### Daniel Feitosa

Dutch, 36 years old University of Groningen, Nijenborgh 9, 9747 AG, Groningen, NL +31 50 363 6920 d.feitosa@rug.nl https://feitosa-daniel.github.io



# **Employment**

Nov. 2021 – present	Assistant Professor at the Faculty of Science and Engineering - University of Groningen
Mar. 2019 – Oct. 2021	Assistant Professor at Campus Fryslân - University of Groningen
Mar. 2019 – Oct. 2021	Guest Researcher at the Faculty of Science and Engineering - University of Groningen
Jun. 2018 – Feb. 2019	Lecturer at Campus Fryslân - University of Groningen
Dec. 2017 - Feb. 2019	Researcher and Chief Data Scientist at Data Research Centre - University of Groningen
May 2017 - Dec. 2017	Researcher at the Faculty of Science and Engineering - University of Groningen
Aug. 2012 – Jan. 2013	Software Engineer at TQS Informática Ltda.
Feb. 2007 – Jul. 2012	Teaching Assistant in undergraduate courses at the University of São Paulo.
	Research Assistant in national research projects.

### **Studies**

May 2013 – Ja	an. 2019	<b>Ph.D.</b> in the Department of Computer Science of the University of Groningen, within the Software Engineering and Architecture group (SEARCH).
		Study funded by the National Council for Scientific and Technological Development (CNPq).
		<u>Doctoral dissertation</u> : Applying Patterns in Embedded Systems Design for Managing Quality Attributes and the Trade-offs
		Supervisors: Prof. Dr. Ir. Paris Avgeriou, Prof. Dr. Elisa Yumi Nakagawa and Dr. Apostolos Ampatzoglou
Aug. 2010 – Fe	eb. 2013	<b>M.Sc.</b> in the Institute of Mathematics and Computational Sciences of the University of São Paulo, within the Software Engineering group (LabES) and Mobile Robotics group (LRM).
		Study funded by the National Council for Scientific and Technological Development (CNPq).
		<u>Master thesis</u> : SiMuS – A Reference Architecture for Service Multirobotic Systems <u>Supervisor</u> : Prof. Dr. Elisa Yumi Nakagawa
Feb. 2006 – Ju	ıl. 2010	<b>B.S. of Computer Science</b> in the Institute of Mathematics and Computational Sciences of the University of São Paulo, with specialization in Software Engineering.
		Awarded with direct, early access to master's program.
		Bachelor thesis: Software Engineering in Embedded Software and Mobile Robot Software Development: A Systematic Mapping Supervisor: Prof. Dr. Elisa Yumi Nakagawa

# Membership in scientific & professional bodies

- 1. Member of the Institute of Electrical and Electronics Engineers (IEEE), IEEE Computer Society and IEEE Young Professionals (http://www.ieee.org/), 2018-present.
- 2. Member of the Dutch National Association for Software Engineering (VEReniging Software Engineering Nederland–VERSEN), 2019-present (leader of the Web Working Group since Oct.-2021).
- 3. Board support for the Steering Committee of European Conference on Software Architecture (ECSA), 2023-present.

## Language

Native Portuguese, Fluent English, Basic Dutch (B1)

### Professionalization

- 1. University Teaching Qualification (BKO), University of Groningen, February 2023.
- 2. Training for Online Teaching and Online Exam, University of Groningen, March 2020 (1 day).
- 3. Training Program on Intercultural Competences, University of Groningen, March June 2018 (4 days).
- 4. Training Program on Teaching for PhD Students, University of Groningen, November December 2015 (4 days).
- 5. Training Program on Presentation Skills, Graduate School of Science, September 2015 (2 days).
- 6. Training for *Thesis Supervision*, University of Groningen, department of Education Support and Innovation, 10<sup>th</sup> November 2014 (1 day).
- 7. Training Program on *Publishing in English for PhD students*, University of Groningen, September November 2013 (7 half-days).
- 8. CASE Summer School on Practical Experimentation in Software Engineering, Free University of Bozen-Bolzano, Italy,  $Julv 8^{th} Julv 11^{th} 2013$ .
- 9. Training Program on *Pedagogical Preparation*, University of São Paulo, Institute of Mathematics and Computational Sciences, August December 2010 (60 hours)

