# Tommaso Petrucciani


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## EXPERIENCE

### PhD in Computer Science — 2015 – 3/2019 (expected)

International joint PhD thesis:
Università di Genova, Italy & Université Paris Diderot, France

TOPIC Programming languages and type systems
THESIS *Polymorphic set-theoretic types for functional languages*
ADVISORS Giuseppe Castagna, Elena Zucca

*I have worked on type checking for functional programming languages and especially on* union *and* intersection types *– two features that are becoming more widely used in recent languages (e.g. TypeScript, Flow, Ceylon) – and how they interact with language features like*

- type inference *(as in OCaml and Haskell),*
- gradual typing *(a technique to integrate static and dynamic typing, as in TypeScript, Flow, or C#),*
- lazy evaluation *(as in Haskell).*

*As well as studying the system formally, I have developed a prototype of the type inference engine in OCaml.*

### Visiting student — 3–8/2015

Université Paris Diderot, France

*I have worked on my master's thesis: how to improve the type checking of polymorphic variants in OCaml using union and intersection types.*

## EDUCATION

### Master's degree in Computer Science — 2013–2015

Università di Genova, Italy · final grade: 110/110 cum laude

THESIS *A set-theoretic type system for polymorphic variants in ML*
ADVISORS Giuseppe Castagna, Elena Zucca, Davide Ancona
REVIEWER Eugenio Moggi

### Bachelor's degree in Computer Science — 2010–2013

Università di Genova, Italy · final grade: 110/110 cum laude

## SELECTED PUBLICATIONS

Giuseppe Castagna, Tommaso Petrucciani, Kim Nguyễn.
*Set-theoretic types for polymorphic variants*.
International Conference on Functional Programming (ICFP), 2016.

Giuseppe Castagna, Victor Lanvin, Tommaso Petrucciani, Jeremy G. Siek.
*Gradual typing: a new perspective*.
Proc. of the ACM on Programming Languages 3 (POPL), 2019.

## OTHER EXPERIENCES

- Student Volunteer Captain in the Organizing Committee of POPL '17
- Student Volunteer (POPL '16, ICFP '16, and ICFP '17)
- Teaching assistant (Università di Genova, CS Department)
- External reviewer (OOPSLA '18)
- Student representative (Università di Genova, CS Department)

## PROGRAMMING & TECH

OCaml · Java · C · C++ · C#
Haskell · Scala
Python · JavaScript

Git · LaTeX · SQL · HTML · CSS

## LANGUAGES

- Italian *native*
- English *full professional proficiency*
- French *working proficiency*