Curriculum Vitae

National and Kapodistrian University of Athens
Department of Business Administration

Assistant Professor Dimitrios Mitropoulos

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Contents

1 CV Summary

Dimitrios Mitropoulos
Assistant Professor
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Research interests: Software engineering – Computer security – Programming languages.

Education: BSc (2005) National and Kapodistrian University of Athens – MSc (2007), PhD (2014) Athens University of Economics and Business – Postdoctoral studies (2015, 2016) Columbia University in the City of New York.

Research experience: From 2007 to 2024 I have been involved in 12 EU and US funded R&D projects.

Teaching experience: Four undergraduate and two postgraduate courses at the Department of Business Administration of the National and Kapodistrian University of Athens (2020–Today), two undergraduate courses at the Department of Management Science and Technology of the Athens University of Economics and Business (2017–2020), one undergraduate course at the Department of Informatics and Telecommunications of the National and Kapodistrian University of Athens (2017, 2018)

Honors and awards: Distinguished Paper Award & Distinguished Artifact Award (PLDI '22), Certificate of Appreciation (ESEC/FSE '21), Distinguished Artifact Award (ICSE '21), Best Data Showcase Award (MSR '18), Literati Highly Commended Paper Award (IMCS '12) and more.

Member of: IEEE, ACM, USENIX.

Service: Organizing committee member at ESEC/FSE '21. Reviewer at high-impact journals including IEEE Transactions on Software Engineering, Journal of Systems and Software, International Journal of Information Security, IEEE Software, ACM Computing Surveys, IEEE Communication Letters, ACM Transactions on Privacy and Security, IET Information Security. Served on more than 16 program committees of software engineering and software security events (2012–2024), including top-tier conferences as registered at CORE (Computing Research and Education Association) such as PLDI, ESEC/FSE, ASE and MSR.

Journal papers: 10

Book chapters: 2

Conference publications: 28

Citations (Google Scholar): 737

Recent notable publications:

1. Stefanos Chaliasos, Marcos Antonios Charalambous, Liyi Zhou, Rafaila Galanopoulou, Arthur Gervais, Dimitris Mitropoulos and Ben Livshits. Smart contract and DeFi security tools: Do they meet the needs of practitioners? In *Proceedings of the 46th International Conference on Software Engineering (ICSE '24)*. Pages 705–717. IEEE, May 2024. DOI: 10.1145/3597503.3623302

2. Charalambos Mitropoulos, Thodoris Sotiropoulos, Sotiris Ioannidis and Dimitris Mitropoulos. Syntax-aware mutation for testing the Solidity compiler. In *Proceedings of the 28th European Symposium on Research in Computer Security (ESORICS '23)*. Pages 327–347. Springer. September 2023. DOI: 10.1007/978-3-031-51479-1_17

3. Stefanos Chaliasos, Thodoris Sotiropoulos, Diomidis Spinellis, Arthur Gervais, Benjamin Livshits and Dimitris Mitropoulos. Finding typing compiler bugs. In *Proceedings of the 43rd ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI '22)*. Pages 183–198. ACM. July 2022. DOI: 10.1145/3519939.3523427

4. Stefanos Chaliasos, Thodoris Sotiropoulos, Georgios-Petros Drosos, Charalambos Mitropoulos, Dimitris Mitropoulos and Diomidis Spinellis. Well-typed programs can go wrong: A study of typing-related bugs in JVM compilers. In *Proceedings of the ACM on Programming Languages, Volume 5, Issue OOPSLA (part of SPLASH 2021)*. Article No. 123. October 2021. DOI: 10.1145/3485500

2   Contact Information

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DBLP	: https://dblp.org/pid/29/8061.html

3   Research Interests

- Software Engineering
- Computer Security
- Programming Languages

4   Academic Education

9/2008–3/2014	Doctor of Philosophy (PhD) in Software Security Athens University of Economics and Business Department of Management Science and Technology Thesis: "Secure Software Development Technologies" Supervisor: Professor Diomidis Spinellis
9/2005–2/2007	Master of Science (MSc) in Information Systems Athens University of Economics and Business Department of Informatics
9/2000–9/2005	Bachelor of Science (BSc) in Informatics and Telecommunications National and Kapodistrian University of Athens Department of Informatics and Telecommunications

