

# Ambrose Bonnaire-Sergeant Last update on December 9, 2016

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## Summary

*Programming language tooling developer, bringing academia to the masses.*

I love delivering tools and lessons from academia to working programmers. My work in building optional type systems has been incredibly rewarding, and fulfills a need of mine to make a real impact on other people's lives.

My work on Typed Clojure is indicative of my approach. I created the optional type system for Clojure in 2011. Each subsequent year has taken a new direction based on the feedback of the community, using my expertise to match solutions to problems.

I love the communicating and marketing ideas. It is both rewarding and challenging. I have orchestrated crowdfunding campaigns that have collectively raised over \$50,000 to support my goals in open source development—supported by companies like Cognitect, Walmart Labs, Prismatic, and CircleCI.

I have given many talks in industry and academic conferences, including Strangeloop, Clojure Conj, Philly ETE, Lambda Jam Brisbane, Code Mesh, ESOP, and the International Lisp Conference. I also enjoy talking at local Clojure user groups.

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## Experience

Research Assistant

**Advisor:** Sam Tobin-Hochstadt

We have worked to formalise and publish a paper on the fundamentals of Typed Clojure. We are also working towards extending Typed Clojure with gradual typing. More recently, we are developing a framework to infer type annotations for optional type systems based on [runtime instrumentation](#).

INDIANA UNIVERSITY BLOOMINGTON

*Fall 2014 — Summer 2015, Spring 2016 —*

Assistant Instructor

**Instructor:** Sam Tobin-Hochstadt

Taught undergraduates C211, an introductory programming language course based on How To Design Programs. Conducted labs and office hours.

INDIANA UNIVERSITY BLOOMINGTON

*Fall 2015*

Google Summer of Code

**Student**

CLOJURE ORGANISATION

*2012, 2013*

**Mentor**

*2014 (3 students), 2015 (2 students)*

**Administrator**

*2014, 2015*

Crowdfunded Open Source work

PERTH, WESTERN AUSTRALIA

**Typed Clojure**

*2013*

**Gradual Typing for Clojure**

*2015*

**Automatic Annotations for Typed Clojure and `clojure.spec`**

*2016*

Analyst Programmer

UNIVERSITY OF WESTERN AUSTRALIA 2010-2011

I worked with the UWA library staff to gather information on the format and location of various University research data sources, and set up VIVO semantic web software. I used Java, XSLT, and bash, and administered several Linux machines.

## Education

Indiana University Bloomington

BLOOMINGTON, INDIANA

**Computer Science PhD student (In progress)**

*Fall 2014 –*

University of Western Australia

WESTERN AUSTRALIA, AUSTRALIA

**BSc in Computer Science with Honours**

*2008 – 2013*

## Publications

[Practical Optional Types for Clojure \(ESOP16\)](#)

WITH ROWAN DAVIES, SAM TOBIN-HOCHSTADT

[A Practical Optional Type System for Clojure \(Honours dissertation\)](#)

SUPERVISED BY ROWAN DAVIES

## Selected Open Source Contributions

[core.typed](#)  
[core.match](#)  
[Clojure](#)

LEAD DEVELOPER  
CONTRIBUTOR  
CONTRIBUTOR

## Selected Talks

Typed Clojure: From Optional to Gradual Typing ( <a href="#">Video</a> )	STRANGELOOP 2015
Typed Clojure in Practice ( <a href="#">Video</a> )	STRANGELOOP 2014
Practical Optional Types for Clojure ( <a href="#">Slides</a> )	ESOP 2016
Introduction to Logic Programming ( <a href="#">Video</a> )	CLOJURE CONJ 2011

## Skills

**Technical expertise:** Experienced with open source development and maintainence, including Git, Github, and continuous integration. Enjoys building static and dynamic program verification tools for dynamically typed languages. Experienced Clojure programmer. Some experience in Java, C, Racket, and Scheme.

## Personal

### Citizenship

I am an Australian citizen. I have Australian and French passports, and am residing in the USA under an F-1 visa.

### Interests

Singing, guitar, clarinet, reading, teaching.