### **Distinctions**

- 1. Received ACM SIGSOFT Distinguished Paper Award for the paper "Uncovering Energy-Efficient Practices in Deep Learning Training: Preliminary Steps Towards Green AI" in the 2nd International ACM/IEEE International Conference on AI Engineering Software Engineering for AI (CAIN 2023).
- 2. Received Distinguished Reviewer Award for service as a PC member of the 20th International Conference on Mining Software Repositories (MSR 2023).
- 3. Awarded 2<sup>nd</sup> place on the Teacher of Year at Campus Fryslân, University of Groningen, 2020.
- 4. Nominated for the GEC (Groningen Engineering Center) Best PhD Thesis award, Jan. 2020.
- 5. Awarded early access to Master's Program of the Institute of Mathematics and Computational Sciences of the University of São Paulo due to academic performance, 2010.
- 6. Awarded 1<sup>st</sup> place on Track 1 of the I Brazilian Computational Linguistics Olympiad (I OLinCom), Brazilian Computer Science Society, 2009.

# **Teaching**

#### Lecturing and Coordination

Nov. 2024 – present	M.S. course: <i>Machine Learning Systems Deployment and Operations</i> (also coordinator)  Department of Computer Science – University of Groningen
Sep. 2024 – present	B.S. course: <i>Advanced Programming</i> (also coordinator)  Department of Computer Science – University of Groningen
Sep. 2022 – Oct. 2023	B.S. course: <i>Advanced Object-Oriented Programming</i> (also coordinator)  Department of Computer Science – University of Groningen
Sep. 2022 – present	B.S. course: <i>Algorithmic Programming Contests</i> Department of Computer Science – University of Groningen
Nov. 2021 – Jan. 2023	B.S. course: <i>Problem Analysis and Software Design (also coordinator)</i> Department of Computer Science – University of Groningen
Sep. 2021 – present	M.Sc. course: <i>Software Architecture</i> Department of Computer Science, University of Groningen.

Feb. 2021 – Oct. 2021	B.S. course: <i>Topics on Data Science</i> (also coordinator) Campus Fryslân – University of Groningen
Feb. 2020 – Oct. 2021	B.S. Living Lab (supervisor) Campus Fryslân – University of Groningen
Oct. 2019 – Oct. 2021	B.S. course: <i>Information Technology and its Implications</i> (also coordinator) Campus Fryslân – University of Groningen
Apr. 2019 – Oct. 2020	B.S. course: <i>Introduction to Data Science</i> (also coordinator) Campus Fryslân – University of Groningen
Sep. 2018 – Oct. 2021	B.S. course: <i>Introduction to Programming</i> (also coordinator) Campus Fryslân – University of Groningen
Sep. 2018 – Oct. 2021	B.S. course: <i>Portfolio – Global Responsibility and Leadership (mentor)</i> Campus Fryslân – University of Groningen

### Teaching Assistantship

Nov. 2014 – Jan. 2016	M.Sc. course: <i>Software Patterns</i> Department of Computer Science, University of Groningen.
Aug. 2011 – Jan. 2012	B.S. course: <i>Information systems</i> Institute of Mathematics and Computational Sciences, University of São Paulo.
Feb. 2010 – Jul. 2011	B.S. course: <i>Analysis of object-oriented designs</i> Institute of Mathematics and Computational Sciences, University of São Paulo.
Aug. 2009 – Jan. 2010	B.S. course: <i>Databases laboratory</i> Institute of Mathematics and Computational Sciences, University of São Paulo.
Feb. 2009 – Jul. 2009	B.S. course: <i>Databases</i> Institute of Mathematics and Computational Sciences, University of São Paulo.
Feb. 2007 – Jul. 2007	B.S. course: <i>Introduction to computer science</i> Institute of Mathematics and Computational Sciences, University of São Paulo.

