CURRICULUM VITAE

PERSONAL DETAILS

Dr. Apostolos Ampatzoglou

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Birth date: 20/05/1980

Marital Status: Married with two children

Address: Paggalou 10, Neapoli, Thessaloniki, Greece

WORKING EXPERIENCE

August 2023 – present

Associate Professor of Software Engineering, Software and Data Engineering Laboratory, University of Macedonia, Greece.

August 2019 – July 2023

Assistant Professor of Software Engineering, Software and Data Engineering Laboratory, University of Macedonia, Greece.

January 2017 – present

Visiting Lecturer, Department of Informatics, Open Hellenic University, Greece.

February 2018 – February 2019

Visiting Lecturer, Programming Languages and Software Engineering Group, Technological Education Institute of Thessaloniki, Greece.

September 2016 – June 2018

Visiting Assistant Professor, Department of Informatics, Aristotle University of Thessaloniki, Greece.

September 2015 – June 2018

Visiting Lecturer, School of Science and Technology, International Hellenic University, Thessaloniki, Greece.

September 2015 – February 2018

Visiting Lecturer, University of Western Macedonia, Kozani, Greece.

March 2013 – February 2016

Assistant Professor, Software Engineering & Architecture Group, University of Groningen, The Netherlands.

September 2009 – February 2013

Research Associate, Aristotle University of Thessaloniki, Greece.

September 2010 – June 2011

Visiting Lecturer, Department of Informatics and Communications, Technological Education Institute of Serres, Greece.

September 2007 – February 2013

Visiting Lecturer, Programming Languages and Software Engineering Group, Technological Education Institute of Thessaloniki, Greece.

STUDIES

November 2007 – February 2012

PhD in Software Engineering, Aristotle University, “The Effect of Object- Oriented Design Patterns on Software Quality”, Grade: Excellent.

September 2003 - June 2005

MSc in Computer Systems, University of Macedonia, Department of Applied Informatics, Grade: 8.77

September 1999 - September 2003

BSc in Computer Science, Technological Education Institute of Thessaloniki, Department of Informatics, Grade: 7.12

FOREIGN LANGUAGES

English - Excellent

Awarded the Certificate of Proficiency in English from the University of Cambridge (UK) and the University of Michigan (USA).

PUBLICATIONS – CITATIONS

#Publications in Peer-Reviewed Journals: 58

#Publications in Peer-Reviewed Book Chapters: 5

#Publications in Peer-Reviewed Conferences: 79

#Citations (Google Scholar): 3080

h-index (Google Scholar): 30

i10-index (Google Scholar): 68

I. Journals

[J58] N. Nikolaidis, N. Mittas, A. Ampatzoglou, D. Feitosa, and A. Chatzigeorgiou, "A Metrics-based Approach for Selecting among Various Refactoring Candidates", Empirical Software Engineering, Springer, 2024.

[J57] N. Nikolaidis, E. M. Arvanitou, C. Volioti, T. Maikantis, A. Ampatzoglou, D. Feitosa, A. Chatzigeorgiou, and P. Krief, "Eclipse Open SmartCLIDE: An End-to-End Framework for Facilitating Service Reuse in Cloud Development", *Journal of Systems and Software*, Elsevier, 2024.

[J56] A. Tsichouridis, S. Xinogalos, and A. Ampatzoglou, "Educational Programming Environments for Enhancing Conceptual Design in the Object-Oriented Paradigm: A Systematic Mapping Study", *Journal of Educational Computing Research*, SAGE Publications, 2024.

[J55] D. Tsoukalas, M. Siavvas, D. Kechagias, A. Ampatzoglou, and A. Chatzigeorgiou, "A Practical Approach for Technical Debt Prioritization based on Class-Level Forecasting", *Journal of Software: Evolution and Process*, Wiley and Sons, 2024.

[J54] K. Georgiou, N. Mittas, A. Ampatzoglou, A. Chatzigeorgiou, and L. Angelis, "What is being Patented in Software Engineering? Empirical Evidence from USPTO", IEEE Software, 2023.

[J53] I. Kalouptsoglou, M. Siavvas, A. Ampatzoglou, D. Kechagias, A. Chatzigeorgiou, "Software Vulnerability Prediction: A Systematic Mapping Study", Information and Software Technology, 2023.

[J52] F. Fagerholm, A. De los Rios, C. Cardenas Castro, J. Gil, A. Chatzigeorgiou, A. Ampatzoglou, and C. Becker, "It's About Time: How to Study Intertemporal Choice in Systems Design", Information and Software Technology, Elsevier, 2023.

[J51] E. Polyzoidou, E. Papagiannaki, N. Nikolaidis, A. Ampatzoglou, N. Mittas, E. M. Arvanitou, A. Chatzigeorgiou, G. Manolis, and E. Manganopoulou, "SmartCLIDE Design Pattern Assistant: A Decision-Tree based Approach", Software Practice and Experience, Wiley and Sons, 2023.

[J50] N. Nikolaidis, N. Mittas, A. Ampatzoglou, E. M. Arvanitou, and A. Chatzigeorgiou, "Assessing TD Macro-Management: A Nested Modelling Statistical Approach", Transactions on Software Engineering, IEEE Computer Society, 2023. **Highest Ranked Journal in SE.**

[J49] I. Zozas, S. Bibi, and A. Ampatzoglou, "Forecasting the Principal of Code Technical Debt in JavaScript Applications", *Transactions on Software Engineering,* IEEE Computer Society, 2023. **Highest Ranked Journal in SE.**

[J48] D. Tsoukalas, N. Mittas, A. Chatzigeorgiou, D. Kehagias, A. Ampatzoglou, T. Amanatidis, and L. Angelis, "Machine Learning for Technical Debt Identification", *Transactions on Software Engineering,* IEEE Computer Society, 2022. **Highest Ranked Journal in SE.**

[J47] K. Georgiou, N. Mittas, A. Ampatzoglou, A. Chatzigeorgiou, and L. Angelis, "Data-Oriented Software Development: The Industrial Landscape through Patent Analysis", *Information Journal*, MDPI, December 2022.

[J46] E. M. Arvanitou, A. Ampatzoglou, A. Chatzigeorgiou, P. Avgeriou, and N. Tsiridis, "A Metric for Quantifying the Ripple Effects among Requirements", *Software Quality Journal,* Springer, 2022.

[J45] A. Ampatzoglou, A. Chatzigeorgiou, E. M. Arvanitou, S. Bibi, "SDK4ED: A Platform for Technical Debt Management", *Software Practice and Experience*, Wiley, 2022.

[J44] I. Kalouptsoglou, D. Tsoukalas, M. Siavvas, D. Kechagias, A. Chatzigeorgiou, and A. Ampatzoglou, "Time Series Forecasting of Software Vulnerabilities using Statistical and Deep Learning Models", *Electronics Journal*, MDPI, 2022.

[J43] E. M. Arvanitou, A. Ampatzoglou, A. Chatzigeorgiou, S. Bibi, and I. Deligiannis, "Applying and Researching DevOps: A Tertiary Study", *IEEE Access*, 2022.

[J42] I. Kalouptsoglou, M. Siavvas, D. Kehagias, A. Chatzigeorgiou, and A. Ampatzoglou, "Examining the Capacity of Text Mining and Software Metrics in Vulnerability Prediction", *Entropy Journal*, MDPI, 2022.

[J41] C. Lamprakos, C. Marantos, M. Siavvas, L. Papadopoulos, A. A. Tsintzira, A. Ampatzoglou, A. Chatzigeorgiou, D. Kehagias, and D. Soudris, "Translating Quality-Driven Code Change Selection to an Instance of Multiple-Criteria Decision Making", *Information and Software Technology*, Elsevier, May 2022.

[J40] C. Marantos, L. Papadopoulos, A. A. Tsintzira, A. Ampatzoglou, A. Chatzigeorgiou, and D. Soudris, "Decision Support for GPU Acceleration by Predicting Energy Savings and Programming Effort", *Sustainable Computing: Informatics and Systems*, Elsevier, 2022.

[J39] P. Smiari, S. Bibi, A. Ampatzoglou, and E. M. Arvanitou, "Refactoring Embedded Software: A Study in Healthcare Domain", *Information and Software Technology*, Elsevier, February 2022.

[J38] G. Digkas, A. Ampatzoglou, A. Chatzigeorgiou, and P. Avgeriou, "The Temporality of Technical Debt Introduction on New Code and Confounding Factors", *Software Quality Journal,* Springer, 2022.

[J37] G. Digkas, A. Chatzigeorgiou, A. Ampatzoglou, and P. Avgeriou, "Can Clean New Code Reduce Technical Debt Density", *Transactions on Software Engineering,* IEEE Computer Society, 2022. **Highest Ranked Journal in SE.**

[J36] M. E. Paschali, C. Volioti, A. Gkikas, A. Ampatzoglou, I. Stamelos, and A. Chatzigeorgiou, "Implementing Game Requirements using Design Patterns", *Journal of Software: Evolution and Process*, Wiley and Sons, 2021.

[J35] N. Nikolaidis, D. Zisis, A. Ampatzoglou, A. Chatzigeorgiou, and D. Soudris, “Experience with Managing Technical Debt in Scientific Software Development using the EXA2PRO framework”, *Access*, IEEE Computer Society, 2021.