5   Work Experience

4/2021–Today	Assistant Professor National and Kapodistrian University of Athens Department of Business Administration
1/2020–Today	Head of Reliability Engineering, Security Officer National Infrastructures for Research and Technology (GRNET)
10/2020–03/2021	Visiting Professor National and Kapodistrian University of Athens Department of Business Administration
9/2016–12/2019	Security Officer, Tech Lead National Infrastructures for Research and Technology (GRNET)
9/2016–9/2020	Adjunct Lecturer, Postdoctoral Researcher Athens University of Economics and Business Department of Management Science and Technology

1/2017–9/2018	Adjunct Lecturer National and Kapodistrian University of Athens Department of Informatics and Telecommunications
9/2014–9/2016	Postdoctoral Researcher Columbia University in the City of New York Department of Computer Science
4/2014–8/2014	Postdoctoral Researcher Athens University of Economics and Business Department of Management Science and Technology
12/2010–5/2011	Software Engineer National Infrastructures for Research and Technology (GRNET)
9/2008–7/2010	Software Engineer SingularLogic
8/2007–8/2008	Software Engineer Greek Army (mandatory conscription service) Informatics Corps
2/2007–7/2007	Researcher Athens University of Economics and Business Department of Management Science and Technology

6   Honors and Awards

7/2022	Distinguished Paper Award: Our paper "Finding typing compiler bugs" was chosen to receive a "Distinguished Paper Award" at the 43rd ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI).
7/2022	Distinguished Artifact Award: Our replication package for the paper "Finding typing compiler bugs" was chosen to receive a "Distinguished Artifact Award" at the 43rd ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI): Research Artifact.
10/2021	Certificate of Appreciation: Honors received by the 29th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE '21) for my service on the conference organization committee.
5/2021	Distinguished Artifact Award: Our replication package for the paper "Data-oriented differential testing of object-relational mapping systems" was chosen to receive a "Distinguished Artifact Award" at the 43rd International Conference on Software Engineering (ICSE): Artifact Evaluation Track.
7/2020	Attending the 46th anniversary of the restoration of democracy in Greece. Representing GRNET at the anniversary of the restoration of democracy that took place at the Presidential Palace. The invitation was sent to honor the organization for its major role in Greece's digital transformation during the COVID-19 outbreak
5/2018	Best Data Showcase Award: Our paper "VulinOSS: A dataset of security vulnerabilities in open-source systems" was chosen to receive a "Best Data Showcase Award" at the 15th International Conference on Mining Software Repositories (MSR): Data Showcase Track.
10/2016	Postdoctoral Research Funding Scholarship: Action II. The "Meta-Life" of JavaScript. Financed by the Athens University of Economics and Business to support postdoctoral research. Ref. number: EP-2606-01/00-01

7/2014	Postdoctoral Research Funding Scholarship: Action II. Taming Code Injection Attacks Across Multiple Domains. Financed by the Athens University of Economics and Business to support postdoctoral research. Ref. number: EP-2166-01/01-01
10/2013	LASER Workshop Scholarship: The award was given by the organizing committee of the Learning from Authoritative Security Experiment Results (LASER) Workshop. for the paper "Dismal code: Studying the evolution of security bugs".
4/2012	Highly Commended Paper Award: The paper "Countering code injection attacks: A unified approach" (Information Management and Computer Security, 19(3):177-194, 2011) was awarded by Emerald publishers with the "Highly Commended Award" distinction.
9/2010	PhD Scholarship / Research Funding Program: Heracleitus II. Secure Software Development Technologies. Co-financed by the European Union (European Social Fund | ESF) and Greek national funds through the Operational Program "Education and Lifelong Learning" of the National Strategic Reference Framework (NSRF). Ref. number: 4-15-6

7 Publications

7.1 Doctoral Dissertation and Theses

[1] Dimitris Mitropoulos. Secure software development technologies. PhD Thesis. Athens University of Economics and Business. March 2014. DOI: 10.12681/eadd/43152
[2] Dimitris Mitropoulos. Countering SQL injection attacks with a database driver. MSc Thesis. Athens University of Economics and Business. February 2007.
[3] Dimitris Mitropoulos. A prediction algorithm in mobile computing. BSc Thesis. National and Kapodistrian University of Athens. September 2005.

