

RODRIGO B. FERREIRA

Citizenship: Brazilian

<https://www.linkedin.com/in/raugfer/>

RESEARCH INTERESTS	Programming Languages and Formal Methods. Certified Programming, Proof-Carrying Code, Next Generation PLs, Typed IRs. Program Analysis, Code Optimization, Virtual Machines, Dynamic Compilation. Cryptocurrencies, Blockchain, Decentralization, Machine learning.	
EDUCATION	Ph.D. Computer Science M.Phil. Computer Science (en-route) M.Sc. Computer Science (en-route) Yale University <i>Thesis: Memory Consistency and Program Verification</i> <i>Advisor: Prof. Zhong Shao</i>	09/2003 – 05/2010 09/2003 – 05/2007 09/2003 – 05/2004 New Haven, CT U.S.A.
	M.Sc. Computer Science State University of Campinas (UNICAMP) <i>Dissertation: A Distributed JVM Implementation Towards JIT Compiler Sharing</i> <i>Advisor: Prof. Guido Araújo</i>	03/1999 – 03/2001 Campinas, SP Brazil
	B.Sc. Computer Science Federal University of Minas Gerais (UFMG) <i>Senior Year Project: A Standalone Java Environment (in Portuguese)</i> <i>Advisor: Prof. Rodolfo Resende</i>	02/1995 – 11/1998 Belo Horizonte, MG Brazil
WORK EXPERIENCE	Senior Blockchain Scientist All Coin Wallet <i>Responsibilities: Cryptocurrency Trading System/Wallet Implementation and Systems Security</i>	10/2018 – 12/2019 Belo Horizonte, MG Brazil
	Technology Consultant and Advisor Undisclosed Startup Company <i>Responsibilities: Setup of the Technology Infrastructure for a Math Software Company</i>	02/2016 – 11/2017 Europe
	Cofounder and CTO Pousadinhas.com.br Ltda <i>Responsibilities: Implementation and Operation of a Booking Platform for Brazilian Pousadas</i>	03/2012 – 07/2016 Belo Horizonte, MG Brazil
	Summer Intern Summer Intern ATI Research Inc (AMD Inc) <i>Responsibilities: Parallelizing Optimization, Code Generation and Instrumentation for Proprietary GPU</i>	06/2006 – 08/2006 06/2005 – 08/2005 Marlborough, MA U.S.A.
	Telecommute Junior Software Engineer IntelliGenesis Corporation <i>Responsibilities: WMSL Scripting Language Design & Implementation</i>	12/1998 – 09/1999 New York, NY U.S.A.
INDEPENDENT PROJECTS	Creator and Maintainer Cashu Mobile Crypto Wallet <i>Description: An Open-Source Mobile Non-Custodial Cryptocurrency Wallet supporting 30+ assets</i>	04/2018 – Present https://cashu.cc/
	Creator and Maintainer Jewel Virtual Machine Project (JewelVM) <i>Description: A Full-Featured Java 2 Environment Providing a Persistent JIT Cache System</i>	01/2000 – 12/2004 https://jewelvm.github.io/
ACADEMIC EXPERIENCE	Research Assistant , Yale University <i>Topic: Semantics of Relaxed Memory Models</i> <i>Advisor: Prof. Zhong Shao</i>	06/2007 – 05/2010

Teaching Assistant, Yale University 09/2004 – 05/2007
Courses: Introduction to Programming, Compilers & Interpreters, Operating Systems
Instructors: Prof. Drew McDermott, Prof. Richard Yang, Prof. Zhong Shao, Prof. James Aspnes

Research Assistant, Yale University 07/2004 – 08/2004
Topic: Semantics for the Memory Consistency Model of the Itanium Architecture
Advisor: Prof. Zhong Shao

Assistant Professor 08/2001 – 12/2001
Catholic University of Minas Gerais (PUC-MG) Betim, MG Brazil
Course: Compilers
Program Coordinator: Prof. Aluísio da Silva

Research Assistant, UFMG 08/1997 – 07/1998
Topic: Unstable Predicate Detection in Distributed Systems
Advisor: Prof. Alfredo Loureiro

Teaching Assistant, UFMG 03/1996 – 06/1996
Course: Algorithms and Data Structures I
Instructor: Prof. Antonio Loureiro

RELATED COURSEWORK Formal Semantics, Language-Based Security, Functional Programming, Advanced Topics in Programming Language Research, Compilers and Interpreters, Advanced Compiler Implementation, Parallel Programming, Computer Systems, Operating Systems.

PUBLICATIONS Rodrigo Ferreira, Xinyu Feng, and Zhong Shao. Parameterized memory models and concurrent separation logic. In *European Symposium on Programming*, Paphos, Cyprus, March 2010.
Xinyu Feng, Rodrigo Ferreira, and Zhong Shao. On the relationship between concurrent separation logic and assume-guarantee reasoning. In *European Symposium on Programming*, Braga, Portugal, March 2007.

AWARDS AND HONORS **Ph.D. Scholarship**, Yale University. 2003 – 2007
Ph.D. Scholarship (declined), Brazilian National Research Council (CNPq).
M.Sc. Scholarship, Brazilian Ministry of Education (CAPES). 1999 – 2001
Ranked 1st, M.Sc. Computer Science selection process, UFMG. 1999
Ranked 2nd, M.Sc. Computer Science selection process, UNICAMP.
Scientific Initiation Scholarship, CNPq. 1997 – 1998
Ranked 3rd, B.Sc. Computer Science selection process, UFMG. 1995
Winner in 2 categories, Tnooz Thack Hospitality Hackathon, São Paulo. 2015

SKILLS SUMMARY **Programming Languages:** C/C++, TypeScript, Python, Rust, Solidity, Java, PHP, Pascal, Haskell
Automated Deduction Systems: Coq, Twelf
Development Tools: GCC, JDK, Hugs, SML/NJ, OCaml
Development Support: Git, CVS, Npm, Pip, Cargo, Make, Autoconf, Automake, Libtool, Docker
Web Development: HTML5, CSS3, React, Node.js, Yii, jQuery, Flask, WebSockets, REST, SOAP
Web Infrastructure: Amazon Web Services, Google App Engine
Database Management: Firebase, MySQL, SQLite, PostgreSQL
Operating Systems: Unices(Linux, Solaris, AIX)/POSIX, Windoze/Win32
Assembly Languages: WebAssembly, IA32, MIPS, Itanium, ARM, DirectX
Languages: Portuguese (Native), English

REFERENCES Available upon request.