[J34] M. Krestou, E. M. Arvanitou, A. Ampatzoglou, I. Deligiannis, V. Gerogiannis, “Change Impact Analysis: A Systematic Mapping Study”, *Journal of Systems and Software*, Elsevier, March 2021.

[J33] G. Digkas, A. Ampatzoglou, A. Chatzigeorgiou, P. Avgeriou, O. Matei, and R. Heb, "The Risk of Generating Technical Debt Interest: A Case Study", *SN Computer Science*, volume 2, article 12, 2021.

[J32] E. M. Arvanitou, A. Ampatzoglou, A. Chatzigeorgiou, J. C. Carver, “Software Engineering Practices for Scientific Software Development: A Systematic Mapping Study”, *Journal of Systems and Software*, Elsevier, vol. 172, February 2021.

[J31] A. Ampatzoglou, E. M. Arvanitou, A. Ampatzoglou, P. Avgeriou, A. A. Tsintzira, and A. Chatzigeorgiou, “Architectural Decision-making as a Financial Investment: An Industrial Case Study”, *Information and Software Technology*, Elsevier, January 2021.

[J30] P. Avgeriou, D. Taibi, A. Ampatzoglou, F. A. Fontana, T. Besker, A. Chatzigeorgiou, V. Lenarduzzi, A. Martini, A. Moschou, I. Pigazzini, N. Saarimäki, D. Sas, S. S. de Toledo, A. A. Tsintzira, “An Overview and Comparison of Technical Debt Measurement Tools”, *Software*, IEEE, January-February 2021.

[J29] A. Ampatzoglou, N. Mittas, A. A. Tsintzira, A. Ampatzoglou, E. M. Arvanitou, A. Chatzigeorgiou, P. Avgeriou, and L. Angelis, “Exploring the Relation between Technical Debt Principal and Interest: An Empirical Approach”, *Information and Software Technology*, Elsevier, December 2020.

[J28] T. Amanatidis, A. Moschou, N. Mittas, A. Chatzigeorgiou, A. Ampatzoglou, and L. Angelis, “Evaluating the Agreement among Technical Debt Measurement Tools: Building an Empirical Benchmark of Technical Debt Liabilities”, *Empirical Software Engineering*, Springer, 2020.

[J27] S. Charalampidou, A. Ampatzoglou, E. Karountzos, and P. Avgeriou, “Empirical Studies on Software Traceability: A Mapping Study”, *Journal of Software: Evolution and Process*, Wiley and Sons, 2020.

[J26] D. Feitosa, A. Ampatzoglou, A. Gkortzis, S. Bibi, and A. Chatzigeorgiou, “Code Reuse in Practice: Benefiting or Harming Technical Debt”, *Journal of Systems and Software*, Elsevier, vol. 167, September 2020.

[J25] S. Bibi, I. Zozas, A. Ampatzoglou, P. Sarigiannidis, G. Kalampokis, and I. Stamelos, “Crowdsourcing in Software Development: Empirical Support for Configuring Contests”, *Access*, IEEE Computer Society, 2020.

[J24] M. Papoutsoglou, A. Ampatzoglou, N. Mittas, and L. Angelis, “Extracting Knowledge from on-line Sources for Software Engineering Labor Market: A Mapping Study”, *Access*, IEEE Computer Society, 2020.

[J23] I. Zozas, A. Ampatzoglou, S. Bibi, A. Chatzigeorgiou, P. Avgeriou, and I. Stamelos, “Reusability Index: A Measure for Assessing Software Assets Reusability”, *Journal of Software: Evolution and Process*, Wiley and Sons, 2019.

[J22] P. Kyriakakis, A. Chatzigeorgiou, S. Xynogalos, and A. Ampatzoglou, “Exploring the Frequency and Change Proneness of Dynamic Feature Pattern Instances in PHP Applications”, *Science of Computer Programming*, Elsevier, vol. 170, February 2019.

[J21] A. Ampatzoglou, S. Bibi, P. Avgeriou, M. Verbeek, and A. Chatzigeorgiou, “Identifying, Categorizing and Mitigating Threats to Validity in Software Engineering Secondary Studies”, *Information and Software Technology*, Elsevier, vol. 106, February 2019.

[J20] D. Feitosa, A. Ampatzoglou, P. Avgeriou, and E. Y. Nakagawa, "What can Violations of Good Practices tell about the Relationship between GoF Patterns and Run-time Quality Attributes?", *Information and Software Technology*, Elsevier, vol. 104, January 2019.

[J19] D. Feitosa, A. Ampatzoglou, P. Avgeriou, and E. Y. Nakagawa, "Correlating Pattern Grime and Quality Attributes", *IEEE Access*, IEEE Computer Society, 2018.

[J18] M. E. Paschali, A. Ampatzoglou, S. Bibi, A. Chatzigeorgiou, and I. Stamelos, "Reusability of Open Source Software across Domains: A Case Study", *Journal of Systems and Software*, Elsevier, vol. 134, pp. 211-227, 2018.

[J17] T. Amanatidis, A. Chatzigeorgiou, and A. Ampatzoglou, "The relation between technical debt and corrective maintenance in PHP web applications", *Information and Software Technology,* Elsevier, vol. 87, 2017.

[J16] P. Sarigiannidis, T. Lagkas, S. Bibi, A. Ampatzoglou, P. Bellavista, "Hybrid 5G optical-wireless SDN-based networks, Challenges and Open Issues", *IET Networks*, 2017.

[J15] E. M. Arvanitou, A. Ampatzoglou, A. Chatzigeorgiou, M. Galster, and P. Avgeriou, "A Mapping Study on Design-Time Quality Attributes and Metrics", *Journal of Systems and Software*, Elsevier, vol. 127, pp. 52 – 77, May 2017.

[J14] S. Charalampidou, A. Ampatzoglou, A. Chatzigeorgiou, A. Gkortzis, and P. Avgeriou, "Identifying Extract Method Refactoring Opportunities based on Functional Relevance", *Transactions on Software Engineering,* IEEE Computer Society, 2017. **Highest Ranked Journal in SE.**

[J13] D. Feitosa, R. Aldres, A. Ampatzoglou, P. Avgeriou, and E. Y. Nakagawa, "Investigating the effect of design patterns on energy consumption", *Journal of Software: Evolution and Process*, John Wiley & Sons, 2017.

[J12] L. Garcés, A. Ampatzoglou, P. Avgeriou, and E.Y. Nakagawa, "Quality attributes and quality models for ambient assisted living software systems: A systematic mapping", *Information and Software Technology*, Elsevier, 83 (2), February 2017.

[J11] E. M. Arvanitou, A. Ampatzoglou, A. Chatzigeorgiou, and P. Avgeriou, "Software Metrics Fluctuation: A Property for Assisting the Metric Selection Process", *Information and Software Technology*, Elsevier, 72 (4), pp. 110-124, April 2016.

[J10] A. Ampatzoglou, A. Chatzigeorgiou, S. Charalampidou, and P. Avgeriou, "The Effect of GoF Design Patterns on Stability: A Case Study", *Transactions on Software Engineering,* IEEE Computer Society, 41 (8), pp. 781-802, Aug. 2015. **Highest Ranked Journal in SE.**

[J9] E. Constantinou, A. Ampatzoglou, and I. Stamelos, "Quantifying reuse in OSS: A large-scale empirical study", *International Journal of Open-Source Software and Processes*, IGI-Global, 2015.

[J8] A. Ampatzoglou, A. Ampatzoglou, A. Chatzigeorgiou, and P. Avgeriou, "The Financial Aspect of Managing Technical Debt: A Systematic Literature Review", *Information and Software Technology*, Elsevier, 64, pp. 52 – 73, Aug. 2015.

[J7] A. Ampatzoglou, S. Charalampidou and I. Stamelos, "Research State of the Art on GoF Design Patterns: A Systematic Mapping Study", *Journal of Systems and Software*, Elsevier, 86 (7), pp. 1945–1964. July 2013.

[J6] A. Ampatzoglou, O. Michou and I. Stamelos, "Building and Mining a Repository of Design Pattern Instances - Practical and Research Benefits", *Entertainment Computing*, Elsevier, 4 (2), pp. 131-142, April 2013.

[J5] G. Kakarontzas, E. Constantinou, A. Ampatzoglou and I. Stamelos, "Layer assessment of object-oriented software: A metric facilitating white-box reuse", *Journal of Systems and Software*, Elsevier, 86 (2), pp. 349-366, February 2013.

[J4] A. Ampatzoglou, G. Frantzeskou and I. Stamelos, “A Methodology to Assess the Impact of Design Patterns on Software Quality”, *Information and Software Technology*, Elsevier, 54(4), pp. 331-346, 2012.

[J3] A. Ampatzoglou, A. Kritikos, G. Kakarontzas and I. Stamelos, “An Empirical Investigation on the Reusability of Design Patterns and Software Packages”, *Journal of Systems and Software*, Elsevier, 84 (12), pp. 2265-2283, Dec. 2011.

[J2] A. Ampatzoglou and I. Stamelos, “Software Engineering Research for Computer Games: A systematic Review”, *Information and Software Technology*, Elsevier, 52 (9), Sept. 2010.

[J1] A. Ampatzoglou and A. Chatzigeorgiou, “Evaluation of Object-Oriented design patterns in game development”, *Information and Software Technology*, Elsevier, 49 (5), pp. 445-454, May 2007.

