



Iosif Polenakis

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University of Ioannina Campus, Ioannina, Greece

● EDUCATION AND TRAINING

2019 – CURRENT – Ioannina, Greece

POST-DOCTORAL RESEARCHER – Department of Computer Science & Engineering, University of Ioannina

- Behavioral Malware Detection and Classification

12/2014 – 06/2019 – Ioannina, Greece

PHD IN COMPUTER SCIENCE – Department of Computer Science & Engineering, University of Ioannina

- Algorithmic Techniques for Detecting and Classifying Digital Objects (Supervisor: Stavros D. Nikolopoulos, Full Professor)

EQF level 8

10/2012 – 10/2014 – Ioannina, Greece

MASTER OF SCIENCE DEGREE – Department of Computer Science & Engineering, University of Ioannina

- G.P.O. : 9.15 / 10
- MSc Thesis Title: Algorithmic Techniques for Detecting and Classifying Malicious Software based on System-call Dependency Graphs (Supervisor: Stavros D. Nikolopoulos, Full Professor)
- Expertise Field: "Theory of Computer Science"

EQF level 7

09/2008 – 09/2012 – Corfu, Greece

DEGREE IN INFORMATICS – Department of Informatics, Ionian University

- G.P.O. : 8.78 / 10
- Experimental Study on the Propagation of New Generation Malicious Software Between Mobile Devices (Supervisor: Emmanuel V. Magkos, Assistant Professor)
- Expertise Field: "Information Systems"

EQF level 6

● HONORS AND AWARDS

Honors and Awards

- 2019, Post-doctoral Research on: Behavioral Malware Detection and Classification, co-financed by Greece and the European Union (European Social Fund- ESF) through the Operational Programme «Human Resources Development, Education and Lifelong Learning» in the context of the project “Reinforcement of Postdoctoral Researchers - 2nd Cycle” (MIS-5033021), implemented by the State Scholarships Foundation (IKY).
- 2019, Malicious Software Detection and Classification utilizing Temporal Graphs of Discrete and Cumulative Modification, Supporting researchers with emphasis on young researchers - 2nd Call, Human Resource Development, Education and Lifelong Learning, Ministry of Development and Investment (Ministry of Economy and Development)
- 2017, Hellenic Foundation for Research and Innovation (Scholarship) [3rd place - 95/100 Rating]
- 2015, Department of Computer Science, University of Ioannina, (Award)
- 2013, Department of Computer Science, University of Ioannina, (Award)
- 2012, Department of Informatics, Ionian University, (Award)
- 2011, State Scholarships Foundation, (Award/Scholarship)
- 2010, State Scholarships Foundation , (Award)
- 2009, State Scholarships Foundation , (Award/Scholarship)