# Supervision

PhD	
Dec. 2023 – Present	<b>Co-supervisor</b> of Jesse Maarleveld, investigating <i>Machine Learning for Technical Debt Management</i> , University of Groningen.
May. 2019 - Present	<b>Co-supervisor</b> of João Paulo Biazotto, investigating <i>Technical Debt Management under Adverse Conditions</i> , University of Groningen & University of São Paulo (double degree).
Apr. 2019 – Mar. 2024	<b>Co-supervisor</b> of Eko Rahmadian, investigating <i>Big Data Applications and Implications on Sustainable Tourism</i> , University of Groningen.
Feb. 2019 - Dec. 2021	<b>Co-supervisor</b> of Jie Tan, investigating <i>Technical Debt Repayment in Practice</i> , University of Groningen (defended in Dec. 17 <sup>th</sup> 2021).
Masters	
Feb. 2024 – Present	<b>Supervisor</b> of Germán Calcedo Pérez for his <u>master thesis</u> , <i>Enhancing and Evaluating Language Models for Al-Assisted Study Selection in Literature Reviews</i> , University of Groningen.
Feb. 2024 – Present	<b>Co-Supervisor</b> of Koen Bolhuis for his <u>master thesis</u> , <i>A linter for cost issues in cloud software</i> , University of Groningen.
Apr. 2023 – Present	<b>Supervisor</b> of Andrei Dumitriu for his <u>master internship</u> , <i>Upgrade design pattern detector and quality assessment</i> , University of Groningen.
Feb. 2023 – Present	<b>Second Supervisor</b> of Gerard Knap for his <u>master internship</u> , <i>A survey of cloud cost calculators</i> , University of Groningen.
Feb. 2023 – Jul. 2023	Second Supervisor of Albert Djkstra for his master thesis, An improved model for the allocation of

	carbon emissions among the tenants of cloud services, University of Groningen.
Jun. 2022 – Aug. 2022	<b>Supervisor</b> of Túpac Rocher for his <u>master internship</u> from Polytech Montpellier, <i>A student-friendly continuous integration pipeline</i> , University of Groningen.
Feb. 2022 – Aug. 2022	<b>Second Supervisor</b> of Richard Westerhof for his <u>master thesis</u> , <i>A model for the total carbon footprint of a cloud-based software as a service provider and its customers</i> , University of Groningen.
Feb. 2022 – Jul. 2022	<b>Second Supervisor</b> of Sjouke de Vries for his <u>master thesis</u> , <i>Cloud applications cost profiling using application performance monitoring</i> , University of Groningen.
Nov. 2021 – Jul. 2022	<b>Co-supervisor</b> of Tim Yarally for his <u>master thesis</u> , <i>Assessing the energy efficiency of training and execution of machine learning models</i> , Delft University of Technology.
May 2017 – Jul. 2017	<b>Co-supervisor</b> of Eric Rwemigabo for a <u>master internship</u> , <i>Integrating a design pattern detector into SEAgle</i> , University of Groningen.
May 2015 – Feb. 2016	<b>Co-supervisor</b> of Rutger Alders for his <u>master thesis</u> , <i>Trade-offs in performance and energy consumption of design patterns</i> , University of Groningen.
Apr. 2015 – Jun. 2015	<b>Co-supervisor</b> of Jeroen David van Leusen for a <u>master internship</u> , <i>Static analyzer for C/C++</i> , University of Groningen.
Undergraduate	
Dec. 2023 – present	<b>Supervisor</b> of Andrei-Ştefan Istudor for his <u>minor project</u> , <i>Software Mining Rig: Building a Scalable MSR Infrastructure for Research</i> , University of Groningen
Nov. 2023 – Mar. 2024	<b>Supervisor</b> of Oscar de Francesca and Konstantinos Chasiotis for their <u>short programming project</u> , <i>Development of a bot for technical debt detection in issue tracking systems</i> , University of Groningen
Feb. 2023 – Aug. 2023	<b>Supervisor</b> of Khanak Gulati for her <u>bachelor thesis</u> , <i>Empirical Evaluation of ChatGPT's Ability to Solve Coding Problems on Leetcode</i> , University of Groningen
Feb 2023 – Jul. 2023	<b>Supervisor</b> of Ana Terna and Karol Machnik for their <u>bachelor thesis</u> , <i>Is Design Pattern Grime Related to Technical Debt?</i> , University of Groningen
Feb. 2023 – Aug. 2023	<b>Co-Supervisor</b> of Mohammad Al Shakoush for his <u>bachelor thesis</u> , <i>Empirical Sentiment Analysis</i> for Predicting Cost Management Actions Related to Changes in Infrastructure-as-Code (IaC) Artifacts, University of Groningen
Oct. 2023 – present	<b>Co-supervisor</b> of Hendrik Jan van den Top for his <u>short programming project</u> , <i>GitHub Search Ranker</i> , University of Groningen
Feb. 2023 – Jun. 2023	<b>Co-supervisor</b> of Kasper Johannes Hopen Alfarnes for his <u>short programming project</u> , <i>SEARCH website</i> , University of Groningen
Jan. 2023 – present	<b>Supervisor</b> of Andrei-Ştefan Istudor for his <u>honours college research project</u> , <i>Software</i> engineering and architecture for automotive resource-limited embedded systems, University of Groningen
Nov. 2022 – Sep. 2023	<b>Supervisor</b> of Andrei Valentin Girjoaba for his <u>honours college research project</u> , <i>Natural deduction proof evaluator for Fitch style proofs</i> , University of Groningen
Nov. 2022 – Apr. 2023	<b>Co-supervisor</b> of Mohammad Al Shakoush for his <u>short programming project</u> , <i>Distributed machine-learning pipeline for software engineering sentiment analysis</i> , University of Groningen
Jul. 2022 – Aug. 2023	<b>Supervisor</b> of Tudor Dragan for his <u>honours college research project</u> , <i>IoT and the Mirai malware:</i> assessing the vulnerability of devices in the Netherlands, University of Groningen
Mar 2021 – Jul. 2021	<b>Co-supervisor</b> of Massimiliano Berardi, Rares-Dorian Boza and Matei-Tudor Penca for their <u>bachelor thesis</u> , <i>Mining and analysis of cost-related decisions in cloud infrastructures</i> , University of Groningen
May 2020 – Jan. 2021	<b>Supervisor</b> of Jana Heitkemper for a <u>research internship project</u> , <i>Netwoke: improving networking in closed environments</i> , University of Groningen
Jul. 2016 – Sep. 2016	<b>Co-supervisor</b> of Abdussamet Dumankaya for a <u>summer internship project</u> from Yıldırım Beyazıt