II. Book Chapters

[B5] A. Ampatzoglou, S. Bibi, P. Avgeriou and A. Chatzigeorgiou, “Systematic Assessment of Threats to Validity in Software Engineering Secondary Studies” *In: Contemporary Empirical Methods in Software Engineering*, Springer, 2019.

[B4] D. Feitosa, A. Ampatzoglou, P. Avgeriou, F. J. Affonso, H. Andrade, K. R. Felizardo, E. Y. Nakagawa, “Design Approaches for Critical Embedded System: A Systematic Mapping Study” *CCIS*, Springer, volume 866, 2018.

[B3] A. Ampatzoglou, A. Ampatzoglou, P. Avgeriou, and A. Chatzigeorgiou, “A Financial Approach for Managing Interest in Technical Debt”, *LNBIP* Springer, 2016.

[B2] Z. Karampaglis, A. Mentis, F. Rafailidis, P. Tsolakidis, and A. Ampatzoglou, “Secure Migration of Legacy Applications to the Web”, *LNCS*, Springer, volume 7991, pp. 229-243, August 2013.

[B1] A. Ampatzoglou, S. Charalampidou and I. Stamelos, “Investigating the Use of Object-Oriented Design Patterns in Open-Source Software: A Case Study”, *CCIS*, Springer, volume 230, pp. 106-120, 2011.

III. Conference Proceedings

[C79] M. Tsechelidis, N. Nikolaidis, T. Maikantis, and A. Ampatzoglou, "Modular Monoliths the Way to Standardization", *3rd Eclipse Security, AI, Architecture and Modelling Conference on Cloud to Edge Continuum (ESAAM 2023)*, Germany, 2023.

[C78] M. Kolyda, E. Kostoglou, N. Nikolaidis, A. Ampatzoglou, A. Chatzigeorgiou, "Library Utilization Metrics for Maven Projects", *17th European Conference on Software Architecture (ECSA ‘23)*, 2023.

[C77] I. Kalouptsoglou, M. Siavvas, A. Ampatzoglou, D. Kechagias, and A. Chatzigeorgiou, "An empirical comparison of Transformer-based models in Vulnerability Prediction", *14th International Symposium on Software Quality*, Athens, Greece, 2023.

[C76] N. Nikolaidis, A. Ampatzoglou, A. Chatzigeorgiou, N. Mittas, E. Konstantinidis, and P. Bamidis, "Exploring the Effect of Various Maintenance Activities on the Accumulation of TD Principal", 6th International Conference on Technical Debt (TechDEBT' 23), Melburne, Australia, May 2023.

[C75] N. Nikolaidis, A. Ampatzoglou, A. Chatzigeorgiou, S. Tsekeridou and A. Piperidis, "Technical Debt in Service-Oriented Software Systems", 23rd International Conference on Product-Focused Software Process Improvement (PROFES '22), Springer, 21-23 November 2022, Finland.

[C74] N. Nikolaidis, D. Zisis, A. Ampatzoglou, N. Mittas, and A. Chatzigeorgiou, "Using Machine Learning to Guide the Application of Software Refactorings: A Preliminary Exploration", 6th International Workshop on Machine Learning Techniques for Software Quality Evolution (MaLTeSQuE '22), ACM, 14-18 November 2022, Singapore.

[C73] Z. Alizadehsani, D. Feitosa, T. Maikantis, A. Ampatzoglou, A. Chatzigeorgiou, D. Berrocal, A. Gonzalez Briones, J. M. Corchado, M. Mateus, and J. Groenewold, "Service Classification through Machine Learning: Aiding in the Efficient Identification of Reusable Assets in Cloud Application Development", *48th Euromicro Conference on Software Engineering and Advanced Applications (SEAA' 22)*, IEEE Computer Society, August 2020, Gran Canaria, Spain.

[C72] E. M. Arvanitou, P. Argyriadou, G. Koutsou, A. Ampatzoglou, and A. Chatzigeorgiou, "Quantifying TD Interest: Are we Getting Closer, or Not Even That?", *48th Euromicro Conference on Software Engineering and Advanced Applications (SEAA' 22)*, IEEE Computer Society, August 2020, Gran Canaria, Spain.

[C71] A. Ichtsis, N. Mittas, A. Ampatzoglou, and A. Chatzigeorgiou, "Merging Smell Detectors: Evidence on the Agreement of Multiple Tools", *5th International Conference on Technical Debt (TechDEBT' 22)*, ACM, Pennsylvania, USA, May 2022

[C70] D. Tsoukalas, A. Chatzigeorgiou, A. Ampatzoglou, N. Mittas, and D. Kechagias, "TD Classifier: Automatic Identification of Java Classes with High Technical Debt", *5th International Conference on Technical Debt (TechDEBT' 22)*, ACM, Pennsylvania, USA, May 2022

[C69] E. M. Arvanitou, N. Nikolaidis, A. Ampatzoglou, and A. Chatzigeorgiou, "Practitioners' Perspective on Practices for Preventing Technical Debt Accumulation in Scientific Software Development"', *17th International Conference on the Evaluation of Novel Approaches to Software Engineering (ENASE '22)*, SCITEPRESS, April 2022.

[C68] P. Kotsikoris, T. Chaikalis, A. Ampatzoglou, and A. Chatzigeorgiou, "Automated Summarization of Service Workflows to facilitate Discovery and Composition", *17th International Conference on the Evaluation of Novel Approaches to Software Engineering (ENASE '22)*, SCITEPRESS, April 2022.

[C67] C. Marantos, M. Siavvas, D. Tsoukalas, C. P. Lamprakos, L. Papadopoulos, P. Boryszko, K. Filus, J. Domanska, A. Ampatzoglou, A. Chatzigeorgiou, E. Gelenbe, D. Kehagias, and D. Soudris, "SDK4ED: One-click platform for Energy-aware, Maintainable and Dependable Applications", 25th Design, Automation and Test in Europe Conference (DATE '22), ACM, Belgium, 14 - 23 March 2022.

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[C64] I. Kalouptsoglou, M. Siavvas, D. Kehagias, A. Chatzigeorgiou, and A. Ampatzoglou, "An Empirical Evaluation of the Usefulness of Word Embedding Techniques in Deep Learning-based Vulnerability Prediction", 4th European CyberSecurity Workshop (EuroCyberSec '21), 25-26 October 2021, France

[C63] C. Marantos, L. Papadopoulos, A. A. Tsintzira, A. Ampatzoglou, A. Chatzigeorgiou, and D. Soudris, "Decision Support for GPU Acceleration by Predicting Energy Savings and Programming Effort", 12th International Green and Sustainable Computing Conference (IGSCC '21), IEEE Computer Society, 18 - 21 October.

[C62] S. Gkikas, C. Volioti, N. Nikolaidis, A. Ampatzoglou, A. Chatzigeorgiou, and I. Deligiannis, " Metrics for Assessing Gamers' Satisfaction: Exploring the Graphics Factor", Automated Software Engineering for Games (ASE4GAMES '21), IEEE Computer Society, November 2021, Australia.

[C61] C. Marantos, A. A. Tsintzira, L. Papadopoulos, A. Ampatzoglou, A. Chatzigeorgiou, D. Soudris, "Technical Debt Management and Energy Consumption Evaluation in Implantable Medical Devices: The SDK4ED Approach", Lecture Notes in Computer Science: Embedded Computer Systems: Architectures, Modeling, and Simulation (SAMOS '20), vol 12471, Springer.

[C60] T. Maikantis, A. A. Tsintzira, A. Ampatzoglou, E. M. Arvanitou, A. Chatzigeorgiou, I. Stamelos, S. Bibi, and I. Deligiannis, "Software Architecture Reconstruction via a Genetic Algorithm: Applying the Move Class Refactoring", *24th Pan-Hellenic Conference on Informatics (PCI '20)*, ACM, 20 – 22 November 2020, Greece.

[C59] S. Koutzanidis, A. Chatzigeorgiou, and A. Ampatzoglou, "RepoSkillMiner: Identifying software expertise from GitHub repositories using Natural Language Processing", *35th IEEE/ACM International Conference on Automated Software Engineering (ASE '20)*, September 2020, Australia.

[C58] G. Digkas, A. Ampatzoglou, A. Chatzigeorgiou, and P. Avgeriou, "On the Temporality of Introducing Code Technical Debt", *13th International Conference on the Quality of Information and Communications Technology (QUATIC' 20)*, Springer, September 2020, Portugal.

[C57] A. A. Tsintzira, E. M. Arvanitou, A. Ampatzoglou, and A. Chatzigeorgiou, "Applying Machine Learning in Technical Debt Management: Future Opportunities and Challenges", *13th International Conference on the Quality of Information and Communications Technology (QUATIC' 20)*, Springer, September 2020, Portugal.

[C56] E. M. Arvanitou, A. Ampatzoglou, N. Nikolaidis, A. A. Tzintzira, A. Ampatzoglou, and A. Chatzigeorgiou, "Investigating Trade-offs between Portability, Performance and Maintainability in Exascale Systems", *46th Euromicro Conference on Software Engineering and Advanced Applications (SEAA' 20)*, IEEE Computer Society, August 2020, Slovenia.

[C55] I. Stamelos, C. Avratoglou, P. Tzinis, G. Kakarontzas, A. Chatzigeorgiou, A. Ampatzoglou, D. Folinas, I. Stratigakis, L. Karavidas, C. Volioti, T. Amanatidis, A. Deliga, and T. Tsiatsos, "Towards a Remote Warehouse Management System", *17th International Conference on Remote Engineering and Virtual Instrumentation (REV' 20)*, Springer, 26-28 February 2020, Georgia, USA.

