Felipe Fronchetti

Louisiana State University
Division of Computer Science and Engineering

Contact

ffronchetti@lsu.edu
+1 (225) 578 4732

1. Summary

Felipe Fronchetti is an Assistant Professor in Computer Science at Louisiana State University (LSU), USA. Currently working on the intersection between Software Engineering (SE) and Human-Robot Interaction (HRI), he focuses on developing programming technologies to support end-users in robotics and newcomers in open-source communities. He is the principal investigator of the Robotics and Software Engineering (RISE) laboratory at LSU. Among his projects, there are studies investigating the integration of newcomers in open-source projects, the benefits of social coding platforms for open-source development, and the development of end-user technologies for industrial and collaborative robots. With more than 10 years of experience in research, his studies resulted in papers published in top-tier journals and conferences in Software Engineering, including research venues such as the International Conference in Software Engineering (ICSE) and the Transactions in Software Engineering Journal (TSE). Fronchetti also holds a master's degree in Computer Science from the University of São Paulo, ranked the best university in Latin America according to USNews (2024).

2. Education

(2020 - 2024) **Ph.D. in Engineering**
Virginia Commonwealth University (VCU), USA
Advised by Dr. Rodrigo Spinola
Working on *"Developing tools to support end-users in robot programming"*

(2018 - 2022) **M.Sc. in Computer Science**
University of São Paulo (USP), Brazil
Advised by Dr. Marco Aurélio Gerosa
Working on *"A classification model to identify newcomer-relevant documentation" in open-source software projects*

(2013 - 2017) **B.Sc. in Computer Science**
Federal University of Technology - Paraná (UTFPR), Brazil
Advised by Dr. Igor Steinmacher and Dr. Igor Wiese
Working on *"An exploratory study on receptivity indicators in open-source software projects"*

(2011 - 2012) **Technical Degree in Occupational Health and Safety**
National Service for Industrial Training (SENAI), Brazil

3. Work

(2024 - Present) **Assistant Professor**
Louisiana State University (LSU), USA

(2020 - 2024) **Graduate Research and Teaching Assistant**
Virginia Commonwealth University (VCU), USA

(2018 - 2019) **Graduate Research Assistant**
University of São Paulo (USP), Brazil

(2014 - 2016) **Co-Founder and Marketing Director**
HAKEN - Junior Enterprise in Computer Science, Brazil

(2014 - 2017) **Undegraduate Research Assistant**
Federal University of Technology - Paraná (UTFPR), Brazil

(2012 - 2012) **Occupational Health and Safety Intern**
Beeight Group, Brazil

4. Publications

My name is underlined as Felipe Fronchetti (shortened name) or Luiz Felipe Fronchetti Dias (full name) in older papers.

4.1. Journals (6)

(2025) de Souza Santos, R., Fronchetti, F., Freire, S. and Spinola, R., 2025. Software fairness debt: Building a research agenda for addressing bias in AI systems. **ACM Transactions on Software Engineering and Methodology**.

(2025) Ritschel, N., Holmes, R., Fronchetti, F., Garcia, R. and Shepherd, D.C., 2025. Block-based or graph-based? Why not both? Designing a hybrid programming environment for end-users. **Interacting with Computers Journal.** Oxford Academic.

(2022) Fronchetti, F., Ritschel, N., Holmes, R., Li, L., Soto, M., Jetley, R., Wiese, I. and Shepherd, D., 2022. Language impact on productivity for industrial end users: A case study from Programmable Logic Controllers. In **Journal of Computer Languages (COLA)**, 69, p.101087.

(2020) Padala, H.S., Mendez, C., Fronchetti, F., Steinmacher, I., Steine-Hanson, Z., Hilderbrand, C., Horvath, A., Hill, C., Simpson, L., Burnett, M. and Gerosa, M., 2020. How gender-biased tools shape newcomer experiences in OSS projects. In IEEE **Transactions on Software Engineering (TSE)**, 48(1), pp.241-259.

(2018) Dias, L.F., Steinmacher, I. and Pinto, G., 2018. Who drives company-owned OSS projects: internal or external members?. In **Journal of the Brazilian Computer Society (JBCS)**, 24(1), pp.1-17.

