Yannis Smaragdakis

Title: Associate Professor
Sector: Computer Systems and Applications
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Academic Qualifications:

- Ph.D. in Computer Sciences, December 1999, University of Texas at Austin. (Advisor: Don S. Batory)
- M.Sc. in Computer Sciences, May 1995, University of Texas at Austin.
- B.Sc. in Computer Science, July 1993, University of Crete, Heraklion. Crete / Greece.

Appointments:

- Associate Professor, Department of Informatics and Telecommunications, University of Athens, 2010-present.
- Associate Professor, Department of Computer Science, University of Massachusetts, Amherst, 2008-2010.
- Associate Professor, Department of Computer and Information Science, University of Oregon, 2006-2008.
- Assistant Professor, College of Computing, Georgia Institute of Technology, 2000-2006.

Teaching Activities: (current)

Undergraduate courses
- Compilers
- Software Engineering

Graduate courses
- Object-oriented languages and systems

Research Interests/Activities:

Applied Programming Languages and Software Engineering.

- Language mechanisms for abstraction (program generators, domain-specific languages, modules and components, extensible languages, meta-programming, multi-paradigm programming).
- Languages and tools for systems (programming models for concurrency, language support for distributed computing, memory management and program locality).
- Program analysis and testing (automatic test generation, invariant inference, symbolic execution, pointer analysis).

Scientific Publications/Citations:

- Multiple publications in all top venues in Programming Languages and Software Engineering
- More than 2800 citations (H-index 25)

Major recent publications

- J. Altidor, S. S. Huang, and Y. Smaragdakis. Taming the wildcards: Combining definition- and use-site variance. In Conf. on Programming Language Design and Implementation (PLDI). ACM, June 2011.
- Y. Smaragdakis, M. Bravenboer, and O. Lhot´ak, "Pick your contexts well: Understanding object-sensitivity (the making of a precise and scalable pointer analysis)," in ACM Symposium on Principles of Programming Languages (POPL), ACM Press, Jan. 2011.
- C. Reichenbach, N. Immerman, Y. Smaragdakis, E. E. Aftandilian, and S. Z. Guyer, "What can the GC compute efficiently? A language for heap assertions at GC time," in ACM Symposium on Object Oriented Programming: Systems, Languages, and Applications (OOPSLA), ACM Press, Oct. 2010.
- M. Might, Y. Smaragdakis, and D. Van Horn, "Resolving and exploiting the k-CFA paradox: Illuminating functional vs. object-oriented program analysis," in Conf. on Programming Language Design and Implementation (PLDI), ACM, June 2010.
- S. S. Huang and Y. Smaragdakis, "Morphing: Structurally shaping a class by reflecting on others," ACM Transactions on Programming Languages and Systems (TOPLAS), to appear.

Distinctions:

- Keynote presentations at the 15th International SPIN workshop on Model Checking of Software, Aug. 2008; Tests and Proofs (TaP) conference, Feb. 2007; multi-conference event: Partial Evaluation and Program Manipulation (PEPM'04), Principles and Practice of Declarative Programming (PPDP'04), Static Analysis Symposium (SAS'04) and Logic-Based Program Synthesis and Transformation (LOPSTR'04).
- Best paper awards at Automated Software Engineering (ASE'07); International Symposium on Software Testing and Analysis (ISSTA'06); Generative Programming and Component Engineering Conference (GPCE'04); USENIX Annual Technical Conference (USENIX'99).
- NSF CAREER award, 2003; Georgia Tech College of Computing Outstanding Junior Faculty Research Award, 2004.

Other:

- Two PhD advisees went on to faculty positions (E. Tilevich at Virginia Tech, C.Csallner at UTArlington).
- Have served on PCs of all top Prog. Lang. and Softw. Eng. conferences (ASE, ECOOP, FSE, ICSE, OOPSLA, POPL, PLDI).