



Kyriakos Stefanidis

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I.S.I. - Industrial Systems Institute, ATHENA R.C., Patras Science Park, 26504, Patras, Greece

● WORK EXPERIENCE

01/2021 – CURRENT – Patras, Greece

PRINCIPAL RESEARCHER – I.S.I. - INDUSTRIAL SYSTEMS INSTITUTE, ATHENA R.C.

09/2018 – 12/2020

RESEARCHER – FRAUNHOFER FOKUS

- Project Acquisition
- Written Proposals (5)
- H2020 x5
- Funded Proposals (2)
- DataVaults (H2020)
- URBANITE (H2020)
- DECIDO (H2020)
- Project: DataVaults - Persistent Personal Data Vaults Empowering a Secure and Privacy Preserving Data Storage, Analysis, Sharing and Monetisation Platform
- **Project Coordinator**
- Project: DECIDE - DevOps for Trusted, Portable and Interoperable Multi-Cloud Applications towards the Digital Single Market. EU funding.
- **Team Coordinator**
- Design of parts of the DECIDE extended DevOps framework
- Design and development of the module for recommending architectural patterns based on given non-functional requirements
- Project: EDP2 - European Data Portal. EU funding.
- **Team Coordinator**
- Design of the security architecture for the European Data Portal
- Design of the integration of EU Identity and Access Management with EDP
- Coordination of the development team during the IAM integration
- MeliCERTes - CEF, Cybersecurity Digital Service Infrastructure. EU funding.
- **Team Coordinator**
- Coordination of the development team for the incident management module of MeliCERTes
- SCDS - Support Centre for data sharing. EU funding.
- **Team Coordinator**
- Coordination of the development team for the integration of EU IAM with SCDS
- Writing of a study titled "Technical guideline for data security"

Berlin, Germany

11/2017 – 07/2018

POSTDOC RESEARCHER – INDUSTRIAL SYSTEMS INSTITUTE, R.C. "ATHENA"

- Project Acquisition
 - Written Proposals (1)
 - H2020 x1
- Project: I3T – "Innovative applications of IoT in intelligent environments". National funding.
 - **Research Team Member**
 - Research and Development on trusted platform modules for industrial systems
 - Research and Development on behavioral monitoring systems for industrial networks

Patras, Greece

10/2017 – 07/2018

- Courses
 - Systems and Network Security

Patras, Greece

01/2017 – 07/2018

ENTERPRISE SYSTEM ARCHITECT / TECHNICAL COORDINATOR – SASTIX INC. / INTRASOFT INTERNATIONAL

- Project: MeliCERTes - CEF, Cybersecurity Digital Service Infrastructure
 - Design of the core service platform for cooperation mechanisms for Computer Emergency Response Teams (CERT)
 - Coordination of the team of developers for the implementation of the platform's services and applications
- Project Aquisition
 - Written & Funded Tenders (1)
 - MeliCERTes Operational Extension Contract

Athens, Greece

10/2016 – 07/2018

ADJUNCT PROFESSOR – DEPARTMENT OF BUSINESS ADMINISTRATION OF F.A.E (DEAPT), UNIVERSITY OF PATRAS

- Courses
 - Project Management
 - Decision theory

Patras, Greece

12/2010 – 12/2016

PHD/POSTDOC RESEARCHER – I.S.I. - INDUSTRIAL SYSTEMS INSTITUTE, ATHENA R.C.

- Project Aquisition
 - Written Proposals (3)
 - National x1
 - FP7 x2
 - Funded Proposals (1)
 - I3T (National)
- Project: KRIPIS / VISETAK – “Industrial Systems for Sustainable Development and Wellbeing - Research, Technological Development and Innovation”. National funding.
 - **Research Team Member**
 - Research and Development of a Network Intrusion Detection System (NIDS), based on machine learning, for Industrial Control Systems (ICS)
- Project: nShield – “new embedded Systems architecture for multi-Layer Dependable solutions”. E.U. funding.
 - **Research Team Member**
 - Research and development of a secure embedded systems architecture
 - Design and development of a cryptographic key exchange system
- Project: pShield – “pilot embedded Systems architecture for multi-Layer Dependable solutions”. E.U. funded
 - **Research Team Member**
 - Research and development of a secure embedded systems architecture
 - Design and development of a cryptographic key exchange system

Patras, Greece

08/2016 – 11/2016

ENTERPRISE SYSTEM ARCHITECT / SECURITY CONSULTANT – MOBILE ELEMENTS CORPORATION

- Project: Mobile Elements Pay
 - Design of an NFC based payments solution
 - Technical consultation on security, scalability and integration.

