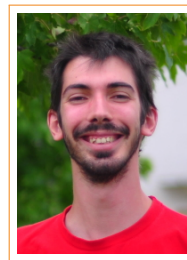


Gabriel Scherer

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I am a permanent researcher in the [Parsifal](#) team of [INRIA Saclay](#), France. I was previously a post-doc working with [Amal Ahmed](#) in the [PRL group](#) at Northeastern University, Boston, and before a PhD student under the supervision of [Didier Rémy](#) in the [Gallium project-team](#) at INRIA Paris-Rocquencourt.

(last update: July 24, 2018)

Publications

- 2018 “[Capturing the Future by Replaying the Past – Functional Pearl](#)”. By James Koppel, Gabriel Scherer, and Armando Solar-Lezama. *ICFP*.
“[Correctness of Speculative Optimizations with Dynamic Deoptimization](#)”. By Olivier Flückiger, Gabriel Scherer, Ming-Ho Yee, Aviral Goel, Amal Ahmed, and Jan Vitek. *POPL*.
“[FabULous Interoperability for ML and a Linear Language](#)”. By Gabriel Scherer, Max S. New, Nicholas Rioux, and Amal Ahmed. *FoSSaCS*.
“[Merlin: a Language Server for OCaml \(Experience report\)](#)”. By Frédéric Bour, Thomas Refis, and Gabriel Scherer. *ICFP*.
- 2017 “[Deciding equivalence with sums and the empty type](#)”. By Gabriel Scherer. *POPL*.
“[Search for Program Structure](#)”. By Gabriel Scherer. *SNAPL*.
- 2015 “[Full reduction in the face of absurdity](#)”. By Gabriel Scherer and Didier Rémy. *ESOP*.
“[Multi-focusing on extensional rewriting with sums](#)”. By Gabriel Scherer. *TLCA*.
“[Normalization by realizability also evaluates](#)”. By Pierre-Évariste Dagand and Gabriel Scherer. *JFLA*.
“[Polarised Intermediate Representation of Lambda Calculus with Sums](#)”. By Guillaume Munch-Maccagnoni and Gabriel Scherer. *LICS*.
“[Which simple types have a unique inhabitant?](#)” By Gabriel Scherer and Didier Rémy. *ICFP*.
- 2013 “[GADTs meet subtyping](#)”. By Gabriel Scherer and Didier Rémy. *ESOP*.

- “Tracking Data-Flow with Open Closure Types”. By Gabriel Scherer and Jan Hoffmann. *LPAR*.
- 2012 “On Irrelevance and Algorithmic Equality in Predicative Type Theory”. By Andreas Abel and Gabriel Scherer. *Logical Methods in Computer Science* (2012).
- 2010 “Macaque: Interrogation sûre et flexible de bases de données depuis OCaml”. By Gabriel Scherer and Jérôme Vouillon. *JFLA*.

Teaching

- 2014–2015 Teaching assistant: Java (bachelor), C (bachelor)
- 2013–2014 Teaching assistant: Java (bachelor), Advanced Functional Programming (master)
- 2008–2010, 2012 Teaching assistant: Caml-Light (bachelor)
- 2006–now Helping beginners learn programming in all kinds of online forums

Thesis

[Which types have a unique inhabitant?](#)
[Focusing on pure program equivalence](#)

Supervised by [Didier Rémy](#).
Defended on March 30th, 2016.

Presentations in peer-reviewed workshops

- 2016 “[Ambiguous pattern variables](#)”, Gabriel Scherer, Luc Maranget and Thomas Réfis, ML Workshop 2016
- 2014 “Deciding unique inhabitants with sums”, Gabriel Scherer, TYPES 2014
- “[Github Pull Requests for OCaml development: a field report](#)”, Gabriel Scherer, OCaml Workshop 2014
- “[Well-typed generic smart-fuzzing for APIs](#)”, Thomas Braibant (presenter), Jonathan Protzenko and Gabriel Scherer, ML Workshop 2014
- 2013 “Mining opportunities for unique inhabitants in dependent programs”, Gabriel Scherer, Dependently Typed Programming Workshop (DTP) 2013
- 2012 “GADT meet subtyping”, Gabriel Scherer and Didier Rémy, ML Workshop 2012

Research internships

- 2012 Visit to the FLINT team in Yale, lead by Zhong Shao
- 2011 “Universe subtyping in Martin-Löf Type Theory”, master thesis supervised by Andreas Abel (TCS, LMU, Munich)

- 2010 “ ML_{ω}^F : extending ML^F to higher-kinded types”, supervised by Didier Rémy (Gallium, INRIA, Rocquencourt)
- 2009 “Safe and flexible database queries from OCaml”, supervised by Jérôme Vouillon (PPS, CNRS, Paris)
- 2009 Bachelor thesis, “Goodstein Sequences and Incompleteness of Peano Arithmetic”, with Silvain Rideau, supervised by François Loeser (ENS)
- 2008 Bachelor thesis (TIPE) : “Monads, Category Theory and Functional Programming”

Reviews

- 2018 MISCS journal (1), CSL (1), POPL (11)
- 2017 ICFP’17 (18), FoSSaCS’18 (1), JFLA’18 (1)
- 2016 LICS’16 (3), OOPSLA (3), MSCS journal (2), VMCAI (1)
- 2015 TYPES’14 (1), ICFP’15 (2), ML’14 post-proceedings (1)
- 2014 POPL’15 (2), JFLA’15 (1)
- 2013 POPL’14 (1), ESOP’14 (2)
- 2012 ESOP’12 (1)

Software skills

- Languages OCaml, Coq, Haskell, C, Oz, Racket, Prolog, Python, MIPS asm
- Tools GNU/Linux, Git, Darcs, Emacs, \LaTeX
- Contributions Co-maintainer of the [OCaml compiler distribution](#), the main implementation of the OCaml programming language.

Education

- 2016–2017 **Post-Doc**, working with [Amal Ahmed](#), Northeastern University, Boston.
- 2011–2016 **Doctoral programme**, PhD student under Didier Rémy in project-team Gallium, INRIA, France.
- 2009–2011 **Master**, Master Parisien de Recherche en Informatique.
- 2008–2009 **Licence**, ENS : math major, minor in computer science.
- 2008–2012 student in “École Normale Supérieure (Paris)” (ENS)
- 2006–2008 **Classe préparatoire**, MPSI and MP* in lycée Louis-le-Grand, Paris.