

## Konstantinos Kallas

---

<b>Contact</b>	Email: kallas@seas.upenn.edu – Website: angelhof.github.io
<b>Education</b>	<div><div><b>University of Pennsylvania</b> Computer and Information Science, PhD student Advisor: Rajeev Alur</div><div><i>September 2018 – present</i></div></div> <div><div><b>Eight Summer School on Formal Techniques</b> Menlo College, Atherton, CA Organised by SRI International</div><div><i>May 2018</i></div></div> <div><div><b>National Technical University of Athens</b> 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><b>Universita degli Studi dell’Aquila</b> Computer Science, Erasmus Mobility Program</div><div><i>February 2015 – July 2015</i></div></div>
<b>Working Experience</b>	<div><div><b>Software Engineering Intern</b> Amazon Web Services, New York, US Internship in the Automated Reasoning Group. Worked on the verification of critical C code.</div><div><i>May 2019 - August 2019</i></div></div> <div><div><b>Google Summer of Code Student</b> 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><b>Big Data Application Developer</b> 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>
<b>Teaching Experience</b>	<div><div><b>Teaching Assistant</b> Institution: University of Pennsylvania Course: <i>Software Foundations</i>, Graduate level Professor: Benjamin Pierce</div><div><i>Fall 2019</i></div></div> <div><div><b>Lab Assistant</b> 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>
<b>Publications</b>	<div><div><b>Dish: Distribution-oblivious Shell Scripting.</b> Konstantinos Kallas, Nikos Vasilakis, Lazar M. Cvetković, and Konstantinos Mamouras. <i>In submission.</i></div><div><b>Flumina: Correct distribution of Stateful Streaming Computations.</b> Konstantinos Kallas, Filip Niksic, Caleb Stanford, and Rajeev Alur. <i>In submission.</i></div><div><b>Differential Testing for Stream Processing Systems.</b> Konstantinos Kallas, Filip Niksic, Caleb Stanford, and Rajeev Alur. <i>In submission.</i></div></div>

**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.

*In submission.*

**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

### 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<sup>A</sup>T<sub>E</sub>X.

## Languages

Greek (Native), English (C2), Italian (C1), German (B2)