[C54] M. E. Paschali, A. Ampatzoglou, R. Escourrou, A. Chatzigeorgiou, and I. Stamelos, "A Metric Suite for Evaluating Interactive Scenarios in Video Games: An Empirical Validation", *35th ACM/SIGAPP Symposium on Applied Computing (SAC' 20)*, ACM, Brno, Czech Republic, 2020.

[C53] I. Zozas, S. Bibi, A. Ampatzoglou and P. Sarigiannidis, "Estimating the maintenance effort of JavaScript Applications", *45th Euromicro Conference on Software Engineering and Advanced Applications (SEAA' 19)*, IEEE, Kalithea, Greece, August, 2019.

[C52] N. Nikolaidis, G. Digkas, A. Ampatzoglou and A. Chatzigeorgiou, "Reusing Code from StackOverflow: The Effect on Technical Debt", *45th Euromicro Conference on Software Engineering and Advanced Applications (SEAA' 19)*, IEEE, Kalithea, Greece, August, 2019.

[C51] A. A. Tsintzira, A. Ampatzoglou, O. Matei, A. Ampatzoglou, A. Chatzigeorgiou, and R. Heb, "Technical Debt Quantification through Metrics: An Industrial Validation", *15th China-Europe International Symposium on Software Engineering Education (CEISEE' 19)*, IEEE, Portugal, 2019.

[C50] A. Ampatzoglou, A. A. Tsintzira, E. M. Arvanitou, A. Chatzigeorgiou, I. Stamelos, A. Moga, R. Heb, O. Matei, N. Tsiridis, and D. Kehagias, "Applying the Single Responsibility Principle in Industry: Modularity Benefits and Trade-offs", *23rd Evaluation and Assessment in Software Engineering (EASE' 19)*. ACM, Copenhagen, Denmark, April 2019.

[C49] E. M. Arvanitou, A. Ampatzoglou, S. Bibi, A. Chatzigeorgiou, and I. Stamelos, "Monitoring Technical Debt in an Industrial Setting", *23rd Evaluation and Assessment in Software Engineering (EASE' 19)*. ACM, Copenhagen, Denmark, April 2019.

[C48] P. Kouros, T. Chaikalis, E. M. Arvanitou, A. Chatzigeorgiou, A. Ampatzoglou, and T. Amanatidis, "JCaliper: Search-Based Technical Debt Management", *34th Symposium on Applied Computing (SAC' 19)*. ACM, Limassol, Cyprus, April 2019.

[C47] A. Lampropoulos, A. Ampatzoglou, S. Bibi, A. Chatzigeorgiou, and I. Stamelos, "REACT - A Process for Improving Open-Source Software Reuse", *11th International Conference on the Quality of Information and Communications Technology*, IEEE Computer Society, Coimbra, Portugal, 4-7 September 2018.

[C46] L. Papadopoulos, C. Marantos, G. Digkas, A. Ampatzoglou, A. Chatzigeorgiou and D. Soudris, "Interrelations between Software Quality Metrics, Performance and Energy Consumption in Embedded Applications", 21st Workshop on Software and Compilers for Embedded Systems (SCOPES' 18), ACM, Germany, 28-30 May 2018.

[C45] S. Charalampidou, E. M. Arvanitou, A. Ampatzoglou, A. Chatzigeorgiou, P. Avgeriou, and I. Stamelos, "Structural Quality Metrics as Indicators of the Long Method Bad Smell: An Empirical Study", *44th Conference on Software Engineering and Advanced Applications (SEAA' 18)*, IEEE, Czech Republic, 29-31 August 2018.

[C44] P. Skiada, A. Ampatzoglou, E. M. Arvanitou, A. Chatzigeorgiou, and I. Stamelos, "Exploring the Relationship between Software Modularity and Technical Debt", *44th Conference on Software Enginering and Advanced Applications (SEAA' 18)*, IEEE Computer Society, Prague, Czech Republic, 29-31 August, 2018.

[C43] S. Charalampidou, A. Ampatzoglou, A. Chatzigeorgiou, and N. Tsiridis, "Integrating Requirement Specifications and Source Code Traceability within the IDE to Prevent Documentation Debt", 44th Conference *on Software Engineering and Advanced Applications (SEAA' 18)*, IEEE Computer Society, Czech Republic, 2018.

[C42] T. Amanatidis, N. Mittas, A. Chatzigeorgiou, A. Ampatzoglou, and L. Angelis, "The developer's dilemma: Factors affecting the Decision to Repay Code Debt", 1st International Conference on Technical Debt (TechDEBT' 18), ACM, 27-28 May, Sweden, 2018.

[C41] A. Ampatzoglou, A. Michailidis, C. Sarikyriakidis, A. Ampatzoglou, A. Chatzigeorgiou, and P. Avgeriou, "*A Framework for Managing Interest in Technical Debt: An Industrial Validation*", 1st International Conference on Technical Debt (TechDEBT' 18), ACM, 27-28 May, Sweden, 2018.

[C40] A. Ampatzoglou, S. Bibi, A. Chatzigeorgiou, P. Avgeriou, and I. Stamelos, "Reusability Index: A Measure for Assessing Software Assets Reusability", *17th International Conference on Software Reuse (ICSR' 18)*, Springer, 21-23 May, Spain. **Best Paper Award.**

[C39] G. Digkas, M. Lungu, A. Chatzigeorgiou, A. Ampatzoglou and P. Avgeriou, "How Do Developers Pay Back Technical Debt in the Apache Ecosystem?", *25th International Conference on Software Analysis, Evolution and Reengineering (SANER' 18)*, IEEE, Campobasso, Italy, 20-23 March 2018.

[C38] M. E. Paschali, N. Bafatakis, A. Ampatzoglou, A. Chatzigeorgiou, and I. Stamelos, "Tool-Assisted Game Scenario Representation through Flow Charts", *13th International Conference on the Evaluation of Novel Approaches to Software Engineering (ENASE' 18)*, Portugal, 23-24 March 2018.

[C37] E. M. Arvanitou, A. Ampatzoglou, K. Tzouvalidis, A. Chatzigeorgiou, P. Avgeriou, and I. Deligiannis, "Assessing Change Proneness at the Architecture Level: An Empirical Validation", *1st International Workshop on Emerging Trends in Software Design and Architecture (WETSoDA '17)*, IEEE, Nanjing, China, 4 December 2017.

[C36] D. Feitosa, P. Avgeriou, A. Ampatzoglou, E. Y. Nakagawa, "The Evolution of Design Pattern Grime: An Industrial Case Study", *18th International Conference on Product-Focused Software Process Improvement (PROFES '17)*, Austria, 2017.

[C35] M. V. Kosti, A. Ampatzoglou, A. Chatzigeorgiou, G. Pallas, I. Stamelos, and L. Angelis, "TD Principal Assessment through Structural Quality Metrics", *43rd Euromicro Conference on Software Engineering and Advanced Applications (SEAA' 17)*, IEEE, Austria, 30 August – 1 September 2017.

[C34] S. Charalampidou, A. Ampatzoglou, A. Chatzigeorgiou, and P. Avgeriou, "Assessing Code Smell Interest Probability: A Case Study", *9th International Workshop on Managing Technical Debt (MTD' 17)*, ACM, Cologne, Germany, 22 May 2017.

[C33] T. Amanatidis, A. Chatzigeorgiou, A. Ampatzoglou, and I. Stamelos, "Who is Producing More Technical Debt? A Personalized Assessment of TD Principal", *9th Intern. Workshop on Managing Technical Debt (MTD' 17)*, ACM, Germany, May 2017.

[C32] E. M. Arvanitou, A. Ampatzoglou, A. Chatzigeorgiou, and P. Avgeriou, "A Method for Assessing Class Change Proneness", *21st International Conference on the Evaluation and Assessment on Software Engineering (EASE' 17)*, ACM, Sweden, **Best Paper Award.**

[C31] S. Charalampidou, A. Ampatzoglou, P. Avgeriou, S. Sencer, E. M. Arvanitou, and I. Stamelos, "A Theoretical Model for Capturing the Impact of Design Patterns on Quality: The Decorator Case Study", *32nd ACM Symposium on Applied Computing (SAC 2017)*. ACM, Morocco, 3-7 April 2017.

[C30] A. Ampatzoglou, P. Avgeriou, T. Koenders, P. van Alphen, and I. Stamelos, "Quality Rule Violations in SharePoint Applications: An Empirical Study in Industry", *17th International Conference on Product-Focused Software Process Improvement (PROFES 2016)*, Springer, Trondheim, Norway, 22-24 November 2016.

[C29] A. Ampatzoglou, A. Ampatzoglou, A. Chatzigeorgiou, P. Avgeriou, P. Abrahamsson, A. Martini, U. Zdun, K. Systa, "The Perception of Technical Debt in the Embedded Systems Domain: An Industrial Case Study", *8th International Workshop on Managing Technical Debt (MTD' 2016)*, USA, 2016.

[C28] G. Digkas, A. Chatzigeorgiou, A. Ampatzoglou, and P. Avgeriou, "A Study On The Accumulation Of Technical Debt On Framework-based Web Applications", *9th Seminar Series on Advanced Techniques & Tools for Software Evolution (SATToSE 2016)*, Bergen, Norway, 11-13 July 2016.