	University (Turkey), Automation of Quality Analysis of Java Projects, University of Groningen.
Jan. 2016 – Jul. 2016	<b>Co-supervisor</b> of Marijn Scholtens for his <u>bachelor thesis</u> , <i>Improving Quality Analysis during Continuous Integration Enhancing the FindBugs-plugin for Jenkins</i> , University of Groningen.
Jun. 2015 – Aug. 2015	<b>Co-supervisor</b> of Begum Benel and Can Berker Çıkış for a <u>summer internship project</u> from Sabanci University (Turkey), <i>Static analyzer for C/C++</i> , University of Groningen.
Jun. 2014 – Sep. 2014	<b>Co-supervisor</b> of Çağla Koca and Melda Seren İnan for <u>summer internship projects</u> from Sabanci University (Turkey), University of Groningen.

# **Technical Contributions (Software)**

- 1. **Student-friendly Report**: A GitHub action to provide feedback on Java source code quality. It is triggered on a pull request, and a report is emitted as a comment to the PR. Main language: Javascript Source code available at https://github.com/search-rug/student-friendly-report
- 2. **SSAP**: tool for detecting extended pattern participants. Creator and developer of the project, which detects additional classes that participate on GoF design patterns. Main language: *Scala*. Source code available at <a href="https://github.com/search-rug/ssap">https://github.com/search-rug/ssap</a>
- 3. **Spoon-pttgrime:** tool for calculating pattern grime metrics of GoF pattern instances. Creator and developer of the project, which implements the metric calculators as Spoon processors. Main language: Java Source code available at <a href="https://github.com/search-rug/spoon-pttgrime">https://github.com/search-rug/spoon-pttgrime</a>
- 4. **SEAgle**: tool for software evolution analysis. Contributed to the project by adding new features: design pattern detection, extra metrics, and automated compilation. Main language: *Java*. Source code available at <a href="https://bitbucket.org/feitosa-daniel/seagle-server/src">https://bitbucket.org/feitosa-daniel/seagle-server/src</a>
- 5. **Cpptool**: C/C++ static analyzer. Creator and developer of the project, which provides a parser, GUI, and additional libraries to calculate various metrics. Main languages/technologies: C++, Java, LLVM/Clang, and Google Protocol Buffer.