Athens, Greece

03/2013 – 11/2014

- Project: SELIDA – Document Management System with RFID Technology. National funding.
 - **Team Coordinator**
 - Integration of a decentralized document management system for public libraries based on RFID technology
 - Conversion of bibliographic data from legacy library information systems (UNIMARC, MARC21)

Patras, Greece

03/2011 – 08/2013

PHD RESEARCHER – ELECTRICAL AND COMPUTER ENGINEERING DEPT. UNIVERSITY OF PATRAS

- Project: PRACE – “Partnership for Advanced Computing in Europe”. E.U. funding.
 - **Team Coordinator**
 - Porting and Optimization of scientific applications from cross-disciplinary fields for high performance computing platforms
- Project: I3E: Promoting Innovation in the Industrial Informatics and Embedded Systems through Networking. National funding.
 - **Research Team Member**
 - Design of methodologies for promoting innovation
 - Contribution to the funding strategy of innovation projects
- Project: EGI-INSPIRE: European Grid Initiative: Integrated Sustainable Pan-European Infrastructure for Researchers in Europe. National funding.
 - **Research Team Member**
 - Maintenance and support of the operation of the University of Patras grid node

Patras, Greece

01/2011 – 12/2011

SENIOR SOFTWARE DEVELOPER – AIM4GAME

- Project: Avaton - Web Based Role-Playing Game
 - Design and Development of a Web Based Multiplayer Role-Playing Game

Patras, Greece

04/2010 – 02/2011

SENIOR SOFTWARE DEVELOPER – DEPT. OF BUSINESS ADMINISTRATION F.A.E (DEAPT), UNIVERSITY OF IOANNINA

- Project: Development of the department's web portal

Agrinio, Greece

01/2010 – 12/2010

SENIOR SOFTWARE DEVELOPER – SCHOOL OF MEDICINE, UNIVERSITY OF PATRAS

- Project: Development of the department's information system
 - Courses, secretarial documents, student services, etc.

Patras, Greece

04/2008 – 06/2008

SENIOR SOFTWARE DEVELOPER – NEPA

- Project: Development of the organization portal
 - Design, development and deployment of NEPA web portal and services

Patras, Greece

05/2002 – 10/2006

- Project: E-NEXT: European Commission FP6 Network of Excellence. E.U. funding.
 - **Research Team Member**
 - Design of simulation environment for next-generation internetworking
- Project: ASPIS. National funding.
 - **Research Team Member**
 - Development of a Distributed Denial of Service Attacks - Protection mechanism for networked systems.
 - Development of simulated DDoS attacks and quantitative assessment of protection mechanisms
- Project: INNO Utilities – “Innovation-friendly Public Procurement & Fight Against Telecommunications Fraud and Security Threats”. E.U. funded
 - **Research Team Member**
 - Design of a secure network architecture and implement services for the exchange of telecom fraud information between telecommunication carriers
- Project: APOLON. National funding
 - **Research Team Member**
 - Design and development of scheduler and switching fabric for APOL switches

Patras, Greece

02/2006 – 08/2006

SOFTWARE DEVELOPER / SECURITY CONSULTANT – VIRTUAL TRIP

- Project: Development of the “Secure Document (Passports) Issuance Information System”.
 - Development of the data base the supports the system
 - Design and development of the applications that handle the issuance procedure
 - Design and development of the application that prints passports and IDs with embedded RFID chip.
 - The deployed system is issuing the passports of the Greek state until today

Athens, Greece

05/2006 – 07/2006

SOFTWARE DEVELOPER – VIRTUAL TRIP

- Project: GRIB II - Development of applications for weather forecasting satellites
 - Convert satellite data from HRPT/PDUS to the GRIB standard
 - Implement geographical projections

Athens, Greece

02/2005 – 07/2005

SOFTWARE DEVELOPER – M.X. S: MANOLAS, HETAS AND ASSOCIATES

- Project: Development of an information system for distributed management of projects and human assets for small-medium enterprises

Athens, Greece

08/2003 – 02/2005

SOFTWARE DEVELOPER / SECURITY CONSULTANT – ELECTRICAL AND COMPUTER ENGINEERING DEPARTMENT, UNIVERSITY OF PATRAS

- Project: EPEAEK - Upgrade of the department information system and infrastructure.
 - Development and deployment of the systems, services and security policies of the department’s network infrastructure.
 - Design and deployment of the department’s web portal.
 - Deployment of the department’s LDAP service.

