Theofilos Petsios

Curriculum Vitae

CONTACT INFORMATION

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RESEARCH INTERESTS

Program Analysis, Systems & Network Security, Binary Instrumentation, Privacy.

EDUCATION

Ph.D. in Computer Science, Columbia University   September 2012 - present
Current GPA: 3.9/4.0   *NY, USA*

Advisor: Prof. **Angelos D. Keromytis**

M.Sc. in Computer Science, Columbia University   September 2012 - May 2014
GPA: 3.9/4.0   *NY, USA*

School of El. Engineering & Computer Science, NTUA   September 2005 - July 2011
GPA: 8.22/10   *Athens, Greece*

Thesis: "Term suggestion mechanisms for Scientific Database Systems". Advisor: Prof. T.Sellis

TECHNICAL SKILLS

Programming

· *Proficient*: C, Python
· *Fluent*: C++, Java, Bash, HTML, CSS, LaTeX.
· *Familiar*: PHP, Ruby, Javascript.

Technologies/Frameworks

· *Fluent*: LLVM, Intel PIN.
· *Familiar*: nodejs, rails

REFEREED PUBLICATIONS

Conference Proceedings

· Theofilos Petsios, Vasileios P. Kemerlis, Michalis Polychronakis, Angelos D. Keromytis. "DynaGuard: Armoring Canary-based Protections against Brute-force Attacks". In *Proceedings of the 31th Annual Computer Security Applications Conference (ACSAC)*, December 2015.

· Iasonas Polakis, George Argyros, Theofilos Petsios, Suphannee Sivakorn, Angelos D. Keromytis. "Wheres Wally? Precise User Discovery Attacks in Location Proximity Services". In Proceedings of the 22nd *ACM Conference on Computer and Communications Security (CCS)*, October 2015.

· Marios Pomonis, Theofilos Petsios, Kangkook Jee, Michalis Polychronakis, and Angelos D. Keromytis. "IntFlow: Improving the accuracy of arithmetic error detection using information flow tracking". In *Proceedings of the 30th Annual Computer Security Applications Conference (ACSAC)*, December 2014

· M. Lecuyer, G. Ducoffe, F. Lan, A. Papancea, T. Petsios, R. Spahn, A. Chaintreau, and R. Geambasu, "XRay: Increasing the webs transparency with differential correlation.", in *Proceedings of the USENIX Security Symposium*, August 2014.

PROFESSIONAL EXPERIENCE

Research Intern   May 2015 - August 2015
Symantec Corp.   *Herndon, VA, USA*

Developed an ELF binary rewriting library

IT Support & Website Administrator   August 2011 - June 2012
Greek army (obligatory service)   *Athens Greece*

Responsible for backup & maintenance of the website of the Greek Ministry of National Defence

System Administrator & Web Developer   January 2011 - July 2011
Cybex S.A.   *Athens Greece*

Maintained Linux servers for website hosting and implemented websites in popular CMSes (Joomla, Wordpress, vBulletin)

Internship   January 2010 - March 2010
Democritos (Greek Nat. Center of Research)   *Athens Greece*

Worked on the Prolog implementation of an Event Calculus dialect for a run-time event recognition mechanism evaluating passenger confort in public transportation. This work was part of the EU PRONTO project.

TEACHING EXPERIENCE

Professor   Summer 2014
Columbia University   *NY, USA*

Taught Intr. to Programming in C, for the summer program of Columbia's SCE for high-school students.

Teaching Assistant   Summer 2013 - Spring 2014
Columbia University   *NY, USA*

· *Spring 2014*: TA for *Network Security* and coordinator of the CVN course for distance-learning students
· *Fall 2013*: Head TA for Data Structures & Algorithms
· *Summer 2013:* Head TA for Advanced Programming

Private Tutoring   2005-2011
Freelance   *Athens, Greece*

Maths & Physics tutor for college & high-school students.

PROJECTS

MINESTRONE   August 2013 - December 2014
Columbia University   *NY, USA*

Developed an integer-error detection tool which reduces false positives for clang's *ioc* checker and inserts runtime checks around sensitive operations which may lead to an exploitable integer error. This project was funded by AFRL.

Praxis   August 2012
NTUA   *Athens, Greece*

Developed the automated report system for the Employment and Career Structure Information System (ECS-IS) of ECS NTUA Internship Programme. The project was funded by NSRF.

DIANA Database Query Optimization   May 2010 - June 2010
NTUA   *Athens, Greece*

Developed a new term suggestion mechanism for the database of DIANA Lab. Implemented a series of MySQL UDFs to optimize queries over large mRNA datasets.

AWARDS - FELLOWSHIPS

Facebook Bug Bounty   2014

Gerondelis Foundation Grant recipient   2014

Graduate Research Assistanship   2012 - present
Columbia University   *NY, USA*

Eurobank EFG student fellowship award   2005

LANGUAGES

Greek (native speaker)

English (proficient)
  TOEFL iBT (Score: 115/120, 2011)
  "Cambridge Proficiency in English", University of Cambridge (2003)

French (basic)
  "Delf 1er Degree", by National French Institute (2003)

Spanish (basic)

GENERAL INTERESTS

Music: Composition, vocals, piano, guitar & bass player. See my soundcloud for more.

Photography: Worked as a freelance photographer. See my flickr for more.

Other: Sports, travelling, cinema, theater and literature.