

## Konstantinos Kallas

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<b>Education</b>	<b>University of Pennsylvania</b> Computer and Information Science, PhD student Advisor: Rajeev Alur	<i>September 2018 – present</i>
	<b>Eight Summer School on Formal Techniques</b> Menlo College, Atherton, CA Organised by SRI International	<i>May 2018</i>
	<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	<i>October 2012 – February 2018</i>
	<b>Universita degli Studi dell’Aquila</b> Computer Science, Erasmus Mobility Program	<i>February 2015 – July 2015</i>
<b>Working Experience</b>	<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.	<i>May 2019 - August 2019</i>
	<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.	<i>May 2017 - September 2017</i>
	<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.	<i>June 2016 - September 2016</i>
<b>Teaching Experience</b>	<b>Teaching Assistant</b> Institution: University of Pennsylvania Course: <i>Software Foundations</i> , Graduate level Professor: Benjamin Pierce	<i>Fall 2019</i>
	<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	<i>Fall 2017</i>
<b>Honors and Awards</b>	<b>Programming Competitions</b> Participation in many programming competitions. Notable examples: ICFP Programming Contest 2018 (Lightning) <i>10th out of 91 teams</i> , IEEE Xtreme 2017 <i>Top 5%</i> and <i>3rd</i> in Greece, IEEE Xtreme 2016 <i>Top 10%</i>	<i>2015-2018</i>
	<b>Heterogenous Computing Student Challenge Certificate</b> HiPEAC CSW, Zagreb, Croatia Optimizing GPU implementation of the K-means algorithm (NTUA-team) Supervision: Prof. Georgios Goumas	<i>2017</i>
	<b>EESTech Challenge</b> Supervised Machine Learning Hackathon <i>Joint 1st place</i> among 40 teams.	<i>2017</i>

	<p><b>The Great Moment of Education Scholarship from Eurobank EFG</b> 2012 Achieving the highest rank in national qualifications exams in Dionisos high school.</p> <p><b>9th European Union Science Olympiad</b> 2011 Team-based science competition in Biology, Chemistry, and Physics. 1st place in local round and 3rd place in national round.</p> <p><b>Mathematical Competition, Hellenic Mathematical Society</b> 2010 Mathematical competition for high school students. Distinction in the 1st and 2nd local round.</p>
Selected University Projects	<p><b>Edsger Compiler</b> ☞ Spring 2016 Course: <i>Compilers</i> – Professors: K. Sagonas and N. Papaspyrou Complete compiler for Edsger (a C-like educational language). Implemented a lexer, a parser, a semantic analysis pass and a transpiler to LLVM-IR.</p> <p><b>Chord Protocol Implementation</b> ☞ Fall 2016 Course: <i>Distributed Systems</i> – Professor: N. Koziris Implemented two versions of the Chord protocol, one with sequential replica consistency and one with eventual replica consistency. Tested whether the replicated values satisfied the constraints set by the consistency protocols.</p> <p><b>Song Emotion Classifier</b> ☞ Fall 2016 Course: <i>Pattern Recognition</i> – Professor: A. Potamianos Worked on an automatic emotion recognition system, dedicated to classifying the emotional content of songs. The system extracted the essential features from the songs and trained an SVM classifier.</p>
Computer Experience	<p><b>Programming Languages:</b> Erlang, Haskell, Python, Coq, C, Scala, SML, Agda, Javascript, Matlab, Java, SQL</p> <p><b>Operating Systems:</b> Extensive experience on the Linux OS and Linux Kernel Programming.</p> <p><b>Hadoop:</b> Deep understanding of the Hadoop Ecosystem as well as hands on experience.</p> <p><b>Typesetting:</b> Experience using L<sup>A</sup>T<sub>E</sub>X.</p>
Languages	<p><b>Greek</b> (Native), <b>English</b> (C2), <b>Italian</b> (C1), <b>German</b> (B2)</p>