Source code available at <a href="https://github.com/search-rug">https://github.com/search-rug</a> (repositories cpptool\*)

## **Academic Services**

Nov.2021 – present	<b>Member</b> of the Computer Science Program Committee, Faculty of Science and Engineering - University of Groningen.
Jun. 2020 – Nov. 2021	Curriculum developer for the B.S. Data Science and Digital Society, Campus Fryslân – University of Groningen
Jun. 2018 – Oct. 2021	<b>Member</b> of the Admissions Board, University College Fryslân - University of Groningen.
Feb. 2017 – Aug. 2017	Curriculum developer for the B.S. Global Responsibility and Leadership, Campus Fryslân – University of Groningen

### **Professional Services**

#### Organization of Scientific Events

- 1. Co-Organizer of the 6th International Software Architecture PhD School (ISAPS '24)
- 2. Co-Chair of the track Software Engineering and Debt Metaphors (SEaDeM) of the 2023 Euromicro Conference on Software Engineering and Advanced Applications (SEAA '23)
- 3. Co-Organizer of the 5th International Software Architecture PhD School (ISAPS '23)
- 4. Co-Chair of the track Software Engineering and Debt Metaphors (SEaDeM) of the 2022 Euromicro Conference on Software Engineering and Advanced Applications (SEAA '22)
- 5. Virtualization Chair of the 2022 International Conference on Software Analysis, Evolution and Reengineering (SANER '22).

- 6. Web Chair of the 2021 International Conference no Technical Debt (TechDebt '21).
- 7. Co-Chair of the 2021 Workshop on Machine Learning Techniques for Software Quality Evaluation (MaLTeSQuE '21).
- 8. Chair of the Journal 1st Track of the 2020 Euromicro Conference on Software Engineering and Advanced Applications (SEAA '20).

#### Scientific Review for Journals and Magazines

- 1. Empirical Software Engineering (EMSE)
- 2. IEEE Access
- 3. IEEE Computer
- 4. IEEE Software
- 5. IEEE Transactions on Software Engineering (TSE)
- 6. IEEE Transactions on Software Engineering and Methodology (TOSEM)
- 7. IET Software
- 8. Information and Software Technology (IST)
- 9. International Journal of Network Management (NEM)
- 10. Journal of Systems and Software (JSS)
- 11. Journal of Software: Evolution and Process (JSME)
- 12. Journal of Computer Science and Technology (JCST)

#### Scientific Review for Conferences, Workshops and Books

- 1. International Conference on Software Analysis, Evolution and Reengineering (SANER 2024)
- 2. International Conference on Mining Software Repositories (MSR 2023, 2024)
- 3. International Conference no Technical Debt (TechDebt 2023, 2024)
- 4. International Conference on the Quality of Information and Communications Technology (QUATIC, 2024)
- 5. International Conference on Software Engineering (ICSE 2016, 2017, 2023)
- 6. International Conference on Program Comprehension (ICPC 2022, 2023)
- 7. International Conference on Software Architecture (ICSA 2017, 2018, 2022, 2023)
- 8. Euromicro Conference on Software Engineering and Advanced Applications (SEAA 2020, 2021, 2022, 2023)
- 9. Brazilian Symposium on Software Engineering (SBES 2016, 2021, 2022, 2023)
- 10. Symposium on Applied Computing (SAC 2022)
- 11. Empirical Software Engineering and Measurement (ESEM 2016, 2017, 2022)
- 12. Workshop on Software Quality Assurance for Artificial Intelligence (SQA4AI 2022)
- 13. International Workshop on Technical Debt for Variability-intensive Systems (TD4Vis 2022)
- 14. European Conference on Software Architecture (ECSA 2015, 2017, 2018, 2020, 2021)
- 15. Machine Learning Techniques for Software Quality Evaluation Workshop (MaLTeSQuE 2019, 2020, 2021)
- 16. International Conference on Software Reuse (ICSR 2016, 2018)
- 17. Evaluation and Assessment in Software Engineering Conference (EASE 2016, 2017, 2018)
- 18. International Conference on Advanced Information Systems Engineering (CAiSE 2015, 2016)
- 19. Australasian Software Engineering Conference (ASWEC 2015)
- 20. Working Conference on Software Architecture (WICSA 2014, 2015)

- 21. Brazilian Symposium on Software Components, Architectures, and Reuse (SBCARS 2014)
- 22. International track on adaptive and reconfigurable service-oriented and component-based Applications and Architectures (AROSA 2014)
- 23. International Conference on Model-Driven Engineering and Software Development (MODELSWARD 2014)
- 24. International Workshop on Software Engineering for Resilient Systems (SERENE 2013)

