

# Publications – Rodrigo Otoni

Last Update in January 2026

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## Journal Papers

5. *Approximate Logic Synthesis via Iterative SMT-based Subcircuit Rewriting*  
M.Rezaalipour, M.Biasion, F.Costa, C.Tirelli, **R.Otoni**, G.Constantinides, and L.Pozzi  
IEEE Trans. on Computer-Aided Design of Integrated Circuits and Systems (TCAD), Early Access
4. *A Language for Quantifying Quantum Network Behavior*  
A. Buckley, P. Chuprikov, **R. Otoni**, R. Soulé, R. Rand, and P. Eugster  
Proceedings of the ACM on Programming Languages (PACMPL), 9(OOPSLA2), 2025
3. *Validation of CHC Satisfiability with ATHENA*  
**R. Otoni**, M. Blichá, P. Eugster, and N. Sharygina  
Formal Aspects of Computing (FAC), 37(4), 2025
2. *An Algebraic Language for Specifying Quantum Networks*  
A. Buckley, P. Chuprikov, **R. Otoni**, R. Soulé, R. Rand, and P. Eugster  
Proceedings of the ACM on Programming Languages (PACMPL), 8(PLDI), 2024
1. *A Solicitous Approach to Smart Contract Verification*  
**R. Otoni**, M. Marescotti, L. Alt, P. Eugster, A. Hyvärinen, and N. Sharygina  
ACM Transactions on Privacy and Security (TOPS), 26(2), 2023

## Conference Papers

7. *Unsatisfiability Proofs for Horn Solving*  
**R. Otoni**, M. Blichá, M. Rivera, P. Eugster, J. Kofroň, and N. Sharygina  
31st Int. Conf. on Tools and Algs. for the Construction and Analysis of Systems (TACAS'25)  
Distinguished Paper Award  and EASST Best Paper Award 
6. *Monomorphism-based CGRA Mapping via Space and Time Decoupling*  
C. Tirelli, **R. Otoni**, and L. Pozzi  
28th Design, Automation and Test in Europe Conference (DATE'25)
5. *CHC Model Validation with Proof Guarantees*  
**R. Otoni**, M. Blichá, P. Eugster, and N. Sharygina  
18th International Conference on integrated Formal Methods (iFM'23)  
Best Paper Award candidate 
4. *Symbolic Model Checking for TLA<sup>+</sup> Made Faster*  
**R. Otoni**, I. Konnov, J. Kukovec, P. Eugster, and N. Sharygina  
29th Int. Conf. on Tools and Algs. for the Construction and Analysis of Systems (TACAS'23)
3. *Theory-Specific Proof Steps Witnessing Correctness of SMT Executions*  
**R. Otoni**, M. Blichá, P. Eugster, A. Hyvärinen, and N. Sharygina  
58th ACM/IEEE Design Automation Conference (DAC'21)
2. *Accurate Smart Contract Verification Through Direct Modelling*  
M. Marescotti, **R. Otoni**, L. Alt, P. Eugster, A. Hyvärinen, and N. Sharygina  
9th International Symposium on Leveraging Applications of Formal Methods (ISoLA'20)

1. *Local Analysis of Determinism for CSP*  
**R. Otoni**, A. Cavalcanti, and A. Sampaio  
20th Brazilian Symposium on Formal Methods (SBMF'17)

## Other Papers

2. *Automatisierte Garantierte Blockchain-Technologie Verifizierung*  
**R. Otoni**  
GI Ausgezeichnete Informatikdissertationen 2023 (Band 24), 2024
1. *Towards an Algebraic Specification of Quantum Networks*  
A. Buckley, P. Chuprikov, **R. Otoni**, R. Rand, R. Soulé, and P. Eugster  
1st Workshop on Quantum Networks and Distributed Quantum Computing (QuNet'23)