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Ph.D. student at INRIA

25 year-old

# **VERIFIED FUNCTIONAL PROGRAMMING OF AN ABSTRACT INTERPRETER**

L. Franceschino, D. Pichardie, J.P. Talpin SAS21

# ABSTRACT INTERPRETATION AS A DIJKSTRA MONAD TRANS. FOR VERIFIED PROGRAMMING

L. Franceschino, D. Pichardie, J.P. Talpin In sumbission.

# LIO\*: LOW-LEVEL INFO. FLOW CONTROL IN F\*

J.J. Marty, L. Franceschino, J.P. Talpin, N. Vazou In sumbission.

Supervised by Jean-Pierre Talpin and David Pichardie Rennes PH.D.

### MASTER AT RADBOUD UNIVERSITY

Mathematics Foundation Of Computer Science Nijmegen, Netherlands

### **MASTER THESIS**

Between Elm and iTasks Building safe and efficient multi users web applications

#### PROOF ASSISTANTS

- ⇒ Proof assistant implem. in ML ⇒ Talk on Method B
- ⇒ Isabelle formalization of BF + proof about Fibonnacci in BF

#### TYPE THEORY

Coq (execices and project). Seminar on a research paper: "An Indexed Model of Impredicative Polymorphism and Mutable References"

Implem. with type inference and closures **COMPILATION** 

45 min. presentation about Kolmogorov complexity **SEMINAR** 

### **DOUBLE DEGREE AT MONTPELLIER UNIVERSITY**

Bachelors: in Maths/Informatics and Computer Science

Web IOcean INTERNSHIP IN AN IT COMPANY

LIRMM Montpellier RESEARCH INTERNSHIP

Assistance, Programming CROUS 6-MONTH INTERNSHIP

#### HIGHSCHOOL IN CASTELNAU-LE-LEZ

School newspaper, School student council, Informatics club

Proof assistant F\*, Cog, Isabelle Programming Haskell, Idris, ML, Nix, Clean, JS, Rust, Lua, C++, Java...

Parallel programming BSP en C++

Automated reasonning tools (Z3, NuSMV, Prover9)

LaTeX, Emacs, Git

Databases (relational as well as NoSQL)

Linux NixOS, Debian, Fedora Windows Desktop and server

Teaching Java and Scala at ISTIC First, second and third years

Teaching Java at INSA First years

Private lessons

C++ et JavaScript

### Python and Visual Basic

For a computer science association in highschool

Trench English

Native speaker TOEFL 93 (2016)

Spanish TRussian

A2 Beginner

HOBBI

**M**usic Languages

**♣** Skiing

**\*** Snowboard

**8** Bicycle

**□**Computer ✓ Painting

</>Programming

✓ Traveling

**■** Reading

I love programming, and some of my projects are available on GitHub. http://github.com/W95Psp

# Mathematics topics I studied

Linear and billinear algebra, group theory, ring theory, Databases, analysis (series, functions series, impropers integrals, operation systems; imperative, continuity...), enumerative combinatoric, euclidean oriented object programming; complexity; geometry, geometry...

# Computer science topics I studied

algorithms; linear data structures: functionnal statistics, arithmetics, computational networks; formal languages; graph theory; computer architecture, automata...