

Théophile Bastian

Student — École Normale Supérieure de Paris

École Normale Supérieure (ENS) of Paris

- 2016–2018 **Expected Master's degree**, *Computer Science Department*.
Expected by September 2018.
- 2015–2016 **Bachelor's degree**, *Computer Science Department*.
3rd year of bachelor's degree in computer science at École Normale Supérieure, Paris.
- 2015 **Successfully passed the admission examination**, *Ranked 11th*.

Internships

- Feb-June 2017 **Hardware circuits design and verification**, *Chalmers*, Gothenburg, Sweden.
Five months internship under the supervision of Carl Seger and Mary Sheeran. The goal was to develop parts of an internal Intel tool for hardware verification, whose theoretical bases were not public.
Topics: hardware verification, sub-graph isomorphism.
- Summer 2016 **Game semantics**, *Computer Laboratory*, Cambridge, UK.
Two months internship under the supervision of Glynn Winskel, with both theoretical developments and technical implementations.
Topics: game semantics, concurrency.

Past studies

- 2013–2015 **CPGE – “Classes Préparatoires”**, *Lycée S^{te} Geneviève*, Versailles, France.
CPGEs are two-years intense schools preparing to admission examinations of various prestigious schools.
It also grants an academic equivalence for two years of a bachelor's degree.
- 2013 **High school diploma in science**.
18.2/20 average mark.
- 2010–2013 **High school, science course**, *Lycée Jean Moulin*, Pézenas, France.

Computer science contests and activities

- 2017 **ACM SWERC**, *Paris*, France.
Team “ENS Ulm 3”, ranked 14th.
- 2016 **ACM SWERC**, *Porto*, Portugal.
Team “ENS Ulm 3”, ranked 9th.
- 2016 **Google Hash Code**, *Google Paris*.
Team “OCaml4Ever”, ranked 9th.

- 2015 **ACM SWERC**, *Porto*, Portugal.
Team “ENS Ulm 2”, ranked 8th.
- 2013–... **Teacher with France-IOI**.
France-IOI is an organization providing computer science formation to high-school pupils, and selecting the IOI french team.
- 2013 **International Olympiad in Informatics (IOI)**, *Brisbane*, Australia.
Member of the IOI french team.
- 2012–2013 **Training with France-IOI**.
- 2011, '12, '13, '16 **Selected for the final round of Prologin**.
Prologin is a french national contest in computer science. The final round goal is to develop an IA for a given board game in 36 hours.
- 2016–... **Member of the Prologin organization team**.

Skills

- Programming languages *By order of proficiency*: C++, OCaml, Python, C, Java, assembly, PHP. Limited experience with a few more languages.
- Languages French (native language), English (fluent), Spanish (intermediate), Swedish (intermediate).

Programming experience

- School projects
- 🌐 Compiler from a large fragment of Scala to x86-64, written in OCaml.
 - 🌐 Netlist simulator, written in OCaml.
 - 🌐 ARM-like processor, written in Python (generating netlists), and a digital clock running on it.
 - 🌐 Minimalistic kernel running on a Raspberry Pi.
- Personal projects
- 🌐 OC4.5 — Pure OCaml implementation of OC4.5 (supervised learning, building a decision tree from a training set of data).
 - 🌐 ORandForest — Pure OCaml implementation of a random forest classifier built on the top of OC4.5.

Theoretical formation

- Computer science Compilation, low-level networks, semantics and program verification, operating systems, λ -calculus, algorithms, formal languages, computability, basics of signal processing and cryptology, basics of statistical machine learning and computer vision.
- Mathematics Basics of algebra and probability.