### **Publications**

#### Journals

- J1. J.P. Biazotto, **D. Feitosa**, P. Avgeriou, E.Y. Nakagawa. "Technical debt management automation: State of the art and future perspectives," *Information and Software Technology*," 167:107375. 2024.
- J2. N. Nikolaidis, N. Mittas, A. Ampatzoglou, **D. Feitosa**, A. Chatzigeorgiou. "A metrics-based approach for selecting among various refactoring candidates," *Empirical Software Engineering*, 29(1):25, 2024.
- J3. N. Nikolaidis, E.-M. Arvanitou, C. Volioti, T. Maikantis, A. Ampatzoglou, **D. Feitosa**, A. Chatzigeorgiou, P. Krief. "Eclipse Open SmartCLIDE: An end-to-end framework for facilitating service reuse in cloud development," *Journal of Systems and Software*, 207:111877. 2024.
- J4. J. Tan, **D. Feitosa**, P. Avgeriou. "The lifecycle of Technical Debt that manifests in both source code and issue trackers," *Information and Software Technology*, 159:107216, 2023.
- J5. C. Zhong, He Zhang, C. Li, H. Huang, **D. Feitosa**. "On measuring coupling between microservices," *Journal of Systems and Software*, 200:111670, 2023.
- J6. E. Rahmadian, **D. Feitosa**, Y. Virantina. "Digital twins, big data governance, and sustainable tourism," *Ethics and Information Technology*, 25(4), 2023.
- J7. J. Tan, **D. Feitosa**, P. Avgeriou. "Does it matter who pays back Technical Debt? An empirical study of self-fixed TD". *Information and Software Technology*, 143:106738, 2022.
- J8. E. Rahmadian, **D. Feitosa**, A.J. Zwitter. "A Systematic Literature Review on the use of Big Data for Sustainable Tourism". *Current Issues in Tourism*, 25(11), pp. 1711-1730, 2022.
- J9. J. Tan, **D. Feitosa**, P. Avgeriou, M. Lungu. "Evolution of technical debt remediation in Python: A case study on the Apache Software Ecosystem". *Journal of Software-Evolution and Process*, e2319, 2021.
- J10. A. Gkortzis, **D. Feitosa**, D. Spinellis. "Software reuse cuts both ways: An empirical analysis of its relationship with security vulnerabilities," *Journal of Systems and Software*, 172:110653, 2021.
- J11. **D. Feitosa**, A. Ampatzoglou, A. Gkortzis, S. Bibi, A. Chatzigeorgiou. "CODE reuse in practice: Benefiting or harming technical debt," *Journal of Systems and Software*, 167:110618, pp 1-12, 2020.
- J12. P. Smiari, S. Bibi and **D. Feitosa**. "Examining the reuse potentials of IoT application frameworks," *Journal of Systems and Software*. 169, 110706, pp. 1-17, 2020.
- J13. **D. Feitosa**, A. Ampatzoglou, P. Avgeriou, A. Chatzigeorgiou 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*, 105, p. 1-16, 2019.
- J14. **D. Feitosa**, A. Ampatzoglou, P. Avgeriou and E. Y. Nakagawa. "Correlating Pattern Grime and Quality Attributes," *IEEE Access*, 6, p. 23065-23078, 2018.
- J15. **D. Feitosa**, R. Alders, A. Ampatzoglou, P. Avgeriou, and E. Y. Nakagawa. "Investigating the effect of design patterns on energy consumption," *Journal of Software-Evolution and Process*, 29, p. e1851-e1870, 2017.

#### **International Conferences**

- C1. N. Nikolaidis, K. Flamos, K. Gulati, **D. Feitosa**, A. Ampatzoglou, A. Chatzigeorgiou. "A Comparison of the Effectiveness of ChatGPT and Co-Pilot for Generating Quality Python Code Solutions," in Proccedings of the 2024 IEEE International Conference on Software Analysis, Evolution and Reengineering Companion (SANER-C '24). 2024.
- C2. L. de Oliveira Carvalho, J. P. Biazotto, **D. Feitosa**, E. Y. Nakagawa. "Technical Debt in Continuous Software Engineering: An Overview of the State of the Art and Future Trends," in Proceedings of the 27th Ibero-American Conference on Software Engineering (CIBSE '24). 2024.
- C3. T. Yarally, L. Cruz, **D. Feitosa**, J. Sallou, A. van Deursen. "Batching for Green AI An Exploratory Study on Inference," in *Proceedings of the 49th Euromicro Conference Series on Software Engineering and Advanced Applications (SEAA '23)*. 2023.