(2018) Pinto, G., Steinmacher, I., Dias, L.F. and Gerosa, M., 2018. On the challenges of open-sourcing proprietary software projects. In **Empirical Software Engineering (EMSE)**, 23, pp.3221-3247.

4.2. Conferences (16)

(2025) Moreira, G., Freitas, J., Burvant, S., Sengchiam, C., de Paula, S.M. and Fronchetti, F., 2025, September. womeninoss.com: Supporting women participation in OSS communities with an online platform. In **Simpósio Brasileiro de Engenharia de Software (SBES)**.

(2025) Sotolani, R., Freire, S., Fronchetti, F., de Souza Santos, R. and Spinola, R., 2025, September. Exploring Software Fairness Debt in Gray Literature. In **Euromicro Conference on Software Engineering and Advanced Applications** (pp. 85-104). Springer Nature Switzerland.

(2025) Odugu, O., Khan, M.T., Wang, C. and Fronchetti, F., Transfer Learning for Construction Robotics: Leveraging Road Construction Data to Enhance Building Site Segmentation. **IEEE International Conference on Robotics and Automation: 4th Workshop on Future of Construction**.

(2024) Fronchetti, F., Ritschel, N., Schorr, L., Barfield, C., Chang, G., Spinola, R., Holmes, R. and Shepherd, D.C., 2024. April. Block-based Programming for Two-Armed Robots: A Comparative Study. In Proceedings of the ACM/IEEE 45th **International Conference on Software Engineering (ICSE): Research Track**.

(2023) Ruvimova, A., Fronchetti, F., Khan, B., Susin, L., Hurley, Z., Fritz, T., Hancock, M., Shepherd, D.C., 2023, December. Ready Worker One? High-Res VR for the Home Office. In Proceedings of the 29th ACM **Symposium on Virtual Reality Software and Technology (VRST)**.

(2023) Fronchetti, F., Shepherd, D.C., Wiese, I., Treude, C., Gerosa, M. and Steinmacher, I, 2023. December. Do CONTRIBUTING files provide information about OSS newcomers' onboarding barriers? In Proceedings of the ACM Joint European **Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE)**.

(2022) Ritschel, N., Fronchetti, F., Holmes, R., Garcia, R. and Shepherd, D.C., 2022, May. Enabling end-users to implement larger block-based programs. In Proceedings of the ACM/IEEE 44th **International Conference on Software Engineering (ICSE): Companion Proceedings** (pp. 347-349).

(2022) Shepherd, D.C., Fronchetti, F., Liu, Y., Hou, D., DeWaters, J. and Small, M.M., 2022, May. Project-sized scaffolding for software engineering courses. In Proceedings of the First **International Workshop on Designing and Running Project-Based Courses in Software Engineering Education (DREE)** (pp. 27-31).

(2022) Ritschel, N., Fronchetti, F., Holmes, R., Garcia, R. and Shepherd, D.C., 2022. Can guided decomposition help end-users write larger block-based programs? a mobile robot experiment. Proceedings of the **ACM on Programming Languages (OOPSLA)**, pp.233-258.

(2020) Dias, L.F., Barbosa, C., Pinto, G., Steinmacher, I., Fonseca, B., Ribeiro, M., Treude, C. and Da Costa, D.A., 2020, August. Refactoring from 9 to 5? What and When Employees and Volunteers Contribute to OSS. In 2020 **IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC)** (pp. 1-5). IEEE.

(2019) Fronchetti, F., Wiese, I., Pinto, G. and Steinmacher, I., 2019, May. What Attracts Newcomers to Onboard on OSS Projects? TL; DR: Popularity. In 15th IFIP **International Conference on Open Source Systems (OSS)** (pp. 91-103).

(2018) Pinto, G., Dias, L.F. and Steinmacher, I., 2018, May. Who gets a patch accepted first? comparing the contributions of employees and volunteers. In Proceedings of the 11th **International Workshop on Cooperative and Human Aspects of Software Engineering (CHASE)** (pp. 110-113).

(2018) Pinto, G., Wiese, I. and Dias, L.F., 2018, March. How do scientists develop scientific software? An external replication. In 2018 **IEEE International Conference on Software Analysis, Evolution and Reengineering (SANER)** (pp. 582-591). IEEE.

