François Garillot
Curriculum Vitæ

Born in France on January 24th, 1983
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WORK EXPERIENCE

Current, from SEPTEMBER 2007

Microsoft Research - INRIA Joint Research Lab, Orsay

Research project: Software architecture for mathematical components, 150 K€

Developed, tested and deployed modular software interfaces for a large-scale (100K LoC) library of mathematical software certified in COQ. Advanced the state of the art of generic programming in the COQ language, and made quantified performance improvements to its OCAML-based compiler, while serving the concurrent development needs of teams at the MSR-INRIA joint lab (Orsay) and INRIA (Sophia-Antipolis).
Took ownership of the semi-automated, tight coupling of this large code base with the latest development branches of the COQ compiler, in collaboration with its developers at École Polytechnique. Successfully advocated best practices regarding continuous integration and regression testing among two teams of carrier academic researchers.

JANUARY 2007 – JULY 2007

Computer Science Laboratory (LIX), École Polytechnique, Palaiseau

Research project: certification of compiler evaluation strategies

With Pr. Benjamin Werner, developed an innovative method for exposing the evaluation strategy used in the COQ compiler using reflection. Developed a software prototype providing an implementation of this technique along with an end-to-end certification.

JANUARY 2006 – JULY 2006

Scala Team, École Polytechnique Fédérale de Lausanne, Switzerland

Research project: a formal model for the core of Scala type system

Advanced the development of a lightweight model for the type system of the Scala language, isolating its decidable fragment. Provided a micro-model significantly more faithful to the production contents of the Scala compiler than best alternatives of the time.

JUNE 2005 – SEPTEMBER 2005

Programmming Languages Group, University of Pennsylvania

Research project: validating a C# extension for statically-typed XML

With Dr. Vladimir Gapeyev, developed a testbed for XML transformation tasks using XTATIC, a research compiler written in OCAML that extended the C# language with statically-typed XML bindings. Deployed an ASP webservice advertising this prototype.

INTERNATIONAL CONFERENCES AND grants

AUGUST 2007, AUGUST 2009

Gave talks presenting peer-reviewed research results at the *Theorem Proving in Higher Order Logic* conference (resp. Kaiserslautern and Munich, Germany)

SEPTEMBER 2006, SEPTEMBER 2009

Obtained funding from hosting institutions for research scouting in international conferences of relevant fields: MFCS 2006 (Slovakia), ICFP 2009 (UK)

JULY 2006

Obtained funding from Microsoft Research to attend the 1-week *Trends in Concurrency* summer school (Bertinoro, Italy)

FORMATION

Date	
DCEMBER 2011 **Ph.D.**	Doctoral defense towards the of **École Polytechnique** (Palaiseau) in Computer Science. Thesis title: *Generic proof tools and Finite Group Theory*. Advisor: Pr. Benjamin Werner
SEPT. 2007 **Degree**	of the **École Normale Supérieure** (Paris). Graduate level, major: Computer science
JULY 2007 **M.Sc.**	in THEORETICAL COMPUTER SCIENCE (MPRI), **University Diderot - Paris VII**
JULY 2005 **B.Sc.**	in COMPUTER SCIENCE, **École Normale Supérieure** (Paris)
SEPT. 2004	(since SEPT. 2001) **Classes Préparatoires MP*, MPSI**: intensive scientific course preparing towards a highly competitive exam that allows entrance to the *Grandes Écoles*.
JULY 2001	Scientific Baccalauréat, granted with honours.

COMMUNICATION SKILLS

SEPTEMBER 2005 to SEPTEMBER 2009
Classes Préparatoires MP (2d year undergrad.), Lycée St. Louis, Paris
and INF421a (3d year undergrad.), École Polytechnique, Paris

Teaching Assistant in courses in Computer Science fundamentals

Developed long-term relationships with two pedagogical teams developing advanced undergraduate courses. Led small groups of bright undergraduates using project-driven teaching to bring them to a mastery of fundamental and advanced data structures and algorithms.

TOEIC score:638/650, december 2006
Cambridge Certificate Of Proficiency in English, spring 2006
Debater at École Normale Supérieure since 2006

English Debating enthusiast

Member of the team from École Normale Supérieure who won the 2006 debating tournament of the French Debating Association (a yearly meeting between Paris-based *Grandes Écoles*). Adjudicator in this tournament since 2008. Contributes to coaching of the team from École Normale Supérieure since then.

INTERESTS AND ACTIVITIES

Sailing Instructor (French sailing federation) since 2011
Rock and alpine climber, and avid hiker.