

# Theofilos Petsios

## Curriculum Vitae

### CONTACT INFORMATION

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*Address:* 608W 113st  
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### RESEARCH INTERESTS

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Systems & Network Security, Binary Instrumentation, Privacy.

### EDUCATION

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**Ph.D. in Computer Science, Columbia University**

*Current GPA:* 3.9/4.0

Advisor: Prof. [Angelos D. Keromytis](#)

September 2012 - present

NY, USA

**M.Sc. in Computer Science, Columbia University**

*GPA:* 3.9/4.0

September 2012 - May 2014

NY, USA

**School of El. Engineering & Computer Science, NTUA**

*GPA:* 3.3/4.0

September 2005 - July 2011

Athens, Greece

Thesis: "Term suggestion mechanisms for Scientific Database Systems". Advisor: Prof. [T.Sellis](#)

### TECHNICAL SKILLS

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#### Programming

- *Proficient:* C, Python
- *Fluent:* C++, Java, Bash, HTML, CSS,  $\text{\LaTeX}$ .
- *Familiar:* PHP, Ruby, Javascript.

#### Technologies/Frameworks

- *Proficient:* LLVM, Intel PIN.
- *Familiar:* nodejs, rails

## REFEREED PUBLICATIONS

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### Conference Proceedings

- 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.

## PROJECTS

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### MINESTRONE

*Columbia University*

August 2013 - December 2014

*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

*NTUA*

August 2012

*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

*NTUA*

May 2010 - June 2010

*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.

## PROFESSIONAL EXPERIENCE

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### IT Support & Website Administrator

*Greek army (obligatory service)*

August 2011 - June 2012

*Athens Greece*

Responsible for backup & maintenance of the website of the Greek [Ministry of National Defence](#)

### System Administrator & Web Developer

*Cyber S.A.*

January 2011 - July 2011

*Athens Greece*

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

### Internship

*Democritos (Greek Nat. Center of Research)*

January 2010 - March 2010

*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

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<b>Professor</b> <i>Columbia University</i>	Summer 2014 <i>NY, USA</i>
Taught <a href="#">Intr. to Programming in C</a> , for the summer program of Columbia's <a href="#">SCE</a> for high-school students.	
<b>Teaching Assistant</b> <i>Columbia University</i>	Summer 2013 - Spring 2014 <i>NY, USA</i>
<ul style="list-style-type: none"><li>· <i>Spring 2014</i>: TA for <i>Network Security</i> and coordinator of the <a href="#">CVN</a> course for distance-learning students</li><li>· <i>Fall 2013</i>: Head TA for <i>Data Structures &amp; Algorithms</i></li><li>· <i>Summer 2013</i>: Head TA for <i>Advanced Programming</i></li></ul>	
<b>Private Tutoring</b> <i>Freelance</i>	2005-2011 <i>Athens, Greece</i>
Maths & Physics tutor for college & high-school students.	

## FELLOWSHIPS

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<b>Gerondelis Foundation Grant recipient</b>	2014
<b>Graduate Research Assistanship</b> <i>Columbia University</i>	2012 - present <i>NY, USA</i>
<b><a href="#">Eurobank EFG</a> student fellowship award</b>	2005

## LANGUAGES

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<b>Greek</b> (native speaker)
<b>English</b> (proficient) TOEFL iBT (Score: 115/120, 2011) “Cambridge Proficiency in English”, University of Cambridge (2003)
<b>French</b> (basic) “Delf 1er Degree”, by National French Institute (2003)
<b>Spanish</b> (basic)

## GENERAL INTERESTS

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*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.