

Abel Nieto

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Education

- May 2017–Present **Master of Mathematics (Computer Science)**, *University of Waterloo*, Waterloo, ON, Canada.
Working with Ondřej Lhoták on taming null in Scala. Contributor to Dotty, the new Scala compiler.
Project page: <https://git.io/scala-null>
- Sep 2009–Apr 2014 **Bachelor of Computer Science**, *University of Waterloo*, Waterloo, ON, Canada.
Major average: 92.53/100. Graduated with Distinction on the Dean's Honours List.

Work Experience

- May–Aug 2018 **Research Intern**, *MPI-SWS*, Kaiserslautern, Germany.
Static analysis (abstract interpretation) and fuzzing for the Ethereum Virtual Machine.
- May 2014–April 2017 **Software Engineer**, *Google*, Kitchener, ON, Canada.
Google Fiber TV and Technical Infrastructure teams.
2017 Android and backend development in Java. Distributed build systems in Go.
- Sep–Dec 2013 **Software Engineer Intern**, *Facebook*, Menlo Park, CA, USA.
Immutable containers (e.g. FrozenVector, FrozenSet) for HHVM, Facebook's PHP JIT compiler.
- May–Aug 2012 **Software Engineer Intern**, *Facebook*, Menlo Park, CA, USA.
Tracking perf events (e.g. branch mispredictions, cache misses) within tc-print, a profiler for HHVM.
- Sep–Dec 2011 **Software Engineer Intern**, *Facebook*, Palo Alto, CA, USA.
Backend and frontend development in a system for enforcing intellectual property rights.
- Jan–Apr 2011 **Software Engineer Intern**, *BlackBerry*, Waterloo, ON, Canada.
Embedded development in C for an NFC driver.

Papers

- 2017 **Abel Nieto**, *Towards Algorithmic Typing for DOT (Short Paper)*, SCALA'17.

Technical Reports

- 2017 **Abel Nieto**, *Tamarin: Concolic Disequivalence for MIPS*, [link].
- 2017 **Abel Nieto**, *Towards Algorithmic Typing for DOT*, arXiv:1708.05437 [cs.PL].

Talks

- 2018 **Scala with explicit nulls (student talk)**, SCALA'18.

2017 **Towards Algorithmic Typing for DOT**, SCALA'17, [link].

Skills

- Programming languages/Compilers/Static analysis/Program verification/SAT and SMT solvers
- Algorithms/data structures
- Scala/Go/Java/C++/Scheme

Misc

Jul 2010 **Winner**, *Waterloo Local Programming Contest*.

2008 **Silver Medal (44th/300+)**, *XX International Olympiad in Informatics*, Cairo, Egypt.

2007 **Participant (187th/300+)**, *XIX International Olympiad in Informatics*, Zagreb, Croatia.