7.2 Peer-reviewed Journal Articles

[1] Dimitris Mitropoulos, Thodoris Sotiropoulos, Nikos Koutsovasilis and Diomidis Spinellis. PDGuard: An architecture for the control and secure processing of personal data. *International Journal of Information Security.* 19(4):479–498. 2020. DOI: 10.1007/s10207-019-00468-5
[2] Dimitris Mitropoulos, Panos Louridas, Michalis Polychronakis, and Angelos D. Keromytis. Defending against Web application attacks: Research approaches, challenges and implications. *IEEE Transactions on Dependable and Secure Computing.* 16(2):188–203, March 2019. DOI: 10.1109/TDSC.2017.-2665620
[3] Konstantina Dritsa, Dimitris Mitropoulos, and Diomidis Spinellis. Aspects of the history of computing in modern Greece. *IEEE Annals of the History of Computing.* 40(1):47–60, May 2018. DOI: 10.1109/MAHC.2018.012171267
[4] Dimitris Mitropoulos and Diomidis Spinellis. Fatal injection: A survey of modern code injection attack countermeasures. *PeerJ Computer Science.* Page e136, November 2017. DOI: 10.7717/peerj-cs.136
[5] Vaggelis Atlidakis, Jeremy Andrus, Roxana Geambasu, Dimitris Mitropoulos, and Jason Nieh. POSIX has become outdated. *USENIX ;login: Magazine.* 41(3), Fall 2016.
[6] Dimitris Mitropoulos, Kostantinos Stroggylos, Diomidis Spinellis, and Angelos D. Keromytis. How to train your browser: Preventing XSS attacks using contextual script fingerprints. *ACM Transactions on Privacy and Security.* 19(1):2:1–2:31, August 2016. DOI: 10.1145/2939374
[7] Maria Kechagia, Dimitris Mitropoulos and Diomidis Spinellis. Charting the API minefield using software telemetry data. *Empirical Software Engineering.* 20(6):1785–1830, December 2015. DOI: 10.1007/s10664-014-9343-7
[8] Vassilios Karakoidas, Dimitris Mitropoulos, Panagiotis Louridas and Diomidis Spinellis. A type-safe embedding of SQL into Java using the extensible compiler framework J%. *Computer Languages, Systems and Structures.* 41:1–20, April 2015. DOI: 10.1016/j.cl.2015.01.001

[9] Dimitris Mitropoulos, Vassilios Karakoidas, Panagiotis Louridas, and Diomidis Spinellis. Countering code injection attacks: A unified approach. *Information Management and Computer Security.* 19(3): 177–194, 2011. DOI: 10.1108/09685221111153555

[10] Dimitris Mitropoulos and Diomidis Spinellis. SDriver: Location-specific signatures prevent SQL injection attacks. *Computers & Security.* 28:121–129, May 2009. DOI: 10.1016/j.cose.2008.09.005

7.3   Book Chapters

[1] Dimitris Mitropoulos, Theodosios Tsaklanos and Diomidis Spinellis. Secure software technologies. Information and System Security in the Cyberspace. NewTech Pub, 2021. ISBN: 978-960-578-064-7. In Greek.

[2] Dimitris Mitropoulos. Securing software. Encyclopedia of Computer Science and Technology, Second Edition. Edited by Phillip A. Laplante. *CRC Press, Taylor and Francis Group.* 2016. ISBN: 978-1-4822-0819-1

7.4   Peer-reviewed Conference and Workshop Publications

[1] Georgios Alexopoulos and Dimitris Mitropoulos. nvshare: Practical GPU sharing without memory size constraints. In *Proceedings of the 46th International Conference on Software Engineering (ICSE '24): Demonstrations Track.* IEEE, May 2024. To appear.

[2] Stefanos Chaliasos, Marcos Antonios Charalambous, Liyi Zhou, Rafaila Galanopoulou, Arthur Gervais, Dimitris Mitropoulos and Ben Livshits. Smart contract and DeFi security tools: Do they meet the needs of practitioners? In *Proceedings of the 46th International Conference on Software Engineering (ICSE '24).* Pages 705–717. IEEE, May 2024. DOI: 10.1145/3597503.3623302

[3] Apostolos Fournaris, Christos Tselios, Evangelos Haleplidis, Athanasopoulos Elias, Antreas Dionysiou, Dimitris Mitropoulos, Panos Louridas, Georgios Christou, Manos Athanatos, George Hatzivasilis, Konstantinos Georgopoulos, Costas Kalogeros, Christos Kotselidis, Simon Vogl, Francois Hamon and Sotiris Ioannidis. Providing security assurance & hardening for open source software/hardware: The SecOPERA approach. In *Proceedings of the IEEE 28th International Workshop on Computer Aided Modeling and Design of Communication Links and Networks (CAMAD '23).* IEEE, November 2023. To appear.