Patras, Greece

06/2004 – 09/2004

SOFTWARE DEVELOPER – VIRTUAL TRIP

- Project: GRIB - Development of applications for weather forecasting satellites
 - Convert satellite data from HRPT/PDUS to the GRIB standard

- Implement geographical projections

Athens, Greece

● EDUCATION AND TRAINING

07/2001 – Patras, Greece

DIPLOMA IN COMPUTER ENGINEERING – Computer Engineering and Informatics Department, University of Patras

EQF level 7

02/2014 – Patras, Greece

PHD IN NETWORK SECURITY – Electrical and Computer Engineering Department, University of Patras

Thesis title: Protecting systems from Distributed Denial of Service Attacks on the internet

EQF level 8

● LANGUAGE SKILLS

Mother tongue(s): GREEK

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C2	C2	C2	C2	C2
GERMAN	A2	A2	A1	A1	A1

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

● PUBLICATIONS

Journals

- J01. F. Pirpilidis, K. Stefanidis, A. G. Voyiatzis and P. Kitsos, "On the effects of ring oscillator length and hardware Trojan size on an FPGA-based implementation of AES". In *Microprocessors and Microsystems Journal*. Elsevier Science. Vol. 54, October 2017
- J02. K. Stefanidis and G. Tsakonas, "Integration of Library Services with Internet of Things Technologies". In *code{4}lib Journal*, Issue 30, October 2015
- J03. K. Farkas, O. Wellnitz, M. Dick, X. Gu, M. Busse, W. Effelsberg, Y. Rebahi, D. Sisalem, D. Grigoras, K. Stefanidis and D. N. Serpanos. "Real-time service provisioning for mobile and wireless networks" In *Computer Communication Journal*. Elsevier Science. Vol. 29, No 2, December 2005

Book Chapters

- BC01. A. Fiaschetti, P. Azzoni, J. Noll, R. Uribeetxeberria, K. Stefanidis, A. Papalambrou, J. Gialelis, D. Serpanos. Book Chapter "Security, Privacy and Dependability Concepts" on "Measurable and Composable Security". CRC Press. 2017
- BC02. A. Fiaschetti, P. Azzoni, J. Noll, R. Uribeetxeberria, K. Stefanidis, A. Papalambrou, J. Gialelis, D. Serpanos. Book Chapter "Security, Privacy and Dependability Technologies" on "Measurable and Composable Security". CRC Press. 2017
- BC03. M. Cesena, C. Regazzoni, L. Marcenaro, G. Hatzivasilis, K. Fysarakis, C. Manifavas, I. Papaefstathiou, P. Azzoni, K. Stefanidis. Book Chapter " SHIELD Technology Demonstrators " on "Measurable and Composable Security". CRC Press. 2017
- BC04. K. Stefanidis, A. G. Voyiatzis and D. N. Serpanos. Book Chapter "Grid Security" on "Network Security: Current Status and Future Directions". Willey Inc. 2004

CONFERENCES (Peer Review) [1/2]