[C27] M. E. Paschali, A. Ampatzoglou, S. Bibi, A. Chatzigeorgiou, and I. Stamelos, "A case study on the availability of open-source components for game development", *15th International Conference on Software Reuse (ICSR' 16)*, Springer, 5-7 June, Cyprus.

[C26] S. Bibi, A. Ampatzoglou, and I. Stamelos, "A Bayesian Belief Network for Modeling Open Source Software Maintenance Productivity", *12th International Conference on Open Source Software Systems (OSS 2016)*, Springer, 2016, Sweden.

[C25] P. Kyriakakis, A. Chatzigeorgiou, A. Ampatzoglou, and S. Xinogalos, "Evolution of method invocation and object instantiation pattern in PHP ecosystem", 20th Pan-Hellenic Conference on Informatics (PCI 2016). ACM, 2016.

[C24] X. C. Kounoukla, A. Ampatzoglou, and K. Anagnostopoulos, "Implementing Game Mechanics with GoF Design Patterns", 20th Pan-Hellenic Conference on Informatics, 2016.

[C23] E. M. Arvanitou, A. Ampatzoglou, A. Chatzigeorgiou, and P. Avgeriou, "Introducing a Ripple Effect Measure: A Theoretical and Empirical Validation", *9th International Symposium on Empirical Software Engineering and Measurement (ESEM' 15)*, IEEE, 2015.

[C22] S. Charalampidou, A. Ampatzoglou, P. Avgeriou, "Size and cohesion metrics as indicators of the long method bad smell: An empirical study", *11th International Conference on Predictive Models and Data Analytics in Software Engineering (PROMISE' 15)*, ACM, 2015.

[C21] A. Chatzigeorgiou, A. Ampatzoglou, A. Ampatzoglou, and T. Amanatidis, "Estimating the Breaking Point for Technical Debt", *7th International Workshop on Managing Technical Debt (MTD' 15)*, IEEE Computer Society, 2 October 2015, Germany.

[C20] D. Feitosa, A. Ampatzoglou, P. Avgeriou and E. Y. Nakagawa, “Investigating Quality Trade-offs in Open-Source Critical Embedded Systems", *11th International Conference on the Quality of Software Architectures (QoSA' 15)*, ACM, 2015, Canada.

[C19] A. Zaimi, A. Ampatzoglou, N. Triantafyllidou, A. Chatzigeorgiou, A. Mavridis, T. Chaikalis, I. Deligiannis, P. Sfetsos, and I. Stamelos, “An Empirical Study on Reusing Third-Party Libraries in Open-Source Software Development”, *7th Balkan Conference on Informatics (BCI’ 15)*, ACM, 2 – 4 Sept. 2015, Romania.

[C18] T. Chaikalis, A. Chatzigeorgiou, A. Ampatzoglou and I. Deligiannis, “Assessing the Evolution of Quality in Software Libraries”, *7th Balkan Conference on Informatics (BCI’ 15)*, ACM, 2015.

[C17] A. Ampatzoglou, A. Ampatzoglou, P. Avgeriou, and A. Chatzigeorgiou, “Establishing a framework for managing interest in technical debt”, *5th International Symposium on Business Modeling and Software Design (BMSD' 15)*, 2015, Milan, Italy.

[C16] L. Garcés, A. Ampatzoglou, P. Avgeriou, and E.Y. Nakagawa, “A Reference Architecture for Healthcare Supportive Home Systems”, *Workshop for Ongoing Projects on Computer-based Medical Systems*, IEEE, June 2015, Sao Carlos, Brazil.

[C15] L. Garcés, A. Ampatzoglou, P. Avgeriou, and E. Y. Nakagawa, “A Comparative Analysis of Reference Architectures for Healthcare in the Ambient Assisted Living Domain”, *28th International Symposium on Computer-Based Medical Systems*, IEEE, 22 – 25 June 2015, Sao Carlos, Brazil.

[C14] M. E. Paschali, A. Ampatzoglou, A. Chatzigeorgiou, and I. Stamelos, “Non-functional requirements that influence gaming experience: A survey on gamers satisfaction factors”, *7th MindTREK Conference (MindTREK 2014)*, ACM, 2014, Finland.

[C13] P. Sfetsos, A. Ampatzoglou, A. Chatzigeorgiou, I. Stamelos and I. Deligiannis, “A comparative study on the effectiveness of patterns in software libraries and standalone applications”, *9th International Conference on the Quality of Information and Communications Technology (QUATIC 2014)*, IEEE, 23-26 September 2014, Portugal.

[C12] S. Charalampidou, A. Ampatzoglou and P. Avgeriou, “PROMES Process Framework: A framework for modeling embedded systems development processes”, *40th Euromicro Conference on Software Engineering and Advanced Applications (SEAA’ 14)*, IEEE Computer Society, 27 - 29 August 2014, Italy.

[C11] Z. Li, P. Liang, P. Avgeriou, N. Guelfi, and A. Ampatzoglou, "An Empirical Investigation of Modularity Metrics for Indicating Architectural Technical Debt", *10th International Conference on the Quality of Software Architectures (QoSA' 14)*, ACM, 30 June - 4 July 2014, Lille, France.

[C10] A. Ampatzoglou, A. Gkortzis, S. Charalampidou and I. Stamelos, “An Embedded Multiple-Case Study on OSS Design Quality Assessment across Domains”, *7th International Symposium on Empirical Software Engineering and Measurement (ESEM’13)*, ACM, 10 - 11 October 2013, Baltimore, USA.

[C9] A. Ampatzoglou, S. Charalampidou and I. Stamelos, “Design Pattern Alternatives: What to do when a GoF pattern fails”, *17th Panhelenic Conference on Informatics (PCI’13)*, ACM, 19 - 21 September 2013, Greece.

[C8] A. Ampatzoglou, A, Gortzis, I. Deligiannis and I. Stamelos, “A Methodology on Extracting Reusable Software Candidate Components from Open-Source Games”, *5th MindTREK Conference (MindTREK 2012)*, ACM, Oct. 2012, Finland.

[C7] A. Mavridis, A. Ampatzoglou, I. Stamelos, P.Sfetsos and I. Deligiannis, “Selecting Refactorings in XP: An Option Based Approach”, *8th International Conference on the Quality of Information and Communications Technology (QUATIC 2012)*, IEEE, Portugal.

[C6] A. Ampatzoglou, A. Kritikos, M. E. Arvanitou, A. Gkortzis, F. Chatziasimidis and I. Stamelos, "An empirical investigation on the impact of design pattern application on computer game defects", *4th MindTREK Conference (MindTREK 2011)*, ACM, Tampere, Finland, September 2011.

[C5] A. Ampatzoglou, S. Charalampidou, K. Savva and I. Stamelos, "An empirical study on design pattern employment in open-source software", *5th International Conference on Evaluation of Novel Approaches in Software Engineering (ENASE'10)*, 22-24 July 2010, Athens, Greece. **Best Student Paper Award**.

[C4] M. Keskenidou, L. Koskinidou, A. Ampatzoglou, "A controlled experiment on children learning experience through computer games", *13th Panhellenic Conference on Informatics (PCI'09)*, 10-12 September 2009, Corfu, Greece

[C3] A. Ampatzoglou, A. Chatzigeorgiou, I. Stamelos, "Graphical Representation as a factor of 3D software user satisfaction: A metric-based approach", *12th Panhellenic Conference (PCI'08)*, IEEE Computer Society, 28-30 August 2008, Samos, Greece.

[C2] A. Ampatzoglou, A. Chatzigeorgiou, N. Samaras, "Investigating the use of patterns in open-source games", *3rd Balkan Conference on Informatics (BCI'07)*, 2007, Bulgaria.

[C1] O. Michou, M. Vamvaka, A. Ampatzoglou, "AynOmel 3D - A pattern-based game framework", *11th Panhellenic Conference on Informatics*, 18-20 May 2007, Greece.

RESEARCH PROJECTS

I. Overview

#Successful Proposal Preparation: 8

#Secured Funding (@Consortium Level): approx. 23.0 Mo€

#Secured Funding (@Organization Level): approx. 2.0 Mo€

#Participation in International Projects: 13

#Participation in National Projects: 7

I. Details on Research Project Experience

1. *SKILLAB: Monitoring the Demand and Supply of Skills in the European Labour Market* / **HORIZON-CL2-2023-TRANSFORMATIONS -01-07 /** Senior Researcher / Part of the Proposal Preparation Team / 2.999 Mo€
2. *RAISE: Research Analysis Identifier System* / **HORIZON-INFRA-2021-EOSC-01-04 /** Senior Researcher / Part of the Proposal Preparation Team / 4.996 Mo€
3. *SmartCLIDE: Smart Cloud Integrated Development Environment supporting the full-stack implementation, composition and deployment of data-centered services and applications in the cloud* / **H2020-ICT-2018-2020** / Senior Researcher / Part of the Proposal Preparation Team / 4.935 Mo€
4. *BLOCKADEMIC: Blockchain for Micro-Credential Certification* / **National Funds** / Senior Researcher
5. *EXA2PRO: Enhancing Programmability and boosting Performance Portability for Exascale Computing Systems* / **H2020-FETHPC-02-2017** / Senior Researcher / Part of the Proposal Preparation Team / 3.475 Mo€
6. *SDK4ED: Software Development Kit for Energy and Technical Debt Management (2018-2020)* / **H2020-ICT-05-2017** / Senior Researcher – Quality Manager / Principal Investigator @ Proposal Preparation Stage / 4.325 Mo€
7. *GraDAna: Improving Innovation and Entrepreneurship Competences of Iranian Higher Education Graduates through Data Analytics (2017-2018)* / **LLP-Erasmus-CBHE-2016** / Project and Technical Manager / Part of the Proposal Preparation Team / 688 Ko€