[4] Charalambos Mitropoulos, Thodoris Sotiropoulos, Sotiris Ioannidis and Dimitris Mitropoulos. Syntax-aware mutation for testing the Solidity compiler. In *Proceedings of the 28th European Symposium on Research in Computer Security (ESORICS '23).* Pages 327–347. Springer. September 2023. DOI: 10.1007/978-3-031-51479-1_17

[5] Stefanos Chaliasos, Marcos Antonios Charalambous, Liyi Zhou, Rafaila Galanopoulou, Arthur Gervais, Dimitris Mitropoulos and Ben Livshits. Smart contract and DeFi security: Insights from tool evaluations and practitioner surveys. *The Science of Blockchain Conference 2023 (SBC '23).* August 2023.

[6] Stefanos Chaliasos, Thodoris Sotiropoulos, Diomidis Spinellis, Arthur Gervais, Benjamin Livshits and Dimitris Mitropoulos. Finding typing compiler bugs. In *Proceedings of the 43rd ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI '22).* Pages 183–198. ACM. July 2022. DOI: 10.1145/3519939.3523427

[7] Stefanos Chaliasos, Thodoris Sotiropoulos, Georgios-Petros Drosos, Charalambos Mitropoulos, Dimitris Mitropoulos and Diomidis Spinellis. Well-typed programs can go wrong: A study of typing-related bugs in JVM compilers. In *Proceedings of the ACM on Programming Languages, Volume 5, Issue OOPSLA (part of SPLASH 2021).* Article No. 123. October 2021. DOI: 10.1145/3485500

[8] Georgios Nikitopoulos, Konstantina Dritsa, Panos Louridas and Dimitris Mitropoulos. CrossVul: A cross-language vulnerability dataset with commit data. In *Proceedings of the 29th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE '21): Demonstrations Track.* Pages 1565–1569. ACM, August 2021. DOI: 10.1145/3468264.3473122

[9] Thodoris Sotiropoulos, Stefanos Chaliasos, Vaggelis Atlidakis, Dimitris Mitropoulos and Diomidis Spinellis. Data-oriented differential testing of object-relational mapping systems. In *Proceedings of the 43rd International Conference on Software Engineering (ICSE '21).* Pages 1535–1547. IEEE, May 2021. DOI: 10.1109/ICSE43902.2021.00137

[10] Vitalis Salis, Thodoris Sotiropoulos, Panos Louridas, Diomidis Spinellis and Dimitris Mitropoulos. PyCG: Practical call graph generation in Python. In *Proceedings of the 43rd International Conference on Software Engineering (ICSE '21)*. Pages 1646–1657. IEEE, May 2021. DOI: 10.1109/ICSE-43902.2021.00146

[11] Thodoris Sotiropoulos, Stefanos Chaliasos, Dimitris Mitropoulos and Diomidis Spinellis. A model for detecting faults in build specifications. In *Proceedings of the ACM on Programming Languages, Volume 4, Issue OOPSLA (part of SPLASH 2020)*. Article No. 144. November 2020. DOI: 10.1145/3428212

[12] Thodoris Sotiropoulos, Dimitris Mitropoulos and Diomidis Spinellis. Practical fault detection in Puppet programs. In *Proceedings of the 42nd International Conference on Software Engineering (ICSE '20)*. Pages 26–37. ACM, June 2020. DOI: 10.1145/3377811.3380384

[13] Stefanos Chaliasos, George Metaxopoulos, George Argyros and Dimitris Mitropoulos. Mime artist: Bypassing whitelisting for the Web with JavaScript mimicry attacks. In *Proceedings of the 24th European Symposium on Research in Computer Security (ESORICS '19)*. Pages 565–585. Springer, September 2019. DOI: 10.1007/978-3-030-29962-0_27

[14] Dimitris Mitropoulos, Panos Louridas, Vitalis Salis and Diomidis Spinellis. Time present and time past: Analyzing the evolution of JavaScript code in the wild. In *Proceedings of the 16th International Conference on Mining Software Repositories (MSR '19): Technical Track*. Pages 126–137. IEEE, May 2019. DOI: 10.1109/MSR.2019.00029

