combinatorial Optimization*, IPCO 2022.
7. Étienne Bamas, Marina Drygala, and Andreas Maggiori, “An Improved Analysis of Greedy for Online Steiner Forest” , 33<sup>rd</sup> *ACM-SIAM Symposium on Discrete Algorithms*, SODA 2022.
8. Étienne Bamas, Paritosh Garg, and Lars Rohwedder, “The Submodular Santa Claus Problem in the Restricted Assignment Case” , 48<sup>th</sup> *International Colloquium on Automata, Languages, and Programming*, ICALP 2021.
9. Étienne Bamas, Andreas Maggiori, and Ola Svensson, “The Primal-Dual method for Learning Augmented Algorithms” , *Advances in Neural Information Processing Systems 33*, NeurIPS 2020 (**oral presentation**).
10. Étienne Bamas, Andreas Maggiori, Lars Rohwedder, and Ola Svensson, “Learning Augmented Energy Minimization via Speed Scaling” , *Advances in Neural Information Processing Systems 33*, NeurIPS 2020 (**spotlight presentation**).
11. Étienne Bamas and Louis Esperet, “Local Approximation of the Maximum Cut in Regular Graphs” , *Graph-Theoretic Concepts in Computer Science - 45th International Workshop*, WG 2019.
12. Étienne Bamas and Louis Esperet, “Distributed Coloring of Graphs with an Optimal Number of Colors” , 36<sup>th</sup> *International Symposium on Theoretical Aspects of Computer Science*, STACS 2019.






## TEACHING

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- Lecturer for “AI Center Projects in Machine Learning Research” Spring 2024
- Lecturer for “Advanced Topics in Discrete Optimization” Spring 2024
- Supervision of master thesis at ETHZ since 2023  
*Supervised students: Gaia Torresani (Fall 2024), Thibault Vignon (Fall 2023), Jonathan Schnell (Spring 2024).*
- Supervision of semester projects at EPFL 2021-2023  
*Supervised students: Alexandre Reynaud (master student), Taha El Ghazi (master student).*
- Teaching Assistant at EPFL 2019–2022  
*“Algorithms” (head TA), “Theory of Computation” (head TA), “Information, Calcul, Communication”*
- Teaching Assistant at Lycée Janson-de-Sailly 2017–2018  
*In charge of oral exams in mathematics*

## REFERENCES

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1. Prof. Ola Svensson at EPFL (PhD advisor).  
Email: [ola.svensson@epfl.ch](mailto:ola.svensson@epfl.ch)  
Postal address: Building INJ (INJ112), Station 14, 1015 Lausanne  
Personal website: <https://theory.epfl.ch/osven/> 
2. Prof. Lars Rohwedder at Maastricht University (frequent co-author).  
Email: [contact@larsrohwedder.com](mailto:contact@larsrohwedder.com)  
Postal address: P.O. Box 616, 6200 MD Maastricht  
Personal website: <https://larsrohwedder.com/> 
3. Prof. Rico Zenklusen at ETH Zurich (post-doc mentor).  
Email: [ricoz@ethz.ch](mailto:ricoz@ethz.ch)  
Postal address: HG G 22.4, Rämistrasse 101, 8092 Zürich  
Personal website: [https://math.ethz.ch/ifor/groups/zenklusen\\_group/rico-zenklusen.html](https://math.ethz.ch/ifor/groups/zenklusen_group/rico-zenklusen.html) 
4. Prof. Anupam Gupta at New-York University (member of the jury of my PhD defense).  
Email: [anupam.g@nyu.edu](mailto:anupam.g@nyu.edu)  
Postal address: 251 Mercer Street, New York NY 10012  
Personal website: <https://cs.nyu.edu/~anupamg/> 
5. Prof. Louis Esperet at G-SCOP lab (MSc thesis advisor).  
Email: [louis.esperet@grenoble-inp.fr](mailto:louis.esperet@grenoble-inp.fr)  
Postal address: 46, avenue Félix Viallet, 38000 Grenoble, France  
Personal website: <https://oc.g-scop.grenoble-inp.fr/esperet/> 

## SKILLS AND LANGUAGES

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- **Programming:** Java, C++, Python, Pytorch.
- **French:** Native.
- **English:** Full professional proficiency (110/120 TOEFL iBT).
- **Spanish and Mandarin:** Basics.

## ACADEMIC SERVICE AND TALKS

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- I co-organized the workshop ALPS '22 [↗](#) on algorithms with predictions (~ 45 international participants).
- Program committee: MAPSP '24
- Reviewer for the conferences: MFCS '19, WAOA '20, ITCS '20, '23, NeurIPS '21, '22, '23, SODA '22, '23, ICML '22, STOC '23, '24, IPCO '24
- Reviewer for the journals: Algorithmica (2021), Journal of Computer and System Sciences (2023).
- I gave a talk at the following conferences or workshops: WG '19, STACS '19, Dagstuhl scheduling seminar in 2020 and 2023, NeurIPS '20, ICALP '21, Operations Research Bern (OR) '21, SODA '22, STOC '23, ICML '24.

## EXTRACURRICULAR ACTIVITIES

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- Fond of sports: running (I enjoy sharing my (modest) results on Strava [↗](#)), skiing, rock climbing, hiking.
- Member of EPFL emergency medical team (2019).