8. *WMS+AR: Warehouse Management with Augmented Reality (2018 - 2019) /* **National Funds** / Senior Researcher / Part of the Proposal Preparation Team / 530 Ko€.
9. *SQAP/SCADA: Study for the application of a Software Quality Assurance Plan (SQAP) in the development, testing, and documentation of project: SCADA system for Maliakos-Kleidi tunnels T1, T2, T3 and Leptokarya Control Room (2015)* / **Industrial (Siemens Hellas)** / Senior Researcher / Part of the Proposal Preparation Team / 45 Ko€
10. *WJETSS: Whole-Journey Experience through SenSourcing* / **European Space Agency (ESA)** / Senior Researcher.
11. *ACES: Architecting Critical Embedded Systems (2013-2017)* **/ EU-Brazil** / Senior Researcher
12. *PROMES: Process Models for Engineering of Embedded Systems (2013-2017)* / **H2020-ITEA2-2013** / Senior Researcher.
13. *STEREO: Software Engineering Research Platform (2012-2015) /* **National Funds** / Senior Researcher.
14. *APIvsAPP: A Comparative Study of Library and Application Software in Open-Source and Industrial Applications (2012-2015) /* **National Funds** / Senior Researcher.
15. *TRACER: Identifying software vulnerabilities and securing legacy systems (2011-2014)* **/ National Funds** / Software Designer.
16. *OpenED 2.0: Designing for Participatory Learning in Open Educational Environments (2009-2011)* **/ LLP-Erasmus-KA3-2009** / Software Engineering Educator.
17. *OpenSE: Open Educational Framework for Computer Science and Software Engineering (2009-2012)* **/ LLP-Erasmus-ECUE-2009** / Software Engineering Educator.
18. *OpenSME: Open-Source Software Reuse Service for SMEs (2009-2012)* **/ FP7-SME-2008-2** / Software Developer.
19. *SQO-OSS: Source Quality Observatory for Open-Source Software (2005-2008)* **/ FP6-IST-2005** / Software Developer.
20. *K-Clusters: Knowledge Clusters in Western Macedonia (2004-2006) /* **National Funds** / Software Developer & Graphics Designer.

TEACHING EXPERIENCE

1. **Software Engineering II (Advanced Software Engineering).** Software Design Phase: Class Diagrams, Sequence Diagrams, Design Patterns, Refactoring, and Metrics
2. **Software Engineering I (Introduction to Software Engineering).** Software Analysis Phase: Requirements Elicitation and Specification, Use Case Diagrams, Use Case Specification, System Sequence Diagrams, Prototypes
3. **Software Patterns (MSc Course).** The software patterns course deals with the most common types of software patterns, such as POSA Architectural Patterns, Design and Enterprise Patterns.
4. **Foundations of Computing: Algorithms & Data Structures (MSc / BSc Course).** The foundations course deals with the most common issues of algorithms and data structures
5. **Mobile Applications Development (MSc Course).** The mobile application course will provide the basic skills for developing mobile applications. The course has been provided in an industrial and global software engineering context (co-operation with Netherlands and Sweden)
6. **Theory of Complexity.** The complexity theory course covers three main issues: automata, computational theory, and complexity theory
7. **Language and Compilers Design.** Static and dynamic scope, methods and sub-programs, structure of programming languages, lexical and structural analysis, and grammars
8. **Human-Computer Interaction.** User interface design, input/output management, HCI principles

9. **Web Development.** Web development in php, MySQL, html, and css
10. **Introduction to Programming.** Input – Output, variable declaration, if statements, while statements
11. **Expert Systems.** Fuzzy Logic and Evolutionary Algorithms
12. **Introduction to Object – Oriented Programming.** Class declaration, constructors, attributes, methods, inheritance, object composition/aggregation, basic OOP principles, both in Java and C++

STUDENT SUPERVISION

I. Post-Doc Researchers

1. E. M. Arvanitou, "T_2DO: Technical Debt for DevOps", Πανεπιστήμιο Μακεδονίας (2020 - 2022), ***Personal Research Grant from National Scholarships Association in Greece***.

II. PhD Candidates (Promotor or Co-Promotor)

1. E. M. Arvanitou, "Proposing and Empirically Validating Change Impact Analysis Metrics", PhD Project from University of Groningen (2014 - 2018).
2. D. Feitosa, "Architecting Critical Embedded Systems", PhD Project from University of Groningen and University of Sao Paolo (2013 - 2019).
3. S. Charalampidou, "Process Models for Engineering of Embedded Systems", PhD Project from University of Groningen (2013 - 2019).
4. G. Digkas, "Data-Driven Analysis of Technical Debt based on Open-Source Software Projects", PhD project from University of Macedonia (2017 - 2021)
5. N. Nikolaidis, "Technical Debt Management in Contemporary Software Application", PhD project from University of Macedonia (2021 – present)
6. I. Kalouptsoglou, "Identification of Software Vulnerabilities based on Machine Learning", PhD project from University of Macedonia (2021 – present)
7. T. Maikantis, "Assessing and Improving the Quality of Complex Software Systems", PhD project from University of Macedonia (2023 – present)

III. MSc Theses / Research Internships

1. K. Seretis, "Software Quality Assurance in SQP Systems", University of Macedonia (2023)
2. P. Argyriadou, "Technical Debt Interest Quantification", University of Macedonia (2023)
3. T. Maikantis, "Service Creation and Composition for Developing Cloud Applications", University of Macedonia (2022).
4. P. Argyriadou, "Software Maintenance Cost Estimation", University of Macedonia (2022).
5. A. Tsichouridis, "Evaluation of Static Code Analysis Methods and Application in Teaching Programming", University of Macedonia (2021).
6. N. Nikolaidis, "Empirical Evaluation of the Human Factor in Technical Debt Management", University of Macedonia (2021).
7. M. Kretsou, "Metrics and Methods for Change Impact Analysis: A Systematic Literature Review", Open Hellenic University (2020).
8. A. Lampropoulos, "Mobile application development with reusable code", International Hellenic University (2017).
9. A. Michailidis, "Software refactoring: industrial practices, challenges and benefits", International Hellenic University (2017).

10. G. Gkroztidou, “Game-based learning in high school”, International Hellenic University (2017).
11. P. Skiada, “Architectural Technical Debt Management by Focusing on the Interplay between Coupling and Cohesion Metrics”, Aristotle University of Thessaloniki (2017)
12. A. Gkortzis, “Extract Method Refactoring Opportunities by Applying the Single Responsibility Principle”, University of Groningen (2015).
13. T. Koenders, “SharePoint: Quality analysis”, University of Groningen (2014).
14. A. Gkortzis, “Maintainability Prediction Metrics”, University of Groningen (2014).
15. R. Urias, “Comparing the Design Quality of Systems Developed in Different Programming Languages”, University of Groningen (2014).
16. E. M. Arvanitou, “The effect of GoF design patterns on software design quality”, Aristotle University of Thessaloniki (2013).
17. K. Savva, “Code reuse in object-oriented e-commerce applications”, Aristotle University of Thessaloniki (2010).
18. O. Michou and E. Karamanou, “A methodology for reusing code-based n design pattern instances”, Aristotle University of Thessaloniki (2010).

IV. BSc Theses / Research Internships

1. E. Papagiannaki and E. Polyzoidou, “Design Pattern Selection Advisor for Cloud-based Applications”, University of Macedonia (2022).
2. A. Giannopoulos, “Web Application for Computer Reservation Systems to Reduce the Spread of COVID-19 Virus”, University of Macedonia (2021).
3. A. Gkagkas, “Using Design Patterns for Implementing Game Mechanics”, University of Macedonia (2020).
4. T. Maikantis, “A Methodology for Automated Software Architecture Recovery”, International Hellenic University (2020).
5. E. Drakakis, “Design and Implementation of a 3D Game, using a Game Engine”, Open Hellenic University (2019).
1. A. Tsintzira, “Enhancing the Modularity of Software Systems”, University of Western Macedonia (2018).
2. C. Sarikyriakidis, “Evolution Analysis of Technical Debt”, University of Western Macedonia (2017).
3. B. Benel, “Construction of a C++ parser for static source code quality analysis”, University of Groningen (2015).
4. S. Sencer, “The effect of GoF design patterns on software quality”, University of Groningen (2015).
5. M. Verbeek, “A Tertiary Study on Secondary Studies Threats to Validity”, University of Groningen (2015).
6. R. Escourrou, “Computer Game Scenario Representation and Evaluation”, University of Groningen (2014).
7. A. Gkortzis, “A strategy for selecting classes for reuse in order to optimize the quality of the selected code”, Technological Education Institute of Thessaloniki (2012).
8. T. Margariti, “Specifying GoF design patterns UML”, Technological Education Institute of Thessaloniki (2012).
9. I. Koutalianou, “Evaluation of OSS with community metrics”, Technological Education Institute of Thessaloniki (2012).

