Daniel **Feitosa**

Brazilian, 34 years old
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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 – Jan. 2019	**Ph.D.** 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). Doctoral dissertation: *Applying Patterns in Embedded Systems Design for Managing Quality Attributes and their Trade-offs* Supervisors: Prof. Dr. Ir. Paris Avgeriou, Prof. Dr. Elisa Yumi Nakagawa and Dr. Apostolos Ampatzoglou
Aug. 2010 – Feb. 2013	**M.Sc.** 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). Master thesis: *SiMuS – A Reference Architecture for Service Multirobotic Systems* Supervisor: Prof. Dr. Elisa Yumi Nakagawa
Feb. 2006 – Jul. 2010	**B.S. of Computer Science** 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).

Language

Native Portuguese, Fluent English, Basic Dutch (B1)

Professionalization

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

Distinctions

1. Awarded 2nd place on the Teacher of Year at Campus Fryslân, University of Groningen, 2020.
2. Nominated for the GEC (Groningen Engineering Center) Best PhD Thesis award, Jan. 2020.
3. 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.
4. Awarded 1st place on Track 1 of the I Brazilian Computational Linguistics Olympiad (I OLinCom), Brazilian Computer Science Society, 2009.

Teaching

Lecturing and Coordination

Sep. 2022 – present	B.S. course: *Advanced Object-Oriented Programming* (also coordinator) Department of Computer Science – University of Groningen
Sep. 2022 – present	B.S. course: *Algorithmic Programming Contests* Department of Computer Science – University of Groningen
Nov. 2021 – present	B.S. course: *Problem Analysis and Software Design* Department of Computer Science – University of Groningen
Sep. 2021 – present	M.Sc. course: *Software Architecture* Department of Computer Science, University of Groningen.
Feb. 2021 – Oct. 2021	B.S. course: *Topics on Data Science* (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: *Information Technology and its Implications* (also coordinator) Campus Fryslân – University of Groningen
Apr. 2019 – Oct. 2020	B.S. course: *Introduction to Data Science* (also coordinator) Campus Fryslân – University of Groningen
Sep. 2018 – Oct. 2021	B.S. course: *Introduction to Programming* (also coordinator) Campus Fryslân – University of Groningen

Sep. 2018 – Oct. 2021 B.S. course: *Portfolio – Global Responsibility and Leadership (mentor)*
Campus Fryslân – University of Groningen

Teaching Assistantship

Nov. 2014 – Jan. 2016 M.Sc. course: *Software Patterns*
Department of Computer Science, University of Groningen.

Aug. 2011 – Jan. 2012 B.S. course: *Information systems*
Institute of Mathematics and Computational Sciences, University of São Paulo.

Feb. 2010 – Jul. 2011 B.S. course: *Analysis of object-oriented designs*
Institute of Mathematics and Computational Sciences, University of São Paulo.

Aug. 2009 – Jan. 2010 B.S. course: *Databases laboratory*
Institute of Mathematics and Computational Sciences, University of São Paulo.

Feb. 2009 – Jul. 2009 B.S. course: *Databases*
Institute of Mathematics and Computational Sciences, University of São Paulo.

Feb. 2007 – Jul. 2007 B.S. course: *Introduction to computer science*
Institute of Mathematics and Computational Sciences, University of São Paulo.

Supervision

PhD

May. 2019 – Present **Co-supervisor** of João Paulo Biazotto, investigating *Technical Debt Management under Adverse Conditions*, University of Groningen & University of São Paulo (double degree).

Apr. 2019 – Present **Co-supervisor** of Eko Rahmadian, investigating *Big Data Applications and Implications on Sustainable Tourism*, University of Groningen.

Feb. 2019 – Dec. 2021 **Co-supervisor** of Jie Tan, investigating *Technical Debt Repayment in Practice*, University of Groningen (defended in Dec. 17th 2021).

