

Curriculum Vitae

Rijnard van Tonder

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Personal

Date of Birth: October 13, 1989, South African citizen

Education

Ph.D. Computer Science, Carnegie Mellon University, 2014-2019
M. Software. Engineering., Carnegie Mellon University, 2014-2017
M. Eng. & BSc. (Hons) Computer Science, Stellenbosch University, 2009-2014

Employment

Sourcegraph, Research Scientist, Phoenix, AZ, October 2019-current

Large scale code search, software analysis, and refactoring.

Facebook Software Eng. Intern, Menlo Park CA, May-Aug 2018

Added static taint analysis support to [Pyre](#), the Python static type checker at Facebook.

Facebook Software Eng. Intern, Menlo Park CA, May-Aug 2017

Static Analysis at Facebook. Parallelized [Pyre](#) for 5x speedup and added incremental, in-editor type-checking with language server protocol support.

Software Eng. Intern at Microsoft Research, Redmond WA, May-Jul 2014

Worked on dynamic symbolic execution for stateful programs with Patrice Godefroid in the RiSE group.

Software Eng. Intern at Google, Zurich, Nov-Jan 2012

Worked with a Google Maps backend team to increase quality of map listings.

Publications

- [1] Rijnard van Tonder and Claire Le Goues, Tailoring Programs for Static Analysis via Program Transformation, International Conference on Software Engineering (ICSE), '20
- [2] Rijnard van Tonder and Claire Le Goues, Lightweight Multi-language Syntax Transformation with Parser Parser Combinators, Programming Language Design and Implementation (PLDI), '19
- [3] Rijnard van Tonder and Claire Le Goues, Towards s/engineer/bot: Principles for Program Repair Bots, Bots in Software Engineering (BotSE@ICSE), '19
- [4] Rijnard van Tonder, Asher Trockman, and Claire Le Goues. A Panel Data Set of Cryptocurrency Development Activity on GitHub, Mining Software Repositories (MSR), '19.
- [5] Asher Trockman, Rijnard van Tonder, and Bogdan Vasilescu. Striking Gold in Software Repositories? An Econometric Study of Cryptocurrencies on GitHub, Mining Software Repositories (MSR), '19.

- [6] Rijnard van Tonder and Claire Le Goues, Cross-Architecture Lifter Synthesis, *Software Engineering and Formal Methods (SEFM)*, '18
- [7] Rijnard van Tonder, John Kotheimer, and Claire Le Goues, Semantic Crash Bucketing, *Automated Software Engineering (ASE)*, '18
- [8] Rijnard van Tonder and Claire Le Goues, Static Automated Program Repair for Heap Properties, **ACM Distinguished Paper Award**, *International Conference on Software Engineering (ICSE)*, '18
- [9] Ivan Gotovchits, Rijnard van Tonder and David Brumley, Saluki: Finding Taint-style Vulnerabilities with Static Property Checking. *Workshop on Binary Analysis Research (BAR)*, '18
- [10] Rijnard van Tonder and Claire Le Goues, Defending Against the Attack of the Micro-clones, *International Conference on Program Comprehension (ICPC)*, '16.
- [11] Rijnard van Tonder and Herman Engelbrecht, Lowering the USB Fuzzing Barrier by Transparent Two-Way Emulation, *Workshop on Offensive Technologies (WOOT)* '14.

Professional Service: International Journal and Conference Program Committee Member

International Conference on Automated Software Engineering (ASE), 2020

International Conference on Software Engineering, New Ideas and Emerging Research (NIER), 2020

International Conference on Mining Software Repositories (MSR), Data Showcase, 2020

Journal of Systems & Software (JSS), New Ideas and Trends, 2019