- C01. L. Orue-Echevarria, J. Alonso, M. Escalante, K. Stefanidis and L. Blasi, "DECIDE: DevOps for Trusted, Portable and Interoperable Multi-Cloud Applications towards the Digital Single Market". In proceedings of 20th International Conference on Product-Focused Software Process Improvement (PROFES 2019), Barcelona, Catalunya, Spain, November 2019
- C02. J. Alonso, K. Stefanidis, L. Orue-Echevarria, L. Blasi, M. Walker, M. Escalante, M. J. Lopez and S. Dutkowski. "DECIDE: An Extended DevOps Framework for Multi-cloud Applications". In Proceedings of the 3rd International Conference on Cloud and Big Data Computing (ICCBDC 2019), Oxford, UK, August 2019
- C03. K. Stefanidis and A. G. Voyiatzis, "An HMM-based Anomaly Detection Approach for SCADA Systems". In Proceedings of the 10th WISTP International Conference on Information Security Theory and Practice (WISTP 2016), Heraklion, Greece, September 2016
- C04. P. Kitsos, K. Stefanidis and A. G. Voyiatzis, "TERO-based Detection of Hardware Trojans on FPGA Implementation of the AES Algorithm". In Proceedings of the EUROMICRO Digital System Design Conference (DSD 2016), Limassol, Cyprus, September 2016
- C05. A.G. Voyiatzis, K. Stefanidis, P. Kitsos, "Efficient Triggering of Trojan Hardware Logics". In Proceedings of the 19th IEEE International Symposium on Design and Diagnostics of Electronic Circuits and Systems (DDECS 2016), Košice, Slovakia, April 2016
- C06. A. Papalambrou, K. Stefanidis, J. Gialelis and D. N. Serpanos, "Detection, traceback and filtering of denial of service attacks in networked embedded systems". In Proceedings of the 2014 Workshop on Embedded Systems Security (WESS '14), New Delhi, India, October, 2014.
- C07. D. Karadimas, E. Polytarchos, K. Stefanidis and J. Gialelis, "Information System Framework Architecture for Organization Agnostic Logistics Utilizing Standardized IoT Technologies". In Proceeding of the 2014 Federated Conference on Computer Science and Information Systems (FedCSIS 2014), Warsaw, Poland, September 2014.
- C08. A. G. Voyiatzis, K.G. Stefanidis and D.N. Serpanos, "Increasing lifetime of cryptographic keys on smartphone platforms with the controlled randomness protocol." In Proceedings of the 2011 Workshop on Embedded Systems Security (WESS '11), Taipei, Taiwan, October 13, 2011.
- C09. K. Stefanidis, A. G. Voyiatzis and D. N. Serpanos: "Performance of the Controlled Randomness Protocol on .NET Compact Framework Embedded Systems", In Proceedings of 4th IFIP International Conference on New Technologies, Mobility and Security, Paris, France, February 2011
- C10. A. Antonopoulos, K. Stefanidis, and A. G. Voyiatzis: "Fighting Spammers with Spam". In Proceedings of 9th IEEE International Symposium on Autonomous Decentralized Systems (ISADS 2009). Athens, Greece, March 2009.

CONFERENCES (Peer Review) [2/2]

- C11. K. Stefanidis and D. N. Serpanos, "Implementing Filtering and Traceback Mechanism for Packet-Marking IP-Based Traceback Schemes against DDoS Attacks," in *IEEE International Conference on Intelligent Systems*, Varna, Bulgaria, 2008.
- C12. K. Stefanidis and D. N. Serpanos, "Packet Marking Scheme and Deployment Issues", In Proceedings of IEEE International Workshop on Intelligent Data Acquisition and Advanced Computing Systems: Technology and Applications, Dortmund, Germany, September 2007
- C13. K. Stefanidis and D. N. Serpanos "Defending against DDoS attacks using packet marking" In Electronic Security Forum. Thessaloniki, Greece. October 2007
- C14. K. Stefanidis and D. N. Serpanos. "Packet-Marking Scheme for DDoS Attack Prevention" In Proceedings of Security and Protection of Information. 2005
- C15. K. Stefanidis and D. N. Serpanos. "Countermeasures Against Distributed Denial of Service Attacks" In Proceedings of IEEE International Workshop on Intelligent Data Acquisition and Advanced Computing Systems. September 2005
- C16. K. Stefanidis and D. N. Serpanos. "A Formal Analysis of Distributed Denial-of-Service Networks". In Proceedings of Eurescom Summit 2003. Heidelberg, Germany, September 2003

CONFERENCES (Abstract Review)

- CA01. P. Kitsos, D. Simos, K. Stefanidis and A. G. Voyiatzis, "Malicious hardware logic detection based on combinatorial testing". In Proceedings of the TRUDEVICE 2016: Workshop on Trustworthy Manufacturing and Utilization of Secure Devices, Dresden, Germany, March 2016
- CA02. K. Stefanidis and D. N. Serpanos, "Αποδοτική ανίχνευση και αποτροπή καταμεμημένων επιθέσεων άρνησης υπηρεσιών σε δίκτυα IP", In Proceedings of 2ο Πανελλήνιο Συνέδριο Μηχανολόγων-Ηλεκτρολόγων, Athens, Greece, May 2007
- CA03. D. N. Serpanos, A. Antonopoulos, K. Stefanidis, N. Xipolias. "Architecture of a secure information service for telecom fraud data management" In 2nd Balkan Security Forum. June 2006