Masters

Jun. 2022– Aug. 2022 **Supervisor** of Túpac Rocher for his master internship from Polytech Montpellier, *A student-friendly continuous integration pipeline*, University of Groningen.

Nov. 2021– Jul. 2022 **Co-supervisor** of Tim Yarally for his master thesis, *Assessing the energy efficiency of training and execution of machine learning models*, Delft University of Technology.

May 2017 – Jul. 2017 **Co-supervisor** of Eric Rwemigabo for a master internship, *Integrating a design pattern detector into SEAgle*, University of Groningen.

May 2015 – Feb. 2016 **Co-supervisor** of Rutger Alders for his master thesis, *Trade-offs in performance and energy consumption of design patterns*, University of Groningen.

Apr. 2015 – Jun. 2015 **Co-supervisor** of Jeroen David van Leusen for a master internship, *Static analyzer for C/C++*, University of Groningen.

Undergraduate

Nov. 2022 – present **Supervisor** of Andrei Valentin Girjoaba for his honours college research project, Natural deduction proof evaluator for Fitch style proofs, University of Groningen

Nov. 2022 – present **Co-supervisor** of Mohammad Al Shakoush for his short programming project, Distributed machine-learning pipeline for software engineering sentiment analysis, University of Groningen

Jul. 2022 – present **Supervisor** of Tudor Dragan for his honours college research project, IoT and the Mirai malware: assessing the vulnerability of devices in the Netherlands, University of Groningen

Mar 2021 – Jul. 2021 **Co-supervisor** of Massimiliano Berardi, Rares-Dorian Boza and Matei-Tudor Penca for a bachelor thesis, Mining and analysis of cost-related decisions in cloud infrastructures, University of Groningen

May 2020 – Jan. 2021	**Supervisor** of Jana Heitkemper for a research internship project, Netwoke: improving networking in closed environments, University of Groningen
Jul. 2016 – Sep. 2016	**Co-supervisor** of Abdussamet Dumankaya for a summer internship project from Yıldırım Beyazıt University (Turkey), *Automation of Quality Analysis of Java Projects*, University of Groningen.
Jan. 2016 – Jul. 2016	**Co-supervisor** of Marijn Scholtens for his bachelor thesis, *Improving Quality Analysis during Continuous Integration Enhancing the FindBugs-plugin for Jenkins*, University of Groningen.
Jun. 2015 – Aug. 2015	**Co-supervisor** of Begum Benel and Can Berker Çıkış for a summer internship project from Sabanci University (Turkey), *Static analyzer for C/C++,* University of Groningen.
Jun. 2014 – Sep. 2014	**Co-supervisor** of Çağla Koca and Melda Seren İnan for summer internship projects from Sabanci University (Turkey), University of Groningen.

Main Technical Contributions (Software)

1. **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 https://github.com/search-rug/ssap
2. **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 https://github.com/search-rug/spoon-pttgrime
3. **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 https://bitbucket.org/feitosa-daniel/seagle-server/src
4. **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 https://github.com/search-rug (repositories cpptool*)

Academic Services

Nov.2021 – present	**Member** 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	**Member** 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-Chair of the track Software Engineering and Debt Metaphors (SEaDeM) of the 2023 Euromicro Conference on Software Engineering and Advanced Applications (SEAA ‘23)
2. Co-Organizer of the 5th International Software Architecture PhD School (ISAPS ‘23)
3. Co-Chair of the track Software Engineering and Debt Metaphors (SEaDeM) of the 2022 Euromicro Conference on Software Engineering and Advanced Applications (SEAA ‘22)
4. Virtualization Chair of the 2022 International Conference on Software Analysis, Evolution and Reengineering (SANER ’22).
5. Web Chair of the 2021 International Conference no Technical Debt (TechDebt ‘21).
6. Co-Chair of the 2021 Workshop on Machine Learning Techniques for Software Quality Evaluation (MaLTeSQuE ‘21).

