

Felipe R. Monteiro

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Personal

Felipe R. Monteiro is currently a senior undergraduate student in Computer Engineering at Federal University of Amazonas. In addition, he works as researcher in the Systems and Software Verification Laboratory at the Electronic and Information Research Center. He was also awarded the Science without Borders exchange program, which has sponsored his studies in the Computer Science course at Goldsmiths University of London, in 2013–2014. He has worked in 7 research and development (R&D) projects and his main experiences are in formal verification, model checking, and software engineering. Furthermore, he has 12 revised publications, [h-index 4](#), and an academic award by Association for Computing Machinery.

Education

B.Eng. Computer Engineering, Federal University of Amazonas, *currently*.

Exchange Program in Computer Science, Goldsmiths University of London, 2014.

Technical in Software Programming, National Service of Industrial Learning, 2011.

Employment

1. **Research Fellow** at Electronic and Information Research Center, 2011 – *present*
 - Research on formal verification of digital systems ([DSVerifier](#))
 - Research on model checking of C++ programs based on the Qt framework ([QtOM](#))
 - Research on model checking of CUDA-based applications ([ESBMC-GPU](#))
 - [Systems & Software Verification Laboratory](#)
2. **Google Summer of Code Student** at Checker Framework, 06/2017 – 08/2017 (*sponsored by Google*)
 - Research on whole-program inference ([Checker Framework](#))
 - [Google Summer of Code 2017](#)
3. **Internship** at Samsung Electronics, 04/2015 – 01/2016
 - Mobile application development (Android)
4. **Research Fellow** at [Institute of Technology Development \(INdT\)](#), 11/2011 – 04/2013
 - Research on formal verification of C++ programs using SMT-based BMC ([ESBMC++](#))
 - [Systems & Software Verification Laboratory](#)
5. **Research Fellow** at Institute of Computing, 04/2011 – 12/2011

- Research on assistive technology for autistic children
- Usability and semiotic engineering of human-computer interaction
- Laboratory of Intelligent Systems

Publications

Journal Articles

- F. R. Monteiro**, E. H. da S. Alves, I. S. da Silva, H. I. Ismail, L. C. Cordeiro, E. B. de Lima Filho. [ESBMC-GPU A Context-Bounded Model Checking Tool to Verify CUDA Programs](#), Science of Computer Programming (2017). doi:10.1016/j.scico.2017.09.005.
- F. R. Monteiro**, F. A. P. Januário, L. C. Cordeiro, E. B. de Lima Filho. [BMCLua: A Translator for Model Checking Lua Programs](#), ACM SIGSOFT Software Engineering Notes. 42 (2017) 1 – 10. doi:10.1145/3127360.3127367.
- F. R. Monteiro**, M. A. P. Garcia, L. C. Cordeiro, E. B. de Lima Filho. [Bounded Model Checking of C++ programs based on the Qt cross-platform framework](#), Journal of Software Testing, Verification and Reliability. 27 (2017) e1632 – n/a. doi:10.1002/stvr.1632.
- P. Pereira, H. Albuquerque, I. da Silva, H. Marques, **F. R. Monteiro**, R. Ferreira, L. C. Cordeiro. [SMT-based Context-Bounded Model Checking for CUDA Programs](#), Journal of Concurrency and Computation: Practice and Experience (2016) doi:10.1002/cpe.3934.

Proceedings

- F. R. Monteiro**. [Bounded model checking of state-space digital systems: the impact of finite word-length effects on the implementation of fixed-point digital controllers based on state-space modeling](#), 24th ACM SIGSOFT International Symposium on Foundations of Software Engineering, 2016.
- M. Garcia, **F. R. Monteiro**, L. C. Cordeiro, E. B. de Lima Filho. [ESBMC^{QtOM}: A Bounded Model Checking Tool to Verify Qt Applications](#), Model Checking Software. SPIN 2016. Lecture Notes in Computer Science, vol 9641. Springer, 2016.
- F. R. Monteiro**, P. A. Pereira, L. C. Cordeiro, C. F. F. Costa Filho, M. G. F. Costa. [Complementary training programme for electrical and computer engineering students through an industrial-academic collaboration](#), IEEE Frontiers in Education Conference, 2016.
- F. R. Monteiro**, L. C. Cordeiro, E. B. de Lima Filho. [Bounded model checking of C++ programs based on the Qt framework](#), IEEE 4th Global Conference on Consumer Electronics, 2015.
- F. R. Monteiro**, L. C. Cordeiro, E. B. de Lima Filho. [Verificação de Programas C++ Baseados no Framework Multiplataforma Qt](#), Encontro Regional de Computação e Sistemas de Informação, 2015.
- M. Ramalho, M. Freitas, **F. R. Monteiro**, H. Marques, L. C. Cordeiro, B. Fischer. [SMT-based bounded model checking of C++ programs](#), 20th IEEE International Conference and Workshops on the Engineering of Computer Based Systems, 2013.
- F. R. Monteiro**, E. A. B. Costa, T. H. C. de Castro. [WorldTour: Software para Suporte no Ensino de Crianças Autistas](#), XXIII Brazilian Symposium on Computers in Education, 2012.
- F. R. Monteiro**, T. H. C. de Castro. [WorldTour: Towards an Adaptive Software to Support Children with Autism in Tour Planning](#), IEEE 36th Annual Computer Software and Applications Conference, 2012.

Additional Skills

Software Engineering; Formal Verification; Model Checking; SCRUM; Version Control (Git); ANSI-C/C++/Java Programming; \LaTeX ;

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