



Rodrigo Otoni

Curriculum Vitae

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PERSONAL DETAILS

Full Name Rodrigo Benedito Otoni
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 rodrigo7491@gmail.com

SUMMARY

PhD student in Informatics at the Università della Svizzera italiana, Switzerland. Interested in the use of formal methods for specification and verification of general programs, as well as of smart contracts and blockchain technologies.

EDUCATION

PhD in Informatics 2018-Present
Università della Svizzera italiana, Switzerland
Advisors: Prof. Patrick Eugster and Prof. Natasha Sharygina

MSc in Computer Science 2016-2018
Universidade Federal de Pernambuco, Brazil
Dissertation: A Strategy for Local Analysis of Determinism
Advisors: Prof. Augusto Sampaio and Prof. Ana Cavalcanti

BSc in Computer Science 2012-2016
Universidade Federal de Sergipe, Brazil
Project: A Verification Strategy for Control Systems Implementations in Safety-Critical Java
Advisors: Prof. Ana Cavalcanti and Prof. Leila Silva
Additional Information: visiting student at the University of York, UK, for one year (2014/15)

ACADEMIC ROLES

Teaching Assistant 2019-Present
Università della Svizzera italiana, Switzerland
MSc Course: Distributed Systems (2019/20, 2020/21, 2022/23)
BSc Course: Software Atelier 2 (2018/19, 2019/20, 2020/21)
BSc Course: Data Management (2021/22)

Universidade Federal de Pernambuco, Brazil 2016
BSc Course: Systems Project and Analysis (2016)

Undergraduate Research Assistant 2013-2014
Universidade Federal de Sergipe, Brazil
Project: Exploring Optimization Algorithms in Requirements Engineering
Advisor: Prof. Leila Silva

WORK EXPERIENCE

Research Engineer

2021-2022

Informal Systems, Switzerland

Topic: SMT-based model checking of TLA⁺ specifications

Arrangement: 6 months as an intern followed by 10 months as a contractor

PUBLICATIONS

- **R. Otoni**, M. Marescotti, L. Alt, P. Eugster, A. Hyvärinen, and N. Sharygina. A Solicitous Approach to Smart Contract Verification. *ACM Transactions on Privacy and Security (TOPS)*.
- **R. Otoni**, M. Blicha, P. Eugster, A. Hyvärinen, and N. Sharygina. Theory-Specific Proof Steps Witnessing Correctness of SMT Executions. *58th ACM/IEEE Design Automation Conference (DAC'21)*.
- M. Marescotti, **R. Otoni**, L. Alt, P. Eugster, A. Hyvärinen, and N. Sharygina. Accurate Smart Contract Verification Through Direct Modelling. *9th International Symposium on Leveraging Applications of Formal Methods (ISoLA'20)*.
- **R. Otoni**, A. Cavalcanti, and A. Sampaio. Local Analysis of Determinism for CSP. *20th Brazilian Symposium on Formal Methods (SBMF'17)*.

CONTRIBUTED TALKS

- Theory-Specific Proof Steps Witnessing Correctness of SMT Executions
 - 19th International Workshop on Satisfiability Modulo Theories (SMT'21)
- Accurate Smart Contract Verification Through Direct Modelling
 - 9th International Symposium on Leveraging Applications of Formal Methods (ISoLA'20)
 - 3rd Workshop on Theory and Practice of Blockchains (TPBC'21)
- Local Analysis of Determinism for CSP
 - 20th Brazilian Symposium on Formal Methods (SBMF'17)

ADDITIONAL INFORMATION

- Sub-reviewer for FORTE'19, CAV'20, FMCAD'20, TACAS'20, SAT'20, LPAR'20, MARS'20, CAV'21, FMCAD'21, TACAS'21, VSTTE'21, CAV'22, FMCAD'22, TACAS'22, OOPSLA'22, and TACAS'23
- Recipient of a Science without Borders scholarship from the Brazilian government

LANGUAGES

- Portuguese: native speaker (Brazilian citizen)
- English: fluent (Toefl iBT 113/120)
- Italian: basic (CEFR A2)