Steven Varoumas

PhD in Computer Science

About me

My main domains of expertise are embedded systems, programming languages and compilers. I graduated with a PhD in computer science from Sorbonne University, in Paris, France. French is my native language and I am fully proficient in English. I am a fast learner, passionate about problem solving and software development.

Areas of specialisation

- Functional Programming
- Compilers / Virtual Machines
- Embedded Software

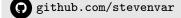
Spoken languages

- French: Fluent (mother tongue)
- English: Full proficiency
- Spanish: Limited

Tools & programming languages

OCaml
C & C++
git
LATEX
Java
LLVM
Python
Haskell





DEGREES

2019 **Ph.D in Computer Science** · Sorbonne University (Paris, France)
"High-level programming models for microcontrollers with scarce resources" supervised by T. Crolard (Cnam), P. Trébuchet (ANSSI) and E. Chailloux (LIP6)

2015 M.Sc in Computer Science · Pierre and Marie Curie University (Paris, France) Science and Technology of Software - magna cum laude distinction

2012 **B.Sc in Computer Science** · Pierre and Marie Curie University (Paris, France) Programming and Software Development - cum laude distinction

WORK EXPERIENCE

Jan 21 - now | Compiler Engineer · Huawei UK R&D (Cambridge, UK)

Working on cutting edge compiler technologies.



niversity of

Kent

Dec 19 - Sep 20 Research Associate · University of Kent (Canterbury, UK)

"Trustworthy Refactoring" project

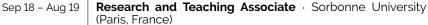
- Development of an ${\bf automatic}$ ${\bf refactoring}$ tool for OCaml code and extension to new kinds of refactorings.

- Proposed and developed a method to perform automatised **equivalence checking** between two versions of a same program.





- Adapted a lightweight OCaml virtual machine for a secured runtime platform that uses PIC32 microcontrollers.



- Finalised the redaction of my PhD thesis.

- Taught $\sim\!\!200$ hours of CS classes for under and post graduates.



Contractual PhD Student / Teaching Assistant · Pierre and Marie Curie University (Paris, France)

- Co-created and developed **a portable OCaml virtual machine** which can run on devices with very limited resources (**microcontrollers, FPGAs**,...).

- Created OCaLustre, a synchronous programming language for concurrent embedded systems.

- Developed a **static analysis tool** to compute worst-case execution time of an OCaLustre program, for critical embedded system.

- Taught approx. 200 hours of computer science classes for undergraduates.



INTERNSHIPS

Oct 15 - Aug 18

Feb 2015 - Aug 2015

"Concurrent programming models for microcontrollers" · Paris 6 Computer Science Laboratory (LIP6) (Paris, France)

Jun 2014 - Jul 2014

"Developing a musical editor for the Web" · Institute for Research and Coordination in Acoustics/Music (IRCAM) (Paris, France)