- C4. T. Yarally, L. Cruz, **D. Feitosa**, J. Sallou, A. van Deursen. "Uncovering Energy-Efficient Practices in Deep Learning Training: Preliminary Steps Towards Green AI," in *Proceedings of the 2nd International Conference on AI Engineering Software Engineering for AI (CAIN '23)*. IEEE, 2023. (distinguished paper award)
- C5. Z. Alizadehsani, **D. Feitosa**, T. Maikantis, A. Ampatzoglou, A. Chatzigeorgiou, D. Berrocal, A. González 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," in *Proceedings of the 48th Euromicro Conference on Software Engineering and Advanced Applications (SEAA '22)*, pp. 247–254. 2022.
- C6. J. Tan, **D. Feitosa**, P. Avgeriou. "Do practitioners intentionally repay their own Technical Debt and why?," in *Proceedings of the 37th International Conference on Software Maintenance and Evolution (ICSME '21*), 2021, pp. 1-12.
- C7. J. Tan, **D. Feitosa**, P. Avgeriou. "An Empirical Study on Self-Fixed Technical Debt," in *Proceedings of the 3rd International Conference on Technical Debt (TechDebt '20)*, 2020, pp. 1-10.
- C8. J. Tan, **D. Feitosa**, P. Avgeriou. "Investigating the Relationship between Co-occurring Technical Debt in Python," in *Proceedings of the 46th EUROMICRO conference on Software Engineering and Advanced Applications (SEAA '20)*, 2020, pp. 1-8.
- C9. A. Gkortzis, **D. Feitosa** and D. Spinellis. "A Double-Edged Sword? Software Reuse and Potential Security Vulnerabilities," in *Proceedings of the 18th International Conference on Software and Systems Reuse (ICSR '19)*, 2019, pp. 1–16.
- C10. P. Smiari, S. Bibi, and **D. Feitosa**. "Examining the reusability of Smart Home applications: A Case Study on Eclipse Smart Home," in *Proceedings of the 18th International Conference on Software and Systems Reuse (ICSR '19)*, 2019, pp. 1–16.
- C11. **D. Feitosa**, A. Ampatzoglou, P. Avgeriou, Affonso, F. J., Andrade, H., Felizardo, K. R. and E. Y. Nakagawa. "Design Approaches for Critical Embedded Systems: A Systematic Mapping Study," in *Evaluation of Novel Approaches to Software Engineering: 12th International Conference (ENASE '17)*, 2017, pp. 243-274.
- C12. **D. Feitosa**, P. Avgeriou, A. Ampatzoglou, and E. Y. Nakagawa. "The Evolution of Design Pattern Grime: An Industrial Case Study," in *Proceedings of the 18th International Conference on Product-Focused Software Process Improvement (PROFES'17)*, 2017, pp. 1–16.
- C13. E. Y. Nakagawa, A. P. Allian, B. R. N. Oliveira, B. Sena, C. E. Paes, C. A. Lana, **D. Feitosa**, D. S. Santos, D. L. Zaniro, D. Dias, F. E. A. Horita, F. J. Affonso, G. Abdalla, I. Z. Vicente, L. S. Duarte, K. R. Felizardo, L. M. Garces, L. B. R. Oliveira, M. B. Goncalves, M. G. C. Morais, M. Guessi, N. F. Silva, T. Bianchi, T. Volpato, V. V. Graciano Neto, V. A. T. Zani, W. A. E. Manzano. "Software Architecture and Reference Architecture of Software-intensive Systems and Systems-of-Systems: Contributions to the State of the Art," in *Proceedings of the 11th European Conference on Software Architecture (ECSA'17)*, 2017, pp. 1–8.
- C14. **D. Feitosa**, A. Ampatzoglou, P. Avgeriou, and E. Y. Nakagawa, "Investigating Quality Trade-offs in Open Source Critical Embedded Systems," in *Proceedings of the 11th International ACM Sigsoft Conference on the Quality of Software Architectures (QoSA'15)*, 2015, pp. 113–122.
- C15. **D. Feitosa**, "An architecture design method for critical embedded systems," in *Proceedings of the Doctoral Symposium of the 11th Working IEEE/IFIP Conference on Software Architecture (WICSA'14)*, 2014, pp. 1–3.
- C16. E. Y. Nakagawa, M. Guessi, J. C. Maldonado, **D. Feitosa**, and F. Oquendo, "Consolidating a Process for the Design, Representation, and Evaluation of Reference Architectures," in *Proceedings of the 11th Working IEEE/IFIP Conference on Software Architecture (WICSA'14)*, 2014, pp. 143–152.
- C17. J. F. M. Santos, M. Guessi, M. Galster, **D. Feitosa**, and E. Y. Nakagawa, "A Checklist for Evaluation of Reference Architectures of Embedded Systems," in *Proceedings of the 25th International Conference on Software Engineering and Knowledge Engineering (SEKE'13)*, 2013, pp. 451--454.
- C18. **D. Feitosa** and E. Y. Nakagawa, "An Investigation into Reference Architectures for Mobile Robotic Systems," in *Proceedings of the Seventh International Conference on Software Engineering Advances (ICSEA'12)*, 2012, pp. 465–471
- C19. D. O. Sales, **D. Feitosa**, F. S. Osorio, and D. F. Wolf, "Multi-agent Autonomous Patrolling System Using ANN and FSM Control," in *Proceedings of the Second Brazilian Conference on Critical Embedded Systems (CBSEC'12)*, 2012, pp. 48–53.
- C20. V. A. T. Zani, **D. Feitosa**, and E. Y. Nakagawa, "Current State of Reference Architectures in the Context of Agile Methodologies," in *Proceedings of the 23rd International Conference on Software Engineering & Knowledge Engineering (SEKE'11)*, 2011, pp. 590–595.
- C21. K. R. Felizardo, E. Y. Nakagawa, **D. Feitosa**, R. Minghim, and J. C. Maldonado, "An Approach Based on Visual Text Mining to Support Categorization and Classification in the Systematic Mapping," in *Proceedings of the 14th International Conference on Evaluation and Assessment in Software Engineering (EASE'10)*, 2010.
- C22. L. B. R. de Oliveira, K. R. Felizardo, **D. Feitosa**, and E. Y. Nakagawa, "Reference Models and Reference Architectures Based on Service-Oriented Architecture: A Systematic Review," in *Proceedings of the Fourth European Conference on Software Architecture (ECSA'10)*, 2010, pp. 360–367.

