

Georgios “George” Balatsouras

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EDUCATION

Doctor of Philosophy – PhD, Static Program Analysis 2012 – 2017

University of Athens, Department of Informatics & Telecommunications

Advisor: Prof. Yannis Smaragdakis (smaragd@di.uoa.gr)

Thesis: *Recovering Structural Information for Better Static Analysis*.

Master of Science, Computing Systems 2009 – 2012

University of Athens, Department of Informatics & Telecommunications

Grade: 9.78/10. Top of graduating class (31 graduates).

Bachelor of Science, Computer Science 2004 – 2009

University of Athens, Department of Informatics & Telecommunications

Grade: 8.80/10. Top of graduating class (~50 graduates).

EXPERIENCE

Hellenic Army Information Technology Support Center (KEPYES) June 2017 – present

Software Development Engineer

Athens, Greece

- *Description*: Served in the Research and Informatics Corps (mandatory military service) with Software Development responsibilities. Worked on the development of a Java EE Web application with JSF to support existing and add new, inter-organizational operations of the Hellenic Army.

University of Athens July 2011 – May 2017

Doctoral Researcher, Dept. of Informatics & Telecommunications

Athens, Greece

- *Supervisor*: Prof. Yannis Smaragdakis (smaragd@di.uoa.gr) *FP7 Projects*: [SPADE](#), [PADECL](#)
- *Description*: My research involved working on various *open-source projects*. Mainly:
 - developed [cclyzer](#), a new static analysis framework for C/C++, using the LogicBlox Datalog engine, the Clang/LLVM infrastructure, Python, and C/C++.
 - developed the [JPhantom](#) program complementation tool to aid the analysis of partial Java programs, using Java and ASM (for bytecode engineering).
 - worked on the active development of the [DOOP](#) framework for static analysis of Java projects.

LogicBlox, Inc April 2012 – August 2012

Software Engineer Intern, Compiler Team

Atlanta, GA, USA

- *Supervisor*: Shan Shan Huang (ssh@logicblox.com)
- *Description*: Contributed to a static analysis tool of Datalog programs. Implemented a clone-detection library for Datalog code, and a string-concatenation library that reduced space complexity.

University of Athens October 2010 – June 2011

Research Developer, Dept. of Informatics & Telecommunications

Athens, Greece

- *Supervisor*: Prof. Alex Delis (ad@di.uoa.gr) *Project*: [PERNASVIP](#)
- *Description*: Worked on the development of the itinerary planner component of a navigation system for visually disabled people. Achieved great speedups in itinerary planning, by optimizing the use of data structures and parallelizing parts of the system.

LANGUAGES AND CERTIFICATES

Greek (native), English (fluent)

Certificate of Proficiency in English, University of Michigan (USA)

2003

TECHNICAL SKILLS

Programming Languages	C/C++, Java, Python, Prolog, Datalog, Emacs Lisp
Build Tools	GNU Make, Apache Ant, Apache Maven
Version Control	Git, Mercurial, Subversion
Databases & ORM	SQL, MySQL, LogicBlox, Hibernate
Operating Systems	Bash Shell Scripting, Linux Command-line, UNIX
Editors, IDEs, Debuggers	Emacs, IntelliJ IDEA, Eclipse, GCC / G++ / GDB
Compiler Engineering	LLVM, GNU Bison + Flex, ASM, BCEL
Web Development	Django, HTML + CSS, JQuery, Bootstrap, JSP / JSF, PrimeFaces
Other	Docker, L ^A T _E X, LibreOffice, G Suite, AspectJ (AOP), ECLiPSe

PUBLICATIONS

- G. Balatsouras et al. “A Datalog Model of Must-alias Analysis”. In: *Intl. Workshop on the State Of the Art in Program Analysis*. SOAP ’17. Barcelona, Spain, 2017.
- G. Balatsouras and Y. Smaragdakis. “Structure-Sensitive Points-To Analysis for C and C++”. In: *Intl. Symp. on Static Analysis*. SAS ’16. Edinburgh, United Kingdom, 2016.
- Y. Smaragdakis, G. Balatsouras, and G. Kastrinis. “More Sound Static Handling of Java Reflection”. In: *Asian Symp. on Programming Languages and Systems*. APLAS ’15. Pohang, Korea, 2015.
- Y. Smaragdakis and G. Balatsouras. “Pointer Analysis”. In: *Foundations and Trends® in Programming Languages* 2.1 (2015), pp. 1–69.
- Y. Smaragdakis, G. Kastrinis, and G. Balatsouras. “Introspective Analysis: Context-sensitivity, Across the Board”. In: *Conf. on Programming Language Design and Implementation*. PLDI ’14. Edinburgh, United Kingdom, 2014, pp. 485–495.
- G. Balatsouras and Y. Smaragdakis. “Class Hierarchy Complementation: Soundly Completing a Partial Type Graph”. In: *Conf. on Object-Oriented Programming, Systems, Languages, and Applications*. OOPSLA ’13. Indianapolis, Indiana, USA, 2013, pp. 515–532.
- Y. Smaragdakis, G. Balatsouras, and G. Kastrinis. “Set-Based Pre-Processing for Points-To Analysis”. In: *Conf. on Object-Oriented Programming, Systems, Languages, and Applications*. OOPSLA ’13. Indianapolis, Indiana, USA, 2013, pp. 253–270.

ACTIVITIES

Teaching Assistant

2009 – 2014

University of Athens - Dept. of Informatics & Telecommunications

Courses: *Advanced OOP, Systems Programming, Operating Systems, Artificial Intelligence*

HOBBIES & INTERESTS

reading, music (piano, guitar), role-playing games, Emacs hacking, soccer