10. N. Triantafyllidou, “Empirical investigation on the evolution of the quality of OSS”, Technological Education Institute of Thessaloniki (2012).
11. E. Nikolaidis, “Designing and implementing game design patterns with GoF design patterns”, Technological Education Institute of Thessaloniki (2012)
12. S. Tsikiltsidis, “Automating the retrieval of community metrics from OSS”, Technological Education Institute of Thessaloniki (2012).
13. E. Sertaridou, “An empirical investigation on the evolution of class change proneness in OSS”, Technological Education Institute of Thessaloniki (2012).
14. K. Simitsi, “Systematic Literature Review on Quality Driven Software Development”, Technological Education Institute of Thessaloniki (2012).
15. E. M. Arvanitou, “An empirical investigation of the effect of GoF design patterns on software defects in OSS games”, Techno Education Institute of Thessaloniki (2011).
16. S. Gkikas, “Designing 3D scenes based on non-functional requirements”, Technological Education Institute of Thessaloniki (2011).
17. K. Souvatzopoulos, “Game Development with Java”, Technological Education Institute of Thessaloniki (2010).
18. S. Charalampidou, “An empirical investigation of the use of GoF design patterns in OSS software games”, Technological Education Institute, Thessaloniki (2010).
19. T. Skevouli, “Dynamic Webpages: A student assessment handling system”, Technological Education Institute of Thessaloniki (2009).
20. E. Tsiaousi, “Software Engineering: Systematic Literature Review – A portal for searching publications”, Technological Education Institute of Thessaloniki (2009).
21. J. Lazkakis, “Design and Implementation of a 3D Basketball application, based on Design Patterns”, Aristotle University of Thessaloniki (2009).
22. S. Kapiris, “Design and Implementation of the Interface of a two players 3D game”, Aristotle University of Thessaloniki (2008).

SCIENTIFIC ACKNOWLEDGEMENT

I. Event Organization – Invited Talks

1. *Tools and Demos Chair* of the 18th European Conference on Software Architecture (ECSA’ 24), Luxemburg, 2024.
2. *Doctoral Symposium Chair* of the 28th International Conference on Evaluation and Assessment in Software Engineering (EASE’ 24), Salerno, Italy, 2024.
3. *Program Chair* of the 4th Software Analytics: Mining Software Open Datasets and Repositories (STREAM) track, of the 49th International Conference on Software Engineering and Advanced Applications (SEAA’ 23), Albania, 2023.
4. *Program Chair* of the 1st International Workshop on Technical Debt for Variability-intensive Systems (TD4VIS ‘22), Graz, Austria, September 2022.
5. *Workshop Chair* of the 29th IEEE International Conference on Software Analysis, Evolution and Reengineering (SANER ‘22), Honolulu, Hawaii, USA, 2022.
6. *Proceedings Chair* of the 4th International Conference on Technical Debt (TechDEBT’ 21), Spain, 2021.
7. *Program Chair* of 5th Workshop on Machine Learning Techniques for Software Quality Evaluation (MaLTeSQuE’ 21), San Francisco, USA, 2021.

8. *Program Chair* of the 2nd Software Analytics: Mining Software Open Datasets and Repositories (STREAM) track, of the 47th International Conference on Software Engineering and Advanced Applications (SEAA' 21), Italy, 2021.
9. *Workshop Chair* of the 24th International Conference on Evaluation and Assessment in Software Engineering (EASE' 20), Trondheim, Norway, 2020.
10. *Program Chair* of the 1st Software Analytics: Mining Software Open Datasets and Repositories (STREAM) track, of the 46th International Conference on Software Engineering and Advanced Applications (SEAA' 20), Slovenia, 2020.
11. *Program Chair* of the 18th International Conference on Software Reuse (ICSR' 19), 2019, Ohio, USA.
12. Invited as a *Panelist* for discussing: "*The Role of Assessment/Evaluation in Software Engineering*" in the 23rd International Conference on the Evaluation and Assessment in Software Engineering (EASE' 19), that will be held in Copenhagen, Denmark.
13. *Organizer* of the 3rd Workshop on Machine Learning Techniques for Software Quality Evaluation (MaLTeSQuE' 19), Tallinn, Estonia, 2019.
14. *Program Chair* of the 3rd Software Engineering and Technical Debt (SEATED' 19) track, of the 45th International Conference on Software Engineering and Advanced Applications (SEAA' 19), Thessaloniki, Greece, 2019.
15. *Program Chair* of the 2nd Workshop on Machine Learning Techniques for Software Quality Evaluation (MaLTeSQuE' 18), Campobasso, Italy, 2018.
16. *Invited Speaker* in the Research Committee of Technopolis Cluster (IT industries in Thessaloniki). Subject: "Technical Debt Management in Industry", April 2017.
17. *Invited Speaker* in the Pre-DEVit Week (Thessaloniki.NET Meetup). Subject "Technical Debt Management in Industry", May 2017.
18. *Program Chair* of the 1st Workshop on Processes, Methods, and Tools for Engineering Embedded Systems (PROMOTE' 15), Bolzano, Italy, 2 December 2015.

II. Participation in Program Committees

1. The 21st International Conference on Software and Systems Reuse (ICSR' 24), Cyprus, 2024.
2. The 7th International Conference on Technical Debt (TechDEBT' 24), Portugal, 2024.
3. The 31st International Conference on Software Analysis, Evolution and Reengineering (SANER '24), Finland, 2024.
4. The 17th European Conference on Software Architecture (ECSA '23), Turkey, 2023.
5. The 19th China - Europe International Symposium on Software Engineering Education (CEISEE' 23), China, 2023.
6. The 49th International Conference on Software Engineering and Advanced Applications (SEAA' 23), Albania, 2023.
7. The 6th International Conference on Technical Debt (TechDEBT' 23), Australia, 2023.
8. The 16th International Symposium on Empirical Software Engineering and Measurement (ESEM' 22), Helsinki, Finland, September 2022.
9. The 2nd International Workshop on Automated Software Engineering for Computer Games (ASE4GAMES '22), Michigan, United States, 2022.
10. The 48th International Conference on Software Engineering and Advanced Applications (SEAA' 22), Gran Canary, Spain, 2022.
11. The 5th International Conference on Technical Debt (TechDEBT' 22), Pittsburgh, USA, 2022.

12. The 20th International Conference on Software and Systems Reuse (ICSR '22), Montpellier, France, 2022.
13. The 29th Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE' 21), Athens, Greece, August 2021.
14. The 14th International Conference on the Quality of Information and Communications Technology – Track: Quality in Agile Methods (QUATIC' 21), Portugal, September 2021.
15. The 4th International Conference on Technical Debt (TechDEBT' 21), Madrid, Spain, 2021.
16. The 28th International Conference on Software Analysis, Evolution and Reengineering (SANER '21)— Tool Track, Honolulu, USA, 9-12 March 2021.
17. The 47th International Conference on Current Trends in Theory and Practice of Computer Science (SOFSEM '21), Bolzano, Italy, 25-28 January 2021
18. The 13rd International Conference on the Quality of Information and Communications Technology – Track: Quality in Agile Methods (QUATIC' 20), Portugal, September 2020.
19. The 19th International Conference on Software and Systems Reuse (ICSR '20), Hammamet, Tunisia, 9-11 November 2020.
20. The 10th International Symposium on Business Modeling and Software Design (BMSD' 20), Berlin, Germany, 6 – 8 July 2020.
21. The 3rd International Conference on Technical Debt (TechDEBT' 20), Seoul, South Korea, 25 – 26 May 2020.
22. The 19th International Conference on Software Process Improvement and Capability Determination (SPICE' 20), Roskilde, Denmark, 6 - 8 April 2020.
23. The 27th IEEE International Conference on Software Analysis, Evolution and Reengineering (SANER '20), Ontario, Canada, February 18-21, 2020.
24. The 15th Evaluation of Novel Approaches to Software Engineering (ENASE' 20), Prague, Czech Republic, 5 – 6 May 2020.
25. The 46th International Conference on Current Trends in Theory and Practice of Computer Science (SOFSEM' 20), Limassol, Cyprus, 20-24 January 2020.
26. The 2nd International Conference on Technical Debt (TechDEBT' 19), Montreal, Canada, 26 – 27 May 2019.
27. The 23rd International Conference on Evaluation and Assessment in Software Engineering (EASE' 19), Copenhagen, Denmark, 15 – 17 April 2019.
28. The 1st International Workshop on Control of Alternatives and Quality (ctrlaltq2019), Paris, France, 19-23 September 2019.
29. The 23rd Pan-Hellenic Conference on Informatics (PCI' 19), Cyprus, 28 - 30 November 2019.
30. The 14th Evaluation of Novel Approaches to Software Engineering (ENASE' 19), Greece, May 2019.
31. The 7th International Conference on Model-Driven Engineering and Software Development (MODELSWARD' 19), Prague, Czech Republic, 20 – 22 February 2019.
32. The 22nd International Conference on Evaluation and Assessment in Software Engineering (EASE' 18), Christchurch, New Zealand, 28 – 29 June 2018.
33. The 44th International Conference on Software Engineering and Advanced Applications (SEAA' 18), Prague, Czech Republic, 29 -31 August 2018.
34. The 14th World Congress on Services (SERVICES' 2018), Seattle, USA, June 2018.
35. The 18th International Conference on Software Process Improvement and Capability Determination (SPICE' 18), Thessaloniki, Greece, 9 - 10 October 2018.

