Enguerrand Prebet

Doctor in Computer Science

Am Fasanengarten 5
76131 Karlsruhe
Germany
+33 601 986 579
enguerrand.prebet@gmail.com

Education

2019–2022 **PhD in Computer Science**, *ENS of Lyon/Università di Bologna*, France/Italy
Typed Behavioural Equivalences in the Pi-Calculus

2017–2019 **Master degree in Communication Systems**, *EPFL*, Lausanne, Switzerland
Double degree with ENS of Lyon

2016–2019 **Master degree in Fundamental Computer Science**, *ENS de Lyon*, France
Double degree with EPFL

2015–2016 **Bachelor of Science in Fundamental Computer Science**, *ENS de Lyon*, France
Normalien Student

2013–2015 **Preparatory School in Mathematics, Physics**, *Lycée Henri IV*, Paris, France
Computer Science option

Teaching

2019–2022 **Teaching Assistant**, *ENS de Lyon*, France
- 2019–2021 Programming Language Theory (L3)
- 2019–2020 Optimisation and Approximation (M1)
- 2020–2021 Performance Evaluation in Networks (M1)
- 2021–2022 Compilation process for the 'Agrégation d'informatique'

2021–2022 **Teaching Assistant**, *UCBL*, Lyon, France
Computer Architecture and System (L2)

Publications

International Conferences

Daniel Hirschkoff, Guilhem Jaber, and Enguerrand Prebet. Deciding contextual equivalence of ν-calculus with effectful contexts. In Orna Kupferman and Pawel Sobocinski, editors, *Foundations of Software Science and Computation Structures - 26th International Conference, FoSSaCS 2023, Held as Part of the European Joint Conferences on Theory and Practice of Software, ETAPS 2023, Paris, France, April 22-27, 2023, Proceedings*, volume 13992 of *Lecture Notes in Computer Science*, pages 24–45. Springer, 2023.

Enguerrand Prebet. Functions and references in the pi-calculus: Full abstraction and proof techniques. In Mikolaj Bojanczyk, Emanuela Merelli, and David P. Woodruff, editors, *49th International Colloquium on Automata, Languages, and Programming, ICALP 2022, July 4-8, 2022, Paris, France*, volume 229 of *LIPIcs*, pages 130:1–130:19. Schloss Dagstuhl - Leibniz-Zentrum für Informatik, 2022.

Daniel Hirschkoff, Enguerrand Prebet, and Davide Sangiorgi. On sequentiality and well-bracketing in the π-calculus. In *36th Annual ACM/IEEE Symposium on Logic in Computer Science, LICS 2021, Rome, Italy, June 29 - July 2, 2021*, pages 1–13. IEEE, 2021.

Daniel Hirschkoff, Enguerrand Prebet, and Davide Sangiorgi. On the representation of references in the pi-calculus. In Igor Konnov and Laura Kovács, editors, *31st International Conference on Concurrency Theory, CONCUR 2020*, volume 171 of *LIPIcs*, pages 34:1–34:20. Schloss Dagstuhl - Leibniz-Zentrum für Informatik, 2020.

Vishnu V. Narayan, Enguerrand Prebet, and Adrian Vetta. The declining price anomaly is not universal in multi-buyer sequential auctions (but almost is). In Dimitris Fotakis and Evangelos Markakis, editors, *Algorithmic Game Theory - 12th International Symposium, SAGT 2019, Athens, Greece, September 30 - October 3, 2019, Proceedings*, volume 11801 of *Lecture Notes in Computer Science*, pages 109–122. Springer, 2019. Best paper award.

Workshops

Daniel Hirschkoff, Enguerrand Prebet, and Davide Sangiorgi. Modeling imperative constructs in the pi-calculus. In Alessandra Cherubini, Nicoletta Sabadini, and Simone Tini, editors, *Proceedings of the 20th Italian Conference on Theoretical Computer Science, ICTCS 2019, Como, Italy, September 9-11, 2019*, volume 2504 of *CEUR Workshop Proceedings*, pages 136–138. CEUR-WS.org, 2019.

Journals

Vishnu V. Narayan, Enguerrand Prebet, and Adrian Vetta. The declining price anomaly is not universal in multi-buyer sequential auctions (but almost is). *Theory Comput. Syst.*, 66(3):546–580, 2022.

Thesis

Enguerrand Prebet. *Typed Behavioural Equivalences in the Pi-Calculus. (Équivalences comportementales typées dans le pi-calcul)*. PhD thesis, École normale supérieure de Lyon, France, 2022.

Others

Enguerrand Prebet. On Up-to Context Techniques in the π-calculus. working paper or preprint, December 2021.

Experience

Internships

Feb 2019 **Master's thesis,** *ENS de Lyon,* France, 5 months.
Behavioural equivalence in imperative pi-calculus.

Aug 2018 **R&D Trainee,** *Total,* Pau, France, 6 months.
Image Classification with Deep Learning using Caffe.

May 2017 **Visiting Student Researcher,** *McGill University.* Montreal, Canada, 3 months.
Analysis of Price of Anarchy for Simultaneous Multiple Round Auction.
Design simulation of Nash equilibria in Python regarding decreasing price anomaly in sequential auction.

May 2016 **Visiting Student Researcher,** *ENS Ulm,* Paris, France, 6 weeks.
Developed graphical interface for analysing graphs using Tkinter in Python
Validation of discharging rules for planar graphs and reflexion around Steinberg's conjecture variations.

Competitive Programmaing and Projects

Feb-Apr 2021 Ranked 7th (resp. 25th) at Google Hashcode Qualifications (resp. World Finals) in a group of four
Design and implementation of algorithms in C++/Python3. Heuristics testing.

Nov 2020 Ranked 4th at the 16th edition of BattleDev
Short implementation of algorithms in Python3.

Nov 2017 Ranked 13th at SWERC'17 ACM-ICPC with the team EPFL Winners
Design and implementation of algorithms in C++.

2016–2017 **Vectrabool,** *ENS de Lyon.* France.
Bitmap vectorization usable as a Gimp plugin
Leader of a subgroup. Mix of C++ and Python

2016 **Group Project,** *ENS de Lyon*, France
SAT Solver using various heuristics in C++.
Parsing using Lex/Yacc. Clause learning. Tseitin transform.

Computer Science Skills

Advanced	C++: Eigen, Caffe Python: scikit-learn, Tkinter, Jupyter Notebook, Folium
Domains	Concurrency Theory, Semantics of Programming Languages, Game Theory, Machine Learning, Deep Learning, Planar Graphs
Various	Coq, CAML, MATLAB, Bash, Git, LaTeX

Languages

Native	French
Advanced	English C1 - Cambridge English: Advanced Score 193
Beginner	Japanese, German