- C23. E. Y. Nakagawa, **D. Feitosa**, and K. R. Felizardo, "Using systematic mapping to explore software architecture knowledge," in *Proceedings of the Workshop on Sharing and Reusing Architectural Knowledge (SHARK'10)*, 2010, pp. 29–36
- C24. **D. Feitosa**, K. R. Felizardo, L. B. R. de Oliveira, D. Wolf, and E. Y. Nakagawa, "Software Engineering in the Embedded Software and Mobile Robot Software Development: A Systematic Mapping," in *Proceedings of the 22nd International Conference on Software Engineering & Knowledge Engineering (SEKE'10)*, 2010, pp. 738–741.
- C25. **D. Feitosa** and V. R. de Uzêda, "SODQ A system of questions and answers for the I OLinCom," in *Proceedings of the Seventh Brazilian Symposium in Information and Human Language Technology (STIL'09*), 2009, pp. 1–3 (in Portuguese).

#### **Book Chapters**

- B1. E. Rahmadian, **D. Feitosa**, A. Zwitter. "Governing Digital Twin technology for smart and sustainable tourism: a case study in applying a documentation framework for architecture decisions," in *Handbook on the Politics and Governance of Big Data and Artificial Intelligence*, pp. 105–137, 2023.
- B2. **D. Feitosa**, L. Cruz, R. Abreu, J. P. Fernandes, M. Couto and J. Saraiva. "Patterns and Energy Consumption: Design, Implementation, Studies and Stories," Software Sustainability, Springer, pp 1-32, 2021
- B3. B. Sena, F. J. Affonso, T. Bianchi, P. H. D. Valle, **D. Feitosa** and E. Y. Nakagawa. "Knowledge Discovery in Systems-of-Systems: Observations and Trends," Knowledge Management in Development of Data-Intensive Software Systems, pp. 1-19, 2020

#### Theses

- T1. **D. Feitosa**. "Applying patterns in embedded systems design for managing quality attributes and their trade-offs," Doctoral Dissertation, University of Groningen. 261 p., 2019.
- T2. **D. Feitosa**. "SiMuS A Reference Architecture for Service Multirobotic Systems," Master Thesis, University of São Paulo. 111 p., 2013.
- T3. **D. Feitosa**. "Reference Architectures for Mobile Robots: A Systematic Literature Review," Bachelor Thesis, University of São Paulo. 45 p., 2010
- T4. **D. Feitosa**. "Software Engineering in Embedded Software and Mobile Robot Software Development: A Systematic Mapping," Bachelor Thesis, University of São Paulo. 56 p., 2009