36. The 11th International Symposium on Empirical Software Engineering and Measurement (ESEM' 17), Toronto, Canada, 9 - 10 November 2017.
37. The 21st International Conference on Evaluation and Assessment in Software Engineering (EASE' 17), Karlskrona, Sweden, 15 – 16 June 2017.
38. The 13th World Congress on Services (SERVICES' 2017), Hawaii, USA, June 2017.
39. The 43rd International Conference on Software Engineering and Advanced Applications (SEAA' 17), Vienna, Austria, 30 August – 1 September 2017.
40. The 13th China - Europe International Symposium on Software Engineering Education (CEISEE' 2017), Athens, Greece, May 2017.
41. The 1st International Workshop on Emerging Trends in Software Design and Architecture (WETSoDA' 17), Nanjing, China, 4 – 8 December.
42. The 10th International Symposium on Empirical Software Engineering and Measurement (ESEM' 16), Ciudad Real, Spain, 8 - 9 September 2016.
43. The 15th International Conference on Software Reuse (ICSR' 16), Cyprus, 5 - 7 June 2016.
44. The 20th Panhellenic Conference on Informatics (PCI' 16), Greece, 10 - 12 November 2016.
45. The 14th International Conference on Software Reuse (ICSR' 15), USA, 4 - 6 January 2015.
46. The 2nd International Workshop on Advanced Probability and Statistics in Information Systems (ASPIS' 15), Stockholm, Sweden, 8 - 12 June 2015.
47. The 19th Panhellenic Conference on Informatics (PCI' 15), Greece, October 2015.
48. The 6th International Conference on Information, Intelligence, Systems and Applications (IISA' 15), Corfu, Greece, 6 - 8 July 2015.
49. The 9th International Conference on the Quality of Information and Communications Technology – Track: Quality in Agile Methods (QUATIC' 14), Portugal, 23 - 26 September 2014.
50. The 18th Panhellenic Conference on Informatics (PCI' 14), Greece, 2 - 4 October 2014.
51. The 1st International Workshop on Advanced Probability and Statistics in Information Systems (ASPIS' 14), Greece, 16 - 20 June 2014.
52. The 17th Panhellenic Conference on Informatics (PCI' 13), Thessaloniki, Greece, 19 - 21 September 2013.
53. The 3rd FTRA International Conference on Computer Science and its Applications (CSA' 11), Jeju, Korea, 12 - 15 December 2011.
54. The 4th International Theoretical and Practical Conference Object Systems (Object Systems' 11), Shakhty, Russia, 10 – 12 November 2011.

III. Participation in Editorial Boards / Conference Steering Committees

1. Steering Committee of the Workshop on Machine Learning Techniques for Software Quality Evolution (2018-present)
2. Special Issue Guest Editor for Empirical Software Engineering – SI: Machine Learning for Software Quality (2022)
3. Special Issue Guest Editor for Journal of Systems and Software – SI: Software Reuse (2020)
4. Special Issue Guest Editor for Journal of Software: Evolution and Process – SI: Machine Learning for Software Quality (2019)
5. Executive Editor for the Journal of Software: Evolution and Process, Wiley
6. Member of the Editorial Board for the e-Informatica Software Engineering Journal.

IV. Evaluation Committees

1. E. Zabardast, "Asset Management, Asset Degradation, and Technical Debt", Blekinge Technical School, Sweden, May 2023 (exam committee)
2. Member of the Evaluation Board of Scientific and Research Project Proposals. Hellenic Foundation for Research and Innovation (HRFI) of Greece.
3. M. Papamichael, "Intelligent Methodology for Assessing the Maintainability of Software Projects using Data Mining", Department of Electrical and Computer Engineering, Aristotle University of Thessaloniki, May 2021 (exam committee)
4. M. Papoutsoglou, "Statistical Methods in Human Resources Competencies Data", Department of Informatics, Aristotle University of Thessaloniki, March 2021 (exam committee)
5. T. Amanatidis, "A study on the evolution of software quality and technical debt in open-source applications", Department of Applied Informatics, University of Macedonia, May 2020 (exam committee)
6. C. Zolotas, "Developing Automated Mechanisms and Techniques for Software Construction using the REST Architectures, based on Model-Driven Software Engineering", Department of Electrical and Computer Engineering, Aristotle University of Thessaloniki, January 2020 (exam committee)
7. M. Leppänen, "Vanishing Point: Where Infrastructures, Architectures, and Processes of Software Engineering Meet", Faculty of Computing and Electrical Engineering of Tampere University of Technology, October 2016 (exam committee)
8. Member of the Evaluation Board of Scientific and Research Project Proposals. National Center of Science and Technology Evaluation (NCSTE) of Kazakhstan.

V. Reviewer in Journals

1. Transactions on Software Engineering, IEEE
2. Transactions on Software Engineering and Methodology, ACM
3. Empirical Software Engineering, Springer
4. IEEE Software, IEEE Computer Society
5. Information and Software Technology, Elsevier
6. Journal of Systems and Software, Elsevier
7. Journal of Software Quality, Springer
8. Journal of Software: Evolution & Maintenance Process, J. Wiley & Sons
9. Science of Computer Programming, Elsevier
10. Computer Languages, Systems & Structures, Elsevier
11. IET Software, IEEE Computer Society
12. Entertainment Computing, Elsevier
13. Computers in Industry, Elsevier
14. Information Sciences, Elsevier
15. Additional publication venues have been omited

GRANTS, AWARDS & DISTINCTIONS

1. Acknowledged as part of the **top-7 reviewers** for the Journal of Systems and Software (*in top-3 journals in the area of software engineering*) for the year 2022.
2. The doctoral thesis of my PhD student Dr. Ampatzoglou Areti was acknowledged as the ***best PhD thesis in Computer Science*** for the 2020-2021 academic year (*University of Groningen*)

3. **Best full paper award** in the 12th International Green and Sustainable Computing Conference (IGSCC '21)— *Decision Support for GPU Acceleration by Predicting Energy Savings and Programming Effort*.
4. Acknowledged as the **18th most active Consolidated Researcher in terms of publishing in high-quality Software Engineering journals** for the period 2013-2020, based on the ranking of the Journal of Systems and Software.
5. Acknowledged as the **3rd most active Early-Stage Researcher in terms of publishing in high-quality Software Engineering journals** for the period 2010-2017, 9th most active Early-Stage Researcher in Software Engineering for the period 2015-2017, and 19th most active Early-Stage Researcher in Software Engineering for the period 2010-2017, based on the Journal of Systems and Software.
6. Personal Research Grant from National Scholarships Association, **"Support for Post-Doc Researchers",** from 01-03-17 until 28-02-19 (*Secured Funding*: 25 Ko€).
7. Personal Research Grant from Aristotle University Research Committee, **"Aristeia for Post-Doc Researchers",** from 01-03-12 until 31-12-12 (*Secured Funding*: 5 Ko€).
8. Acknowledged as part of the **top-7 reviewers** for the Journal of Systems and Software (*in top-3 journals in the area of software engineering*) for the years 2016 – 2017.
9. The doctoral thesis of my PhD student Dr. Elvira-Maria Arvanitou was acknowledged as the **2nd top quality thesis of the ICT field in Netherlands** for 2018.
10. **Most active researcher in terms of number of publications** in the field: "Effect of Design Patterns on Software Quality", Journal of Systems and Software, and 8th most active researcher in terms of number of publications in the field: "Design Patterns", Journal of Systems and Software.
11. **Best full paper award** in the 17th International Conference on Software Reuse (ICSR' 18): *Reusability Index: A Measure for Assessing Software Assets Reusability*.
12. **Best full paper award** in the 21st Int. Conference on Evaluation and Assessment in Software Engineering (EASE' 17): *A Method for Assessing Class Change Proneness*.
13. **Best student paper award** in the 5th International Conference on Evaluation of Novel Approaches in Software Engineering (ENASE' 10): *An empirical study on design pattern employment in open-source software*.
14. The paper *The Financial Aspect of Managing Technical Debt: A Systematic Literature Re-view* has been acknowledged as the **9th most cited paper** in the *Information and Software Technology (Elsevier)* journal from 2015.
15. The paper *Building and mining a repository of design pattern instances: Practical and research benefits* has been the **most top-5 cited papers** in the *Entertainment Computing (Elsevier)* journal.

PROFESSIONAL EXPERIENCE IN SW DEVELOPMENT

1. **odeum manger.** A desktop CRM application that enables users to handle the financial and educational issues of odium students.
2. **hotel pro.** A desktop CRM application that can be used for handling reservations in small and medium size hotels.
3. **Aynomel 3D.** An openGL graphics framework that is based on GoF design patterns in order to enable reuse, code understanding and extension.
4. **percerons.com.** A list of web services that help OSS developers and software development companies to adopt OSS in their product development: Percerons Source Code Search Engine and Percerons OSS Quality Assurance.

5. **docoffice.gr.** A web service that enables doctors and physiotherapists to handle their appointments and submit them to the corresponding organization.
6. **autoscan.gr.** A web service that helps users to estimate the cost of a used car. The web service has been developed in cooperation with used car sales people.
7. **tzimopoulos.gr/calculator.** A web service that assists civil engineers to estimate the cost of buildings that are not placed within cities.
8. **cloudit.gr.** A web service that assists civil engineers to assess the thermal performance of buildings calculates civil engineers' rewards and produces the corresponding reports.