

## Konstantinos Kallas

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| <b>Contact</b>             | Email: kallas@seas.upenn.edu – Website: angelhof.github.io  |
| <b>Education</b>           | <div><div><b>University of Pennsylvania</b><br/>Computer and Information Science, PhD student<br/>Advisor: Rajeev Alur</div><div><i>September 2018 – present</i></div></div> <div><div><b>Eighth Summer School on Formal Techniques</b><br/>Menlo College, Atherton, CA<br/>Organised by SRI International</div><div><i>May 2018</i></div></div> <div><div><b>National Technical University of Athens</b><br/>Electrical and Computer Engineering, Diploma<br/>Thesis: “<i>HiPerJiT: A Profile-Driven Just-in-Time Compiler for Erlang</i>”<br/>Advisor: Prof. Kostis Sagonas</div><div><i>October 2012 – February 2018</i></div></div> <div><div><b>Universita degli Studi dell’Aquila</b><br/>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><br/>Amazon Web Services, New York, US<br/>Internship in the Automated Reasoning Group.<br/>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><br/>Worked with BEAM Community to extend the <i>ejabberd</i> open source project.<br/>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><br/>Everis, Barcelona, Spain<br/>Internship at the Big Data Center of Excellence.<br/>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><br/>Institution: University of Pennsylvania<br/>Course: <i>Software Foundations</i>, Graduate level<br/>Professor: Benjamin Pierce</div><div><i>Fall 2019</i></div></div> <div><div><b>Lab Assistant</b><br/>Institution: National Technical University of Athens<br/>Course: <i>Introduction to Programming</i>, Undergraduate level<br/>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><br/>Konstantinos Kallas, Nikos Vasilakis, Lazar M. Cvetković, and Konstantinos Mamouras.<br/><i>In submission.</i></div><div><b>Flumina: Correct distribution of Stateful Streaming Computations.</b><br/>Konstantinos Kallas*, Filip Niksic*, Caleb Stanford*, and Rajeev Alur.<br/><i>In submission.</i></div><div><b>Differential Testing for Stream Processing Systems.</b><br/>Konstantinos Kallas*, Filip Niksic*, Caleb Stanford*, and Rajeev Alur.<br/><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.

Accepted for publication at ICSE 2020 SEIP track.

**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)