[15] Linos Giannopoulos, Eirini Degkleri, Panayiotis Tsanakas and Dimitris Mitropoulos. Pythia: Identifying dangerous data-flows in Django-based applications. In *Proceedings of the 12th Workshop on Systems Security (EuroSec '19)*. Article No. 5. ACM, March 2019. DOI: 10.1145/3301417.3312497

[16] Antonios Gkortzis, Dimitris Mitropoulos, and Diomidis Spinellis. VulinOSS: A dataset of security vulnerabilities in open-source systems. In *Proceedings of the 15th International Conference on Mining Software Repositories (MSR '18): Data Showcase Track*. ACM, May 2018. DOI: 10.1145/3196398.-3196454

[17] Vaggelis Atlidakis, Jeremy Andrus, Roxana Geambasu, Dimitris Mitropoulos, and Jason Nieh. POSIX abstractions in modern operating systems: The old, the new, and the missing. In *Proceedings of the 11th European Conference on Computer Systems (EuroSys '16)*. Pages 19:1–19:17. ACM, April 2016. DOI: 10.1145/2901318.2901350

[18] Vassilios Karakoidas, Dimitris Mitropoulos, Panos Louridas, Georgios Gousios, and Diomidis Spinellis. Generating the blueprints of the Java ecosystem. In *Proceedings of the 2015 International Conference on Mining Software Repositories (MSR '15): Data Showcase Track*. Pages 510–513. IEEE Computer Society, May 2015. DOI: 10.5555/2820518.2820600

[19] Dimitris Mitropoulos, Panagiotis Papadopoulos, Georgios Gousios, Vasilios Karakoidas, Panos Louridas, and Diomidis Spinellis. The vulnerability dataset of a large software ecosystem. In *Proceedings of the 3rd International Workshop on Building Analysis Datasets and Gathering Experience Returns for Security (BADGERS '14)*. IEEE Computer Society, September 2014. DOI: 10.1109/BADGERS.2014.8

[20] Konstantinos Stroggylos, Dimitris Mitropoulos, Zacharias Tzermias, Panagiotis Papadopoulos, Fotios Rafailidis, Diomidis Spinellis, Panagiotis Katsaros, and Sotiris Ioannidis. Securing legacy code with the TRACER platform. In *Proceedings of 18th Panhellenic Conference on Informatics (PCI '14)*. Pages 25:1-25:6. ACM, October 2014. DOI: 10.1145/2645791.2645796

[21] Konstantinos Stroggylos, Dimitris Mitropoulos, Zacharias Tzermias, Panagiotis Papadopoulos, Fotios Rafailidis, Diomidis Spinellis, Sotiris Ioannidis, and Panagiotis Katsaros. TRACER: A platform for securing legacy code. In *Proceedings of 7th International Conference on Trust & Trustworthy Computing (TRUST '14): Poster Presentation Track*. Pages 218-219. Springer, June 2014. DOI: 10.1007/978-3-319-08593-7_20

[22] Dimitris Mitropoulos, Vassilios Karakoidas, Panos Louridas, Georgios Gousios, and Diomidis Spinellis. The bug catalog of the Maven ecosystem. In *Proceedings of the 2014 International Conference on Mining Software Repositories (MSR '14): Data Showcase Track*. Pages 372-365. ACM, May 2014. DOI: 10.1145/2597073.2597123

[23] Maria Kechagia, Dimitris Mitropoulos, and Diomidis Spinellis. Improving the quality of APIs through the analysis of software crash reports. In *Proceedings of the 3rd Imperial College Computing Student Workshop (ICCSW'13)*. Volume 35 of OpenAccess Series in Informatics (OASIcs). Schloss Dagstuhl–Leibniz-Zentrum füer Informatik. Pages: 57–64. September 2013. DOI: 10.4230/OASIcs.ICCSW.2013.57

[24] Dimitris Mitropoulos, Vassilios Karakoidas, Panos Louridas, Georgios Gousios, and Diomidis Spinellis.

Dismal code: Studying the evolution of security bugs. In *Proceedings of the Learning from Authoritative Security Experiment Results (LASER) Workshop '13*. Pages 37-48. USENIX Association, October 2013. ISBN: 978-1-931971-06-5

[25] Dimitris Mitropoulos, Georgios Gousios, and Diomidis Spinellis. Measuring the occurrence of security-related bugs through software evolution. In *Proceedings of 16th Panhellenic Conference on Informatics (PCI '12)*. Pages 117-122. IEEE Computer Society, October 2012. DOI: 10.1109/PCi.2012.15

[26] Konstantinos Kravvaritis, Dimitris Mitropoulos, and Diomidis Spinellis. Cyberdiversity: Measures and initial results. In *Proceedings of 14th Panhellenic Conference on Informatics (PCI '10)*. Pages 135-140. IEEE Computer Society, September 2010. DOI: 10.1109/PCI.2010.43

[27] Dimitris Mitropoulos, Vassilios Karakoidas, and Diomidis Spinellis. Fortifying applications against XPath injection attacks. In *Proceedings of the 4th Mediterranean Conference on Information Systems (MCIS '09)*. Pages 1169-1179, September 2009.

