



Evgenii Kotelnikov, Ph.D.

Date of birth: 15 February 1990

Current location: Gothenburg, Sweden

Language proficiency: English (fluent), Russian (native), Swedish (intermediate)

✉ evgeny.kotelnikov@gmail.com www.ekotelnikov.com

Main competences

- Formal methods
- Automated reasoning
- Functional programming
- Software verification
- Databases
- Cloud
- C
- C++
- Java
- Scala
- Haskell
- Python

Work experience

[LinkedIn profile](#)

Ericsson AB

August 2019 to now

Software developer

Gothenburg, Sweden

- Implemented new features for the control plane of [SGSN-MME](#).
- Developed the telco cloud infrastructure, including storage, networking and logging, for [Packet Core Controller](#).

- Linux
- Erlang
- C
- Bash
- Python
- Kubernetes
- Docker

Chalmers University of Technology

September 2013 to September 2018

Doctoral researcher

Gothenburg, Sweden

- Conducted research in the areas of automated theorem proving, formal methods and functional programming.
- Published and presented academic results in conferences and workshops (see my [Google Scholar profile](#)).
- Actively contributed to [Vampire](#), a state-of-the-art automated theorem prover for first-order logic.
- Reviewed paper submission for [SCSS 2014](#), [FM 2015](#), [LPAR-20](#), [CPP 2016](#), [CICM 2016](#), [FM 2016](#), [PSI-2017](#), [TACAS 2018](#), [FM 2018](#) and [iFM 2018](#).
- Assisted to preparing assignments, conducting consultation sessions and grading exams in the courses on Functional Programming, Databases, Algorithms and Datastructures.
- Developed and maintained a homework submission system in the Computer Science department used annually by approx. 1000 students and 20 faculty members.

- Java
- Haskell
- Python
- PostgreSQL
- Oracle Database

Amazon Web Services

March 2017 to June 2017

Applied scientist intern, [Automated Reasoning Group](#)

New York, USA

Implemented an experimental backend for [Tiros](#) — a static analyzer of AWS virtual private cloud networks.

- Scala
- Python
- Datalog
- Vampire
- Z3

Yandex Inc.

March 2011 to August 2013

Software developer

Saint-Petersburg, Russia

- Developed the back end of high-load web search services, including an in-house performant database solution capable of serving up to 400 requests per second.
- Developed information retrieval tools and web crawlers.
- Developed an app recommendation system for [Yandex.Store](#).

- Java
- Scala
- Akka
- Oracle Database
- MongoDB
- Redis

Motorola Solutions Inc.

July 2010 to December 2010

Software engineering intern

Saint-Petersburg, Russia

Designed a specification language for low-level telecom protocols and implemented a toolchain for it.

- Lisp
- C
- Python
- Wireshark

Freelance

2005 to 2010

Web developer

Remote

Developed front end and back end of commercial websites.

- PHP
- MySQL
- HTML
- CSS
- JavaScript
- jQuery

Education

Doctor of philosophy (Ph.D.)

September 2013 to September 2018

[Chalmers University of Technology](#), Department of Computer Science

Gothenburg, Sweden

Thesis titled “[Automated Theorem Proving with Extensions of First-Order Logic](#)”

Ph.D. supervisors [Laura Kovács](#) and [Andrei Voronkov](#)

Explored ways to make automated theorem provers more efficient for applications by extending the logic they support. The applications include automation of proof assistants and static analysis of software and networks.

- Automated theorem proving
- First-order logic
- Program analysis
- Vampire

Master of science (M.Sc.)

September 2011 to July 2013

[Saint-Petersburg State University](#), Department of Applied Mathematics

Saint-Petersburg, Russia

Thesis titled “[Syntactical Extensions of Scala for Effectful Computations](#)”

- Scala
- Metaprogramming
- Monads
- Computational effects

Bachelor of science (B.Sc.)

September 2007 to July 2011

[Saint-Petersburg State University](#), Department of Applied Mathematics

Saint-Petersburg, Russia

Thesis titled “[Source Code Generation Based on Language Grammar Description](#)”

- Source code generation
- Context-free grammars
- Algebraic data types
- Scheme

Summer & winter schools

- [Marktoberdorf Summer School 2016](#): Dependable Software Systems Engineering
- August 2016
- Summer School 2014: Verification Technology, Systems & Applications ([VTSA'2014](#))
- October 2014
- Advanced Winter School on Reasoning Engines for Rigorous System Engineering ([ReRiSE'14](#))
- February 2014

Public software projects

[GitHub profile](#)

vampire

An award-winning automated [theorem prover](#) for first-order logic.

- C++

voogie

A verification conditions generator for the Boogie intermediate verification language.

- Haskell

scala-workflow

An extension to Scala for boilerplate-free syntax for effectful computations.

- Scala

atomizer

A static analysis tool for finding loose atoms in large Erlang code bases.

- Erlang

atp

Haskell interface to automated theorem provers.

- Haskell

fire

A submission system for homework assignments.

- Python
- HTML
- CoffeeScript
- Docker