7. 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. IEEE Access
2. IEEE Computer
3. IEEE Software
4. IEEE Transactions on Software Engineering
5. IET Software
6. Information and Software Technology
7. International Journal of Network Management
8. Journal of Systems and Software
9. Journal of Software: Evolution and Process
10. Journal of Computer Science and Technology

Scientific Review for Conferences, Workshops and Books

1. International Conference on Software Engineering (ICSE 2016, 2017, 2023)
2. International Conference on Program Comprehension (ICPC 2022, 2023)
3. International Conference on Software Architecture (ICSA 2017, 2018, 2022, 2023)
4. International Conference on Mining Software Repositories (MSR 2023)
5. Euromicro Conference on Software Engineering and Advanced Applications (SEAA 2020, 2021, 2022, 2023)
6. Symposium on Applied Computing (SAC 2022)
7. Empirical Software Engineering and Measurement (ESEM 2016, 2017, 2022)
8. Brazilian Symposium on Software Engineering (SBES 2016, 2021, 2022)
9. Workshop on Software Quality Assurance for Artificial Intelligence (SQA4AI 2022)
10. International Workshop on Technical Debt for Variability-intensive Systems (TD4Vis 2022)
11. European Conference on Software Architecture (ECSA 2015, 2017, 2018, 2020, 2021)
12. Machine Learning Techniques for Software Quality Evaluation Workshop (MaLTeSQuE 2019, 2020, 2021)
13. International Conference on Software Reuse (ICSR 2016, 2018)
14. Evaluation and Assessment in Software Engineering Conference (EASE 2016, 2017, 2018)
15. International Conference on Advanced Information Systems Engineering (CAiSE 2015, 2016)
16. Australasian Software Engineering Conference (ASWEC 2015)
17. Working Conference on Software Architecture (WICSA 2014, 2015)
18. Brazilian Symposium on Software Components, Architectures, and Reuse (SBCARS 2014)
19. International track on adaptive and reconfigurable service-oriented and component-based Applications and Architectures (AROSA 2014)
20. International Conference on Model-Driven Engineering and Software Development (MODELSWARD 2014)
21. International Workshop on Software Engineering for Resilient Systems (SERENE 2013)

Publications

Journals

J1. 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*, v. 143, 106738, 2022.
J2. E. Rahmadian, **D. Feitosa**, A.J. Zwitter. “A Systematic Literature Review on the use of Big Data for Sustainable Tourism”. Current Issues in Tourism, v. 25(11), pp. 1711-1730, 2022.
J3. 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.
J4. 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*, v.172, 110653, 2021.
J5. **D. Feitosa**, A. Ampatzoglou, A. Gkortzis, S. Bibi, A. Chatzigeorgiou. “CODE reuse in practice: Benefiting or harming technical debt,” *Journal of Systems and Software*, v. 167, 110618, pp 1-12, 2020.
J6. P. Smiari, S. Bibi and **D. Feitosa**. “Examining the reuse potentials of IoT application frameworks,” *Journal of Systems and Software*. vol. 169, 110706, pp. 1-17, 2020.
J7. **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*, v. 105, p. 1-16, 2019.
J8. **D. Feitosa**, A. Ampatzoglou, P. Avgeriou and E. Y. Nakagawa. “Correlating Pattern Grime and Quality Attributes,” *IEEE Access*, v. 6, p. 23065-23078, 2018.
J9. **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*, v. 29, p. e1851-e1870, 2017.

International Conferences

C1. 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.
C2. 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.
C3. 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.
C4. 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.
C5. 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.
C6. 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.
C7. **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.
C8. **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.
C9. 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.
C10. **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.

C11. **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.
C12. 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.
C13. 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.
C14. **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.
C15. 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.
C16. 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.
C17. 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.
C18. 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.
C19. 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.
C20. **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.
C21. **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. **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
B2. 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