(2017) Dias, L.F., Steinmacher, I. and Pinto, G., 2017. Who drives company-owned OSS projects: Employees or volunteers?. In **V Workshop on Software Visualization, Evolution and Maintenance (VEM)**, co-located with CBSoft (p. 10).

(2016) Dias, L.F., Steinmacher, I., Pinto, G., Da Costa, D.A. and Gerosa, M., 2016, October. How does the shift to GitHub impact project collaboration?. In 2016 **IEEE International Conference on Software Maintenance and Evolution (ICSME)** (pp. 473-477). IEEE.

(2016) Dias, L.F., Steinmacher, I., Wiese, I., Pinto, G., da Costa, D.A., Gerosa, M. and Mourao–PR–Brasil, C., Uma Análise Preliminar de Projetos de Software Livre que Migraram para o GitHub. In **IV Workshop on Software Visualization, Evolution and Maintenance (VEM)**, co-located with CBSoft.

5. Research Grants

5.1. National

(2025) **NASA** **US$ 4.5K** TwinSight: A Digital Twin Interface for NASA-Class Robotic Ground Operations
(Role: PI; Award #: AWD-AM260143)

6. Service

6.1. Journal Reviews

(2025) **Reviewer** Journal of Systems and Software (JSS)

(2025) **Reviewer** Empirical Software Engineering (EMSE)

(2025) **Reviewer** Transactions on Software Engineering (TSE)

(2025) **Reviewer** Information and Software Technology (IST)

(2024) **Reviewer** Journal of Systems and Software (JSS)

6.2. Conference Reviews

(2025) **Reviewer** 21st ACM/IEEE International Conference on Human-Robot Interaction (HRI)

(2025) **Reviewer** 44th ACM Conference on Human Factors in Computing Systems (CHI)

(2025) **Committee** 32nd IEEE International Conference on Software Analysis, Evolution and Reengineering (SANER)

(2025) **Committee** 29th ACM International Conference on Evaluation and Assessment in Software Engineering (EASE 2025)

(2025) **Committee** 34th IEEE/ACM International Conference on Program Comprehension (ICPC 2026)

(2023) **Reviewer** 20th International Conference on Mining Software Repositories (MSR)

(2022) **Committee** 1st International Workshop on Recruiting Participants for Empirical Software Engineering (RoPES)

(2022) **Sub-reviewer** 18th International Symposium on Open Collaboration (OpenSym)

(2019) **Sub-reviewer** 10th Brazilian Symposium on Collaborative Systems (SBSC)

6.3. Organization

(2025) **Media Chair** Journal of Systems and Software (JSS)

(2025) **Engineer** LSU CSE Silicon Bayou Gala

(2025) **Media Chair** 34th IEEE/ACM International Conference on Program Comprehension (ICPC 2026)

(2025)	**Web Chair**	2nd International Workshop on Fairness in Software Systems (Fairness'2026)
(2024)	**Media Chair**	1st International Workshop on Fairness in Software Systems (Fairness'2025)
(2022)	**Web Chair**	1st Workshop on Designing and Running Project-Based Courses in Software Engineering Education (DREE)
(2021)	**Session Chair**	29th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE)
(2021)	**Session Chair**	36th IEEE/ACM International Conference on Automated Software Engineering (ASE)
(2020)	**Session Chair**	International Conference on Global Software Engineering (ICGSE)

7. Talks

(2022)	**Speaker**	Is robot programming for everyone? A study about end-users in robotics. College of William & Mary (W&M), Virginia, USA.
(2022)	**Speaker**	Talking with robots: Why is it so tricky, and how can we improve it? Full Steam Ahead Middle School Conference, Virginia, USA.
(2021)	**Speaker**	Mining and learning from software repositories with GitHub API Federal University of Technology - Paraná (UTFPR), Paraná, Brazil.