CONFERENCES (Posters & Presentations)

- CP01. K. Stefanidis and D. N. Serpanos, "DDoS Attacks: Design and Deployment of Packet Marking Scheme", In ITU Quality of Service Development Group, Swakopmund, Namibia, July 2007
- CP02. K. Stefanidis and D. N. Serpanos "DDoS Attacks: Design and Deployment of Packet Marking Scheme" In ITU/QSDG 2007. Swakopmund, Namibia July 2007
- CP03. K. Stefanidis, A. Antonopoulos and D. N. Serpanos. "Real-time Filtering of DDoS Attacks Using Router-based Packet Marking" In ITU/QSDG 2006. June 2006
- CP04. Antonopoulos, D. N. Serpanos, K. Stefanidis, N. Xipolias "Architecture of a Network Centric Secure Information Server" In ITU/QSDG 2005. May 2005

OTHER PUBLICATIONS

- O01. K. Στεφανίδης. «Προστασία συστημάτων από καταγενημένες επιθέσεις στο διαδίκτυο». PhD Thesis. March 2014
- O02. K. Stefanidis. "Development of a Distributed Denial of Service Attacks - Protection system for networks". Technical Report. Funding Programme "K. Karatheodoris". February 2006

● JOB-RELATED SKILLS

Job-related skills

- Research
 - Network Security
 - Industrial Systems Security
 - IT Security
- Architectural and functional design
 - Requirements analysis
 - Workflow design
 - UML Modeling
 - API design
- Security consultation and assessment
 - Security architecture design
 - Penetration testing & Vulnerability assessment
- Team coordination
- Technical project coordination
- Software development
 - Languages/Frameworks: PHP, C#, C, C++, Java, JavaScript
 - Scripting: Bash, Python
 - Databases: MySQL, PL/SQL, Elastic Search
 - Misc. Technologies: Docker, OpenLDAP, AD, RFID, Koha, Git, Keycloak

● SUMMARY OF ROLES

Summary of roles

Academia

- Adjunct Professor
 - University of Patras
 - Hellenic Open University
- Project Coordinator
 - DataVaults (EU)
- Research Team Coordinator
 - DECIDE (EU)
 - SELIDA (National)
 - PRACE (EU)
- Researcher
 - I3T (National)
 - KRIPIS / VISETAK (National)
 - nShield (EU)
 - pShield (EU)
 - I3E (National)
 - EGI-INSPIRE (EU)
 - E-NEXT (EU)
 - ASPIS (National)
 - INNO Utilities (EU)
 - APOLON (National)

Industry

- Technical Coordinator
 - MeliCERTes (EU)
 - Mobile Elements Pay (Private)
- Development Team Coordinator
 - SCDS (EU)
 - EDP2 (EU)
- Enterprise Systems Architect
 - MeliCERTes (EU)
 - Mobile Elements Pay (Private)
- Software Developer
 - Avaton (Private)
 - DEAPT Information System (National)
 - School of Medicine Information System (National)
 - NEPA Information System (National)
 - Greek Passports (National)
 - GRIB Satellites I / II (National)
 - MXS Information System (Private)

● PROJECT AQUISITIONS

Project Aquisitions

- DECIDO
- H2020
- Organization Budget (Fraunhofer FOKUS) ~400K euro
- Total Budget ~4M euro
- DataVaults
- H2020
- Organization Budget (Fraunhofer FOKUS) ~1M euro
- Total Budget ~6M euro
- URBANITE
- H2020
- Organization Budget (Fraunhofer FOKUS) ~450K euro
- Total Budget ~3.5M euro
- MeliCERTes (operational extension)
- Contract extension
- Organization Budget (Intrasoft Intl.) ~150K euro
- Total Budget ~400? euro
- I3T
- National Research Project
- Organization Budget (ISI) ~?K euro
- Total Budget ~?K euro
- pShield / nShield
- ARTEMIS-JU
- Organization Budget (ISI) ~?K euro
- Total Budget 13.13M euro