[28] Dimitris Mitropoulos and Diomidis Spinellis. Countering SQL injection attacks with a database driver. In *Proceedings of the 11th Panhellenic Conference on Informatics (PCI '07)*. Volume B, Pages 105-115. New Technologies Publications, May 2007.

7.5 Magazine Articles

[1] Dimitris Mitropoulos. How 1 million app calls can tell you a bit about malware. *XRDS: Crossroads, The ACM Magazine for Students.* 24(1):17–19, 2017. DOI: 10.1145/3123778

[2] Dimitris Mitropoulos. On the evolution of security bugs. *XRDS: Crossroads, The ACM Magazine for Students.* 21(3):18–19, 2015. DOI: 10.1145/2732692

[3] Dimitris Mitropoulos. Security bugs in large software ecosystems. *XRDS: Crossroads, The ACM Magazine for Students.* 20(2):15-16, 2013. DOI: 10.1145/2542651

[4] Dimitris Mitropoulos. Data security in the cloud environment. *XRDS: Crossroads, The ACM Magazine for Students.* 19(3):11-11, 2013. DOI: 10.1145/2425676.2425683

[5] Dimitris Mitropoulos. Fatal injection: the server's side. *XRDS: Crossroads, The ACM Magazine for Students.* 19(2):12-14, 2012. DOI: 10.1145/2382856.2382864

[6] Dimitris Mitropoulos. How secure is your software? *XRDS: Crossroads, The ACM Magazine for Students.* 19(1):11-13, 2012. DOI: 10.1145/2331042.2331066

[7] Dimitris Mitropoulos. Better safe than sorry: Backup your backups. *XRDS: Crossroads, The ACM Magazine for Students.* 18(2):6-6, 2012. DOI: 10.1145/2173637.2173642

7.6 ACM Computing Reviews

[1] Dimitris Mitropoulos. Article Review: Software verification and validation technologies and tools *ACM Computing Reviews*, Review #: CR146695 (1912-0441). September 2019.

[2] Dimitris Mitropoulos. Article Review: Efficient attack graph analysis through approximate inference. *ACM Computing Reviews*, Review #: CR145805 (1805-0228). January 2018.

7.7 Technical Reports

[1] Theofilos Petsios, Adrian Tang, Dimitris Mitropoulos, Salvatore J. Stolfo, Angelos D. Keromytis, Suman Jana. Tug-of-War: Observations on unified content handling. Technical Report. CoRR abs/1708.09334. August 2017.

[2] Roxana Geambasu, Dimitris Mitropoulos, Simha Sethumadhavan Junfeng Yang, Angelos Stravrou, Dan Fleck, Matthew Elder and Azzedine Benameur. Maintaining Enterprise Resiliency via Kaleidoscopic Adaption and Transformation of Software Services (MEERKATS). Technical Report. Air Force Research Laboratory, Sensors Directorate, Wright-Patterson, Air Force Base, OH 45433-7320, Air Force Materiel Command, United States Air Force. April 2016.

8 Teaching Experience

8.1 Postgraduate Courses

9/2023–Today   Algorithms and Business Analytics. National and Kapodistrian University of Athens, Department of Business Administration, Techno-economic Management Systems.

2/2024–Today   Software Engineering and Data Processing. National and Kapodistrian University of Athens, Department of Business Administration, Techno-economic Management Systems.

8.2 Undergraduate Courses

2/2022–Today   Introduction to Programming. National and Kapodistrian University of Athens, Department of Business Administration, 2nd Semester.

2/2022–Today   Data Security and Privacy. National and Kapodistrian University of Athens, Department of Business Administration, 6th Semster.

9/2021–Today   Algorithms and Business Analytics. National and Kapodistrian University of Athens, Department of Business Administration, 5th Semester.

9/2020–Today   Introduction to Computer Science. National and Kapodistrian University of Athens, Department of Business Administration, 1st Semester.

