

RODRIGO B. FERREIRA

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

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| | Teaching Assistant , Yale University <i>Courses: Introduction to Programming, Compilers & Interpreters, Operating Systems</i> <i>Instructors: Prof. Drew McDermott, Prof. Richard Yang, Prof. Zhong Shao, Prof. James Aspnes</i> | 09/2004 – 05/2007 |
| | Research Assistant , Yale University <i>Topic: Semantics for the Memory Consistency Model of the Itanium Architecture</i> <i>Advisor: Prof. Zhong Shao</i> | 07/2004 – 08/2004 |
| | Assistant Professor Catholic University of Minas Gerais (PUC-MG) <i>Course: Compilers</i> <i>Program Coordinator: Prof. Aluísio da Silva</i> | 08/2001 – 12/2001 Betim, MG Brazil |
| | Research Assistant , UFMG <i>Topic: Unstable Predicate Detection in Distributed Systems</i> <i>Advisor: Prof. Alfredo Loureiro</i> | 08/1997 – 07/1998 |
| | Teaching Assistant , UFMG <i>Course: Algorithms and Data Structures I</i> <i>Instructor: Prof. Antonio Loureiro</i> | 03/1996 – 06/1996 |
| 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 <i>European Symposium on Programming</i> , Paphos, Cyprus, March 2010. Xinyu Feng, Rodrigo Ferreira, and Zhong Shao. On the relationship between concurrent separation logic and assume-guarantee reasoning. In <i>European Symposium on Programming</i> , Braga, Portugal, March 2007. | |
| AWARDS AND HONORS | Ph.D. Scholarship , Yale University. Ph.D. Scholarship (declined) , Brazilian National Research Council (CNPq). M.Sc. Scholarship , Brazilian Ministry of Education (CAPES). Ranked 1st , M.Sc. Computer Science selection process, UFMG. Ranked 2nd , M.Sc. Computer Science selection process, UNICAMP. Scientific Initiation Scholarship , CNPq. Ranked 3rd , B.Sc. Computer Science selection process, UFMG. Winner in 2 categories , Tnooz Thack Hospitality Hackathon, São Paulo. | 2003 – 2007 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. | |