8. Teaching

(2025)	**Professor**	Software Systems Development (CSC 4330). Louisiana State University.
(2025)	**Professor**	Computer Organization and Design (CSC 3501). Louisiana State University.
(2024)	**Professor**	Software Systems Development (CSC 4330). Louisiana State University.
(2024)	**Teaching Assistant**	Introduction to Software Analysis, Testing, and Verification (CMSC 425 and 525). Virginia Commonwealth University.
(2023)	**Teaching Assistant**	Software Testing, Version Control Systems, and Mixed Reality (CMSC 355, Hands-on classes). Virginia Commonwealth University.
(2023)	**Teaching Assistant**	Fundamentals of Software Engineering (CMSC 355). Virginia Commonwealth University.
(2023)	**Teaching Assistant**	Introduction to Software Analysis, Testing, and Verification (CMSC 425 and 525). Virginia Commonwealth University.
(2020)	**Teaching Assistant**	Fundamentals of Software Engineering (CMSC 355). Virginia Commonwealth University.
(2020)	**Teaching Assistant**	Programming Languages (CMSC 403). Virginia Commonwealth University.
(2015)	**Instructor**	Introduction to Mobile Development in Android Studio (8 hours). II SEINFO - Informatics Seminar.

9. Awards

(2025)	**Best Paper Award**	Euromicro Conference on Software Engineering and Advanced Applications
(2021)	**Best Paper Award (Runner Up)**	Journal of Computer Languages (COLA)
(2018)	**Research Scholarship**	São Paulo Research Foundation (FAPESP)
(2017)	**Best Paper Award**	V Workshop on Software Visualization, Evolution and Maintenance (VEM)
(2015)	**Research Scholarship**	Brazilian National Council for Scientific and Technological Development (CNPq)

10. Advising

10.1. Ph.D. Students

(2025 - Present) **Juliana dos Santos Freitas**
Louisiana State University (LSU)

(2025 - Present) **Elijah Phifer**
Louisiana State University (LSU)

(2025 - Present) **Nabila Fairuz**
Louisiana State University (LSU)

10.2. M.Sc. Students

(2025 - Present) **Obiora Joshua Odugu (co-advisor)**
Louisiana State University (LSU)

10.3. Undergraduate Research Projects

(2024 - 2025) **Sarah Burvant, Caitlynn Sengchiam**
Capstone Project: "*Womeninoss.com: A Web-Based Tool for Increasing Women's Participation in Open Source Projects*"
URL: https://womeninoss.com/

(2024 - 2025) **Victoria Irondi, Nnamdi Dike, Trevor Perrault**
Capstone Project: "*Implementation of a Smart Car Seat Alert System to Prevent Child Heatstroke Fatalities*"
URL: https://www.lsu.edu/blog/2025/05/car-seat-device-capstone.php

11. Projects Portfolio

Womeninoss.com: A platform to support women participation in open-source projects
Role: Project Manager.
Website: https://womeninoss.com/
Source: https://github.com/riseatlsu/womeninoss.com

Mista: A tool to manually control robots in mixed reality
Role: Project Manager, Developer.
Source: https://github.com/riseatlsu/mista
Funded by: NSF (Award #2024561)

Duplo: A block-based language for two-armed robots
Role: Project Manager, Developer.
Website: https://se.lab.vcu.edu/research/robotics
Source: https://github.com/fronchetti/ICSE-2024
Funded by: NSF (Award #2024561)

Contributing.info: A tool to identify newcomer-related information in OSS projects
Role: Sole Developer.
Website: https://contributing.streamlit.app/
Source: https://github.com/fronchetti/FSE-2023
Funded by: FAPESP (Award #2018/02596-1)

12. References

Dr. Rodrigo Spinola
Associate Professor at Virginia Commonwealth University
spinolaro@vcu.edu

Dr. David Shepherd
Associate Professor at Louisiana State University
dshepherd@lsu.edu

Dr. Reid Holmes
Associate Professor at University of British Columbia
rtholmes@cs.ubc.ca

Dr. Igor Steinmacher
Assistant Professor at Northern Arizona University
Igor.Steinmacher@nau.edu

13. Additional Information

Google Scholar: https://scholar.google.com/citations?user=-6jIjG8AAAAJ&hl
ORCID: https://orcid.org/my-orcid?orcid=0000-0003-2104-6676
LinkedIn: https://www.linkedin.com/in/fronchat
GitHub: https://github.com/fronchetti
Twitter: https://twitter.com/fronchat
Website: https://fronchetti.github.io/