9/2017–9/2020   Introduction to Computer Science. Athens University of Economics and Business, Department of Management Science and Technology, 1st Semester.

2/2016–8/2020   Software Robustness and Security. Athens University of Economics and Business, Department of Management Science and Technology, 6th Semester.

2/2016–8/2017   Computer Security. National and Kapodistrian University of Athens, Department of Informatics and Telecommunications, 8th semester.

8.3 Senior Instructor

9/2016–06/2017   Data Structures, Secure Software Development. Alliance For Digital Employability, 1st Coding Boot-camp for Professionals. Organizers: Council of European Professional Informatics Societies, Hellenic Professionals Informatics Society, Athens University of Economics and Business.

8.4 Teaching Assistant

9/2012–02/2014   Advanced Programming with Java. Athens University of Economics and Business, Department of Management Science and Technology, 3rd Semester.

9 Participation in Research Projects

2022–Today   SecOPERA: Secure Open-source softwarE and hardwaRe Adaptable framework
Funded by the European Commission, HORIZON-CL3-2021-CS-01-02, Ref. number: 101070599.

2019–2022   eSSIF-Lab: European Self Sovereign Identity Framework Laboratory
Funded by the European Commission, HORIZON 2020, Ref. number: 871932.

2019–2022   FASTEN: Fine-Grained Analysis of Software Ecosystems as Networks
Funded by the European Commission, HORIZON 2020, Ref. number 825328.

2018–2021	PRIViLEDGE: Privacy-Enhancing Cryptography in Distributed Ledgers Funded by the European Commission, HORIZON 2020, Ref. number: 780477.
2017–2020	CERTCOOP: Trans-European and Greek CERTs collaboration project Funded by the European Commission, CEF-TC-2016-3, Ref. number: 2016-EL-IA-0123.
2016–2019	PANORAMIX: Privacy and Accountability in Networks via Optimized Randomized Mix-nets Funded by the European Commission, HORIZON 2020, Ref. number: 653497.
2016–2018	TREDISEC: Trust-aware, REliable and Distributed Information SEcurity in the Cloud Funded by the European Commission, HORIZON 2020, Ref. number: 644412.
2014–2016	VPSN: Virtual Private Social Networks Funded by the National Science Foundation (NSF), Ref. number: 1318415.
2014–2015	MEERKATS: Maintaining EnterprisE Resiliency via Kaleidoscopic Adaptation and Transformation of Software Services Funded by the United States Defense Advanced Research Projects Agency (DARPA), Ref. number: FA8650–11–C–7190. 2014 – 2015.
2011–2014	TRACER: Identifying Software Vulnerabilities and Securing Legacy Systems Funded by the Greek General Secretariat of Research and Technology, Ref. number: 09ΣΥΝ–72–942.
2008–2010	SOPRANO: Service Oriented Programmable Smart Environments for Older Europeans Funded by the European Commission, FP6–IST, Ref. number: 045212. 2008 – 2010.
2007	SQO–OSS: Software Quality Observatory for Open Source Software Funded by the European Commission, FP6–IST, Ref. number: 033331.

10 Service

10.1 Reviewer

2023	IEEE Transactions on Software Engineering
2020	Journal of Systems and Software
2019	IEEE Software
2015, 2016, 2019	International Journal of Information Security
2017	ACM Transactions on Privacy and Security
2015	ACM Computing Surveys
2014, 2015	IEEE Communication Letters
2014, 2015	IET Information Security
2008	Cluster Computing

10.2 Organizing Committee Member

2021	Student Volunteer Chair. The ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE).

10.3 Program Committee Member

2024	The IEEE/ACM International Conference on Automated Software Engineering (ASE), Research Papers Track.
2024	Mining Software Repositories (MSR) Conference, Technical Track.
2023	The ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE), Research Papers Track.

2023 The ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI), Research Papers Track.
2021 The ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE), Industry Track.
2021 The ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE), Doctoral Symposium.
2021 The ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI), Artifact Track.
2021 European Workshop on Systems Security (EuroSec).
2021 Mining Software Repositories (MSR) Conference, Technical Track.
2020 The ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE), Artifact Track.
2020 European Workshop on Systems Security (EuroSec).
2020 Mining Software Repositories (MSR) Conference, Technical Track.
2020 Mining Software Repositories (MSR) Conference, Data Showcase Track.
2020 Euromicro Conference on Software Engineering and Advanced Applications (SEAA), Software Analytics: Mining Software Open Datasets and Repositories (STREAM) Track.
2016 The ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE), Tool Demonstrations Track.
2012 Open Web Application Security Project (OWASP) AppSec Research Conference.

