Daniel **Feitosa**

Brazilian, 33 years old
University of Groningen, Wirdumerdijk 34, 8911 CE, Leeuwarden, NL
+31 6 8321 8865
d.feitosa@rug.nl
https://feitosa-daniel.github.io

dfeitosa
feitosa-daniel
daniel_feitosa
Google Scholar
ORCID

Employment

Mar. 2019 – present	**Assistant Professor** at Campus Fryslân - University of Groningen
Mar. 2019 – present	**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* Supervisor: Prof. Dr. Ir. Paris Avgeriou
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 (part of the board support since 2020).

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

Feb. 2021 – Present	B.S. course: *Topics on Data Science* (coordinator) Campus Fryslân – University of Groningen
Feb. 2020 – present	B.S. Living Lab (supervisor) Campus Fryslân – University of Groningen
Oct. 2019 – Present	B.S. course: *Information Technology and its Implications* (coordinator) Campus Fryslân – University of Groningen
Apr. 2019 – Oct. 2020	B.S. course: *Introduction to Data Science* (coordinator) Campus Fryslân – University of Groningen
Sep. 2018 – Present	B.S. course: *Introduction to Programming* (coordinator) Campus Fryslân – University of Groningen
Sep. 2018 – Present	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

Feb. 2019 – Present	Co-supervisor of Jie Tan, investigating *Technical Debt in Python Projects*, University of Groningen.
Apr. 2019 – Present	Co-supervisor of Eko Rahmadian, investigating *Big Data Applications and Implications on Sustainable Tourism*, University of Groningen.

Masters

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

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. 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
2. 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*)
3. 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

Academic Services

Jun. 2020 – present	**Curriculum developer** for the B.S. Data Science and Digital Society, Campus Fryslân – University of Groningen
Jun. 2018 – Present	**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. Virtualization Chair of the 2022 International Conference on Software Analysis, Evolution and Reengineering (SANER '22).
2. Web Chair of the 2021 International Conference no Technical Debt (TechDebt '21).
3. Co-Chair of the 2021 Workshop on Machine Learning Techniques for Software Quality Evaluation (MaLTeSQuE '21).
4. Chair of the Journal 1st Track of the 2020 Euromicro Conference on Software Engineering and Advanced Applications (SEAA '20).

Scientific Review for Journals

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

Scientific Review for Conferences, Workshops and Books

1. European Conference on Software Architecture (ECSA 2015, 2017, 2018, 2020, 2021)
2. Euromicro Conference on Software Engineering and Advanced Applications (SEAA 2020, 2021)
3. Brazilian Symposium on Software Engineering (SBES 2016, 2021)
4. Machine Learning Techniques for Software Quality Evaluation Workshop (MaLTeSQuE 2019, 2020)
5. International Conference on Software Architecture (ICSA 2017, 2018)
6. International Conference on Software Reuse (ICSR 2016, 2018)
7. Evaluation and Assessment in Software Engineering Conference (EASE 2016, 2017, 2018)
8. International Conference on Software Engineering (ICSE 2016, 2017)
9. Empirical Software Engineering and Measurement (ESEM 2016, 2017)
10. International Conference on Advanced Information Systems Engineering (CAiSE 2015, 2016)
11. Australasian Software Engineering Conference (ASWEC 2015)
12. Working Conference on Software Architecture (WICSA 2014, 2015)

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

Publications

Journals

J1. 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.
J2. 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.
J3. E. Rahmadian, **D. Feitosa**, A.J. Zwitter. "A Systematic Literature Review on the use of Big Data for Sustainable Tourism". Current Issues in Tourism, 2021 (in press).
J4. **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.
J5. 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.
J6. **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.
J7. **D. Feitosa**, A. Ampatzoglou, P. Avgeriou and E. Y. Nakagawa. "Correlating Pattern Grime and Quality Attributes," *IEEE Access*, v. 6, p. 23065-23078, 2018.
J8. **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. 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.
C2. 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.
C3. 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.
C4. 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.
C5. 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.
C6. **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.
C7. **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.
C8. 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.

C9. **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.

C10. **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.

C11. 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.

C12. 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.

C13. **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.

C14. 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.

C15. 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.

C16. 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.

C17. 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.

C18. 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.

C19. **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.

C20. **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