Kostas Ferles

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RESEARCH INTERESTS

My areas of interest are *programming languages* and *formal methods*. My recent research focuses on helping developers produce correct software by developing automated program analysis techniques.

EDUCATION

- **University of Texas at Austin**   Sep 2015 - Present
  Ph.D. in Computer Science
  Advisor: [Işıl Dillig](#)

- **National and Kapodistrian University of Athens**   Sep 2012 - June 2015
  M.Sc. in Computer Systems Technology
  GPA: 9.76/10

- **National and Kapodistrian University of Athens**   Sep 2008 - June 2012
  B.Sc. with honors in Computer Science
  Valedictorian, GPA: 9.28 / 10

PUBLICATIONS

[1] Verifying Context-Free API Protocols.
    Kostas Ferles, Jon Stephens, Işıl Dillig.
    In Submission.

[2] [Formal Verification of Workflow Policies for Smart Contracts in Azure Blockchain](#) @ VSTTE'19
    Yuepeng Wang, Shuvendu Lahiri, Shuo Chen, Rong Pan, Isil Dillig, Cody Born, Immad Naseer, Kostas Ferles.

[3] [Singularity: Pattern Fuzzing for Worst Case Complexity](#) @ FSE'18
    Jiayi Wei, Jia Chen, Yu Feng, Kostas Ferles, Işıl Dillig.

[4] [Symbolic Reasoning for Automatic Signal Placement](#) @ PLDI'18
    Kostas Ferles, Jacob Van Geffen, Işıl Dillig, Yannis Smaragdakis.

[5] [An Efficient Data Structure for Must-Alias Analysis](#) @ CC'18
    George Kastrinis, George Balatsouras, Kostas Ferles, Nefeli Prokopaki-Kostopoulou, Yannis Smaragdakis

[6] [Failure-Directed Program Trimming](#) @ FSE'17
    Kostas Ferles, Valentin Wüstholz, Maria Christakis, Işıl Dillig

[7] [A Datalog Model of Must-Alias Analysis](#) @ SOAP'17
    George Balatsouras, Kostas Ferles, George Kastrinis, Yannis Smaragdakis

Proffesional Experience

- **Microsoft Research**   May 2016 - Aug 2016
  Research Intern, RiSE group
  Mentor: Maria Christakis

- **University of Athens, Greece**   Nov 2012 - June 2015
  Research Assistant
  Advisor: Yannis Smaragdakis

- **LogicBlox**   June 2013 - Sep 2013
  Software Intern

Teaching

- TA for CS389L Automated Logical Reasoning, University of Texas at Austin, Spring 2019
- TA for Compilers, University of Athens (Greece), Spring 2013, 2014
- TA for Operating Systems, University of Athens (Greece), Fall 2013
- TA for Artificial Intelligence, University of Athens (Greece), Fall 2012

Mentoring

- Jon Stephens (2018 - present), now second-year PhD student at UT Austin
- Jacob Van Geffen (Feb 2018 - Dec 2018), now second-year PhD student at the University of Washington

Service

External Reviewer

- International Conference on Computer-Aided Verification (CAV) 2018
- ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI) 2014
- ACM SIGSOFT International Symposium on the Foundations of Software Engineering (FSE) 2014

Talks

- Verifying Context-Free API Protocols   May 2018
  Invited Talks: Stanford, Google and Huawei

- Symbolic Reasoning for Automatic Signal Placement   June 2018
  ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI)
  Philadelphia, PA, USA

- Failure-Directed Program Trimming   Aug 2016, Sep 2017
  (2017) Joint Meeting on Foundations of Software Engineering (FSE), Paderborn, Germany
  (2016) Microsoft Research, Redmond, WA, USA

Honors and Awards

- Graduating Class Valedictorian (B.Sc. degree)
  Approximate Class size: 300 students

- Award for Top GPA in courses, Greek State Scholarships Foundation
  Academic Years: 2008-2009, 2009-2010, 2011-2012
- Scholarship for Exceptional Academic Performance, Greek State Scholarships Foundation
  Academic Years: 2008-2009, 2009-2010, 2010-2011
- OWASP AppSecResearch 2012
  Second place at "Uni Challenge" as member of the "University of Athens" team.