10.4   Session Chair

2021 The ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE). Session Chair of *Dynamic Analysis*.
2020 Mining Software Repositories (MSR) Conference. Session Chair of *Security*.

10.5   Mentor

2022 The 44th International Conference on Software Engineering (ICSE), Student Mentoring Workshop (SMeW).
2020 Archimedes, the Center for Innovation and Entrepreneurship of the University of Athens. Supporting teams who want to develop ideas with start-up potential.
2017 The Google Summer of Code (GSoC) program. Supervising the implementation of a re-encryption mix-net. Ref. number: 5469134313750528

11   Membership of Professional and Learned Societies

- Member, IEEE
- Member, ACM
- Member, USENIX Association
- Member, SysSec (the Network of Excellence in the field of Systems Security for Europe)

12   Invited Talks

11/2022	Operating digital public services with OSS. FOSSCOM (Free and Open-Source Software Communities Meeting). Hosted at the University of Thessaly, Lamia, GR
2/2020	Application security: Vulnerabilities and countermeasures. Hellenic Republic Ministry of Foreign Affairs. Informatics Directorate.
11/2019	PDGuard: An architecture for the control and secure processing of personal data. Keynote Speaker, MyData.org Community and General Meeting. Hosted at the National Centre of Scientific Research Demokritos, Athens, GR

4/2019	Time present and time past: Analyzing the evolution of JavaScript code in the wild. National Technical University of Athens, School of Electrical and Computer Engineering, Athens, GR
3/2019	Securing the operations and services of the Greek Research and Technology Network (GRNET). National Centre of Scientific Research Demokritos, Institute of Informatics and Telecommunications, Athens, GR
2/2019	Time present and time past: Analyzing the evolution of JavaScript code in the wild. University of the Aegean, Department of Information and Communication Systems Engineering, Samos, GR
12/2016	How to train your browser: Preventing XSS attacks using contextual script fingerprints. Athens University of Economics and Business, Department of Management Science and Technology, Athens, GR
11/2016	How to train your browser: Preventing XSS attacks using contextual script fingerprints. National and Kapodistrian University, Department of Informatics and Telecommunications, Athens, GR
5/2016	Ethics collide: Security and disobedience over the Web. TEDx University of Piraeus, Athens, GR
1/2016	Malware and cryptography. University of Piraeus, Department of Informatics, Athens, GR
12/2012	Countering code injection attacks: A unified approach. Hellenic Air Force School, Athens, GR
4/2011	Web application attacks: Categories and countermeasures. National and Kapodistrian University, Department of Informatics and Telecommunications, Athens, GR

13   Selected Publicly Available Software

In the following, I provide a list of software mechanisms that I have authored and made available through the GitHub service (https://github.com/dimitrop).

- *nSign* is a mechanism that can be placed in the JavaScript engine of Mozilla Firefox and protects Web users from Cross-site Scripting attacks. To do so, it generates unique identifiers for each script that reaches the engine during a training phase. Specifically, it collects and combines elements coming from either the script that is about to be executed or from the execution environment. After the generation of the identifier is done, the identifier is stored in an auxiliary table. During production, nsign follows the same steps until it generates the identifier. Then, it checks if the identifier exist in the aforementioned table. If it does not the script is malicious and the Web user is under attack. More details can be found in the paper "How to train your browser: Preventing XSS attacks using contextual script fingerprints".
- *VirusTotalBridge* is a collection of Python scripts that help users to perform bulk uploads to (and retrieve the corresponding results from) the VirusTotal1[1] service. More details can be found in the paper "POSIX abstractions in modern operating systems: The old, the new, and the missing".
- *schemeInterp*: is a small and efficient Lisp interpreter, written in Scheme. More details can be found in my PhD thesis.
- *SDriver* is a type 4 JDBC driver that protect Java applications from SQL injection attacks. To prevent an attack, the driver uses stripped-down queries and stack traces to create unique identifiers that are then used to distinguish between injected and legitimate queries. It depends neither on the application nor on the RDBMS and can be easily retrofitted to any system. More details can be found in the paper "SDriver: Location-specific signatures prevent SQL injection attacks".

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[1] https://www.virustotal.com/