● SCIENTIFIC PUBLICATIONS IN INTERNATIONAL CONFERENCES AND JOURNALS

Scientific Publications in International Conferences and Journals

- Chysi, A., Nikolopoulos, S. D., and Polenakis, I.: An Algorithmic Framework for Malicious Software Detection Exploring Structural Characteristics of Behavioral Graphs, (Accepted) To be presented in the 21st International Conference on Computer Systems and Technologies, 2020 ACM
- Mpanti, A., Nikolopoulos, S. D., and Polenakis, I.: Malicious Software Detection utilizing Temporal-Graphs. Proceedings of the 20th International Conference on Computer Systems and Technologies, 2019 ACM
- Mpanti, A., Nikolopoulos, S. D., & Polenakis, I.: Malicious Software Detection and Classification utilizing Temporal-Graphs of System-call Group Relations. arXiv preprint arXiv:1812.10748, 2018
- Mpanti, A., Nikolopoulos, S. D., & Polenakis, I.: A Graph-based Model for Malicious Software Detection Exploiting Domination Relations between System-call Groups. In Proceedings of the 19th International Conference on Computer Systems and Technologies, 2018 ACM - **BEST PAPER AWARD**
- Nikolopoulos, S. D. and Polenakis, I. Preventing malware pandemics in mobile devices by establishing response-time bounds. *Journal of Information Security and Applications*, Elsevier, 2017, 1-14
- Mpanti, A., Nikolopoulos, S. D. and Polenakis, I.: "Defending Hardware-based Attacks on Trusted Computing using a Hardware-Integrity Attestation Protocol". In: Proceedings of the 18th International Conference on Computer Systems and Technologies, 2017 ACM.
- Nikolopoulos, S. D. and Iosif Polenakis. Preventing Malware Pandemics in Mobile Devices by Establishing Response-time Bounds. *arXiv preprint arXiv:1607.00827*, 2016
- Nikolopoulos S. D. and Polenakis, I.: A Model for Establishing Response-time Bounds to Prevent Malware Pandemics in Mobile Devices . In *Proceedings of the 17th International Conference on Computer Systems and Technologies*, 2016 ACM - **BEST PAPER AWARD**
- Nikolopoulos, S. D. and Polenakis I.: A graph-based model for malware detection and classification using system-call groups. In *Journal of Computer Virology and Hacking Techniques*, Springer, 2016, 1-18.
- Nikolopoulos S. D., and Polenakis, I.: Malicious software classification based on relations of system-call groups. In *Proceedings of the 19th Panhellenic Conference on Informatics* (pp. 59-60), 2015 ACM.
- Nikolopoulos S. D. and Polenakis, I.: A graph-based model for malicious code detection exploiting dependencies of system-call groups. In *Proceedings of the 16th International Conference on Computer Systems and Technologies* (pp. 228-235), 2015 ACM - **BEST PAPER AWARD**
- Nikolopoulos S.D. and Polenakis I.: Detecting Malicious Code by Exploiting Dependencies of System-call Groups, *arXiv preprint arXiv:1412.8712*, 2014.
- Chionis I., Nikolopoulos S.D., and Polenakis I.: A Survey on Algorithmic Techniques for Malware Detection, In *2nd International Symposium on Computing in Informatics and Mathematics ISCIM*, 2013.

● WORK EXPERIENCE

2019 – CURRENT

ADJUNCT LECTURER (ACQUISITION OF ACADEMIC TEACHING EXPERIENCE) – DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING, UNIVERSITY OF IOANNINA

Full Courses (Lecture and Lab):

- Graph Theory
- Discrete Mathematics I

Ioannina, Greece

2018 – 2019

ADJUNCT LECTURER (ACADEMIC SCHOLAR) – DEPARTMENT OF INFORMATICS AND TELECOMMUNICATIONS, UNIVERSITY OF IOANNINA

Full Courses (Lecture and Lab):

- Web Application Technologies

- E-Commerce

Laboratory Courses (Head of the Laboratory):

- Data-Bases
- Data-Bases II
- Operating Systems

Arta, Greece

2016 – CURRENT

HEAD OF THE LABORATORY – DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING, UNIVERSITY OF IOANNINA

- Design and Analysis of Algorithms (MY405)

Ioannina, Greece

2013 – 2015

LABORATORY TEACHING ASSISTANT – DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING, UNIVERSITY OF IOANNINA

- Design and Analysis of Algorithms (PLY402)

Ioannina, Greece

2015 – CURRENT

PROFESSOR/INSTRUCTOR – DELTA 360 - INSTITUTE OF VOCATIONAL TRAINING

- Information System Security
- Algorithms and Data Structures
- Programming in C
- Programming Micro-Controllers - Arduino
- Industrial Informatics

Ioannina, Greece

2012

DATA BASE DESIGNER – DEPARTMENT OF INFORMATICS, IONIAN UNIVERSITY

- Design and Implementation of the Data Base of the Hellenic Mathematical Library EUDML.

Corfu, Greece

2011

SYSTEMS DESIGNER AND ANALYST – COOPERATIVE BANK OF EPIRUS

- Design and Development of CRM & Helpdesk Systems
- System and Network Maintenance
- Information System Support

Ioannina, Greece

● NETWORKS AND MEMBERSHIPS

Memberships

- Member of the Technical Support Committee for Online (Distant) Examination, University of Ioannina, Greece

● **LANGUAGE SKILLS**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C2	C2	C2	C2	C2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● **RESEARCH INTERESTS**

Resarch Interests

- My research interests mainly focus on:
- Epidemic Models for Pandemic Prevention;
 - Detection and Classification of Malicious Software;
 - Behavioral Analysis of Malicious Software;
 - Trusted Computing Systems;
 - Cryptography