

Konstantinos Kallas

Contact	Email: kallas@seas.upenn.edu – Website: angelhof.github.io
Education	University of Pennsylvania <i>September 2018 – present</i> Computer and Information Science, PhD student Advisor: Rajeev Alur
	Eight Summer School on Formal Techniques <i>May 2018</i> Menlo College, Atherton, CA Organised by SRI International
	National Technical University of Athens <i>October 2012 – February 2018</i> Electrical and Computer Engineering, Diploma Thesis: “ <i>HiPerJiT: A Profile-Driven Just-in-Time Compiler for Erlang</i> ” Advisor: Prof. Kostis Sagonas
	Universita degli Studi dell’Aquila <i>February 2015 – July 2015</i> Computer Science, Erasmus Mobility Program
Working Experience	Software Engineering Intern <i>May 2019 - August 2019</i> Amazon Web Services, New York, US Internship in the Automated Reasoning Group. Worked on the verification of critical C code.
	Google Summer of Code Student <i>May 2017 - September 2017</i> 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.
	Big Data Application Developer <i>June 2016 - September 2016</i> Everis, Barcelona, Spain Internship at the Big Data Center of Excellence. Developed Big Data Applications using a plethora of tools in the Hadoop ecosystem.
Teaching Experience	Teaching Assistant <i>Fall 2019</i> Institution: University of Pennsylvania Course: <i>Software Foundations</i> , Graduate level Professor: Benjamin Pierce
	Lab Assistant <i>Fall 2017</i> Institution: National Technical University of Athens Course: <i>Introduction to Programming</i> , Undergraduate level Professors: S. Zachos, N. Papaspyrou, V. Kantere, and P. Potikas
Publications	Dish: Distribution-oblivious Shell Scripting. Konstantinos Kallas, Nikos Vasilakis, Lazar M. Cvetković, and Konstantinos Mamouras. <i>In submission.</i>
	Flumina: Correct distribution of Stateful Streaming Computations. Konstantinos Kallas*, Filip Niksic*, Caleb Stanford*, and Rajeev Alur. <i>In submission.</i>
	Differential Testing for Stream Processing Systems. Konstantinos Kallas*, Filip Niksic*, Caleb Stanford*, and Rajeev Alur. <i>In submission.</i>

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^AT_EX.

Languages

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