

Simon Forest

Student
at *École Normale Supérieure*
in Paris

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Education

- 2015-2016 **LMFI (mathematical logic master)**, *Université Paris 7*.
Courses: Model theory, Set theory, Proof theory, Complexity theory, Forcing, Descriptive set theory
- 2014-2015 **Second year of MPRI (computer science master)**, *Université Paris 7*.
Courses: Concurrency, Functional programming, Models of programming languages, Combinatorial aspects of algorithms, Analysis of algorithms, Graphs algorithms, Automata theory, Algebraic Topology
- 2013-2014 **First year of MPRI (computer science master)**, *Université Paris 7*.
Courses: Quantum computing, Algorithms on planar graphs, Cryptographic protocols verification, Machine learning, Wavelets sparse representation, Algorithms for social networks, Category theory, Vision and object recognition, Statistics
- 2012-2013 **Bachelor's degree in Computer Science with a major in mathematics**, *ENS Ulm*, Paris, Courses: Algorithms, Formal Languages, Complexity, Calculability, Cryptology, Compilation, Programming languages, Geometric algorithmics, Logic and lambda calculus, Machine learning, Random algorithms and data structures, Systems and networks, Mathematical logic, Probability theory, Algebra, Complex analysis.
- July 2012 **Admitted to ENS in Computer Science**, *with entrance rank 5 among the ten students nationwide*.
- 2010–2012 **Prépa MPSI-MP***, *Lycée Kléber*, Strasbourg.
Competitive entrance Prep class in mathematics and physics
- 2010 **Scientific high school diploma**, *Lycée Lumière*, Luxeuil-les-Bains.

Internships

- March–August 2015 **Master internship**, *INRIA Paris*, Formal proof of a fragment of F^* in F^* .
- March–August 2014 **Master internship**, *IQC, University of Waterloo, Canada*, Decomposition of 1-qubit unitaries.
- June–August 2013 **Summer internship**, *INRIA Sophia-Antipolis*, Analysis of properties of epidemics and random graphs.

Research

- 2015 **Dependent Types and Multi-Monadic Effects in F***,
Nikhil Swamy, Cătălin Hrițcu, Chantal Keller, Aseem Rastogi, Antoine Delignat-Lavaud, Simon Forest, Karthikeyan Bhargavan, Cédric Fournet, Pierre-Yves Strub, Markulf Kohlweiss, Jean-Karim Zinzindohoue, soumis à POPL16.
- 2014 **Exact Synthesis of Single-qubit Unitaries over Clifford-cyclotomic Gate Sets**, *Simon Forest, David Gosset, Vadym Kliuchnikov, David McKinnon*, Journal of Mathematical Physics.

Computer science contests

- 2013 **SWERC (ACM)**, *Valencia*, Spain.
- 2012 **SWERC (ACM)**, *Valencia*, Spain.
- 2010 **International Olympiad in Informatics**, *University of Waterloo*, Canada.
Silver medal
- 2009 **International Olympiad in Informatics**, *Plovdiv*, Bulgaria.
Bronze Medal

Languages proficiency

French **Mother tongue**

English **Advanced level**

Golden level at TOEIC, five-month-long internship in Canada

Experience in Computer Science

Mastered programming languages C, C++, OCaml, Haskell

Achieved projects Compiler from C to MIPS assembly, Concurrent system scheduler with monads