



Evgenii Kotelnikov, Ph.D.

Date of birth: 15 February 1990
Current location: Gothenburg, Sweden
Language proficiency: English (fluent), Russian (native), Swedish (intermediate)

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Main areas of expertise

- Software engineering
- Formal methods
- Automated reasoning
- Software verification
- Functional programming

Education

Doctor of philosophy (Ph.D.) September 2013 to September 2018 📅
[Chalmers University of Technology](#) Gothenburg, Sweden 📍

Ph.D. supervisors [Laura Kovács](#) and [Andrei Voronkov](#)
Thesis titled “[Automated Theorem Proving with Extensions of First-Order Logic](#)”
Explored ways to make automated theorem provers for first-order logic more efficient for applications. These applications include automation of proof assistants and static analysis of software and networks. This work resulted in several academic publications, conference speeches, and active contributions to the [Vampire](#) theorem prover.

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

Master of science (M.Sc.) September 2011 to July 2013 📅
[Saint-Petersburg State University](#) 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](#) 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

[Marktobendorf 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 📅

Working experience

[🌐 LinkedIn profile](#)

[Chalmers University of Technology](#) September 2013 to September 2018 📅
Teacher assistant Gothenburg, Sweden 📍

Assisted to courses on Databases, Algorithms and Datastructures, and Functional Programming

Java

Haskell

PostgreSQL

Oracle Database

[Amazon Web Services](#) March 2017 to June 2017 📅
Software engineering intern New York, USA 📍

Contributed to tools for static analysis of AWS virtual private cloud networks. Among these tools are [Zelkova and Tiros](#)

Scala

Python

Datalog

Vampire

Z3

[Yandex Inc.](#) March 2012 to August 2013 📅
Software engineer Saint-Petersburg, Russia 📍

Designed and developed the backend for high-load web search services

Java

Scala

Akka

Oracle Database

MongoDB

[Yandex Inc.](#) March 2011 to March 2012 📅
Software engineering intern Saint-Petersburg, Russia 📍

Developed tools for mining semi-structured data on the web

Java

Oracle Database

[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

Scheme

C

Python

Wireshark

Freelance 2005 to 2010 📅
Web developer Remote 📍

Developed client and server sides of commercial websites

PHP

MySQL

HTML

CSS

JavaScript

jQuery

Public software projects

[🔗 GitHub profile](#)

[Vampire](#) 2014 to current 📅

An award-winning automated theorem prover for first-order logic

C++

 175 KLOC

[Fire](#) 2014 to 2018 📅

A submission system for homework assignments

Python

Pyramid

HTML

CoffeeScript

LESS

 30 KLOC

[Voogie](#) 2018 📅

A verification conditions generator for simple Boogie programs

Haskell

 2 KLOC

[scala-workflow](#) 2013 📅

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

Scala

 1.5 KLOC

List of publications

[🔍 Google Scholar profile](#)

[TFX: The TPTP Extended Typed First-order Form](#) 2018 📅

G. Sutcliffe and E. Kotelnikov
In *Proceedings of the 6th Workshop on Practical Aspects of Automated Reasoning*

[A FOOLish Encoding of the Next State Relations of Imperative Programs](#) 2018 📅

E. Kotelnikov, L. Kovács and A. Voronkov
In *Proceedings of the 9th International Joint Conference on Automated Reasoning*

[A Clausal Normal Form Translation for FOOL](#) 2016 📅

E. Kotelnikov, L. Kovács, M. Suda and A. Voronkov
In *Proceedings of the 2nd Global Conference on Artificial Intelligence*

[The Vampire and the FOOL](#) 2016 📅

E. Kotelnikov, L. Kovács, G. Reger and A. Voronkov
In *Proceedings of the 5th ACM SIGPLAN Conference on Certified Programs and Proofs*

[A First Class Boolean Sort in First-Order Theorem Proving and TPTP](#) 2015 📅

E. Kotelnikov, L. Kovács and A. Voronkov
In *Conferences on Intelligent Computer Mathematics*

[Type-Directed Language Extension for Effectful Computations](#) 2014 📅

E. Kotelnikov
In *Proceedings of the Fifth Annual Scala Workshop*

[Embeddable Framework for Syntax-Safe Source Code Generation](#) 2012 📅

E. Kotelnikov
In *Proceedings of the 2012 Joint International Conference on Human-Centered Computer Environments*