

Konstantinos Kallas

Contact	Email: kallas@seas.upenn.edu – Website: angelhof.github.io
Education	<div><div>University of Pennsylvania Computer and Information Science, PhD student Advisor: Rajeev Alur</div><div><i>September 2018 – present</i></div></div> <div><div>Eighth Summer School on Formal Techniques Menlo College, Atherton, CA Organised by SRI International</div><div><i>May 2018</i></div></div> <div><div>National Technical University of Athens Electrical and Computer Engineering, Diploma Thesis: “<i>HiPERJiT: A Profile-Driven Just-in-Time Compiler for Erlang</i>” Advisor: Prof. Kostis Sagonas</div><div><i>October 2012 – February 2018</i></div></div> <div><div>Universita degli Studi dell’Aquila Computer Science, Erasmus Mobility Program</div><div><i>February 2015 – July 2015</i></div></div>
Working Experience	<div><div>Research Intern Microsoft Research, Redmond, US Internship in the RiSE group; advised by Sebastian Burckhardt. Worked on an execution engine for stateful serverless applications.</div><div><i>May 2020 – August 2020</i></div></div> <div><div>Software Engineering Intern Amazon Web Services, New York, US Internship in the Automated Reasoning Group; advised by Daniel Schwartz-Narbonne. Worked on the verification of critical C code.</div><div><i>May 2019 – August 2019</i></div></div> <div><div>Google Summer of Code Student Worked with BEAM Community to extend the <i>ejabberd</i> open source project. Implemented support for the “<i>Let’s Encrypt</i>” ACME certificate acquiring protocol.</div><div><i>May 2017 – September 2017</i></div></div> <div><div>Big Data Application Developer Everis, Barcelona, Spain Internship at the Big Data Center of Excellence. Developed Big Data Applications using a plethora of tools in the Hadoop ecosystem.</div><div><i>June 2016 – September 2016</i></div></div>
Teaching Experience	<div><div>Teaching Assistant Institution: University of Pennsylvania Course: <i>Software Foundations</i>, Graduate level Professor: Benjamin Pierce</div><div><i>Fall 2019</i></div></div> <div><div>Lab Assistant Institution: National Technical University of Athens Course: <i>Introduction to Programming</i>, Undergraduate level Professors: S. Zachos, N. Papaspyrou, V. Kantere, and P. Potikas</div><div><i>Fall 2017</i></div></div>
Publications	<div><div>PaSh: Light-touch Data-Parallel Shell Processing. Nikos Vasilakis*, Konstantinos Kallas*, Konstantinos Mamouras, Achilleas Benetopoulos, and Lazar M. Cvetković. <i>In submission.</i></div><div>Flumina: Correct distribution of Stateful Streaming Computations. Konstantinos Kallas*, Filip Niksic*, Caleb Stanford*, and Rajeev Alur. <i>In submission.</i></div></div>

Differential Testing for Stream Processing Systems.

Konstantinos Kallas*, Filip Niksic*, Caleb Stanford*, and Rajeev Alur.

*In submission.***Code-Level Model Checking in the Software Development Workflow.**

Nathan Chong, Byron Cook, Konstantinos Kallas, Kareem Khazem, Felipe R. Monteiro, Daniel Schwartz-Narbonne, Serdar Tasiran, Michael Tautschnig, and Mark R. Tuttle.

42st International Conference on Software Engineering: Software Engineering in Practice (ICSE-SEIP 2020).

Security Criteria for a Transparent Encryption Layer.

Konstantinos Kallas, Clara Schneidewind, Benjamin C. Pierce, and Steve Zdancewic. Workshop on Foundations of Computer Security (FCS 2019).

HiPErJiT: A Profile-Driven Just-in-Time Compiler for Erlang.

Konstantinos Kallas and Konstantinos Sagonas.

30th Symposium on Implementation and Application of Functional Languages (IFL 2018).

Honors and Awards**Gerondelis Foundation PhD Award***2020***Programming Competitions***2015-2018*

Participation in many programming competitions. Notable examples:

ICFP Programming Contest 2018 (Lightning) *10th out of 91 teams*,IEEE Xtreme 2017 *Top 5%* and *3rd* in Greece, IEEE Xtreme 2016 *Top 10%***Heterogenous Computing Student Challenge Certificate***2017*

HiPEAC CSW, Zagreb, Croatia

Optimizing GPU implementation of the K-means algorithm (NTUA-team)

Supervision: Prof. Georgios Goumas

EESTech Challenge*2017*

Supervised Machine Learning Hackathon

Joint 1st place among 40 teams.**The Great Moment of Education Scholarship from Eurobank EFG***2012*

Achieving the highest rank in national qualifications exams in Dionisos high school.

9th European Union Science Olympiad*2011*

Team-based science competition in Biology, Chemistry, and Physics.

1st place in local round and *3rd place* in national round.**Mathematical Competition, Hellenic Mathematical Society***2010*

Mathematical competition for high school students.

Distinction in the 1st and 2nd local round.

Computer Experience**Programming Languages:**

Erlang, Haskell, Python, Coq, C, Scala, SML, Agda, Javascript, Matlab, Java, SQL

Operating Systems:

Extensive experience on the Linux OS and Linux Kernel Programming.

Hadoop:

Deep understanding of the Hadoop Ecosystem as well as hands on experience.

Typesetting:Experience using L^AT_EX.**Languages****Greek** (Native), **English** (C2), **Italian** (C1), **German** (B2)