

Felipe Fronchetti

Louisiana State University
Division of Computer Science and Engineering

Contact

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1. Summary

Felipe Fronchetti is an Assistant Professor in Computer Science at Louisiana State University, 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. 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) **Undergraduate 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 (4)

- (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 (JBACS)**, 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 (13)

- (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. Service

5.1. Program Committee

- (2023) **Member** Mining Software Repositories (MSR)
- (2022) **Member** International Workshop on Recruiting Participants for Empirical Software Engineering (RoPES)
- (2022) **Sub-reviewer** International Symposium on Open Collaboration (OpenSym)
- (2019) **Sub-reviewer** Brazilian Symposium on Collaborative Systems (SBSC)

5.2. Event Organization

- (2022) **Web Chair** Workshop on Designing and Running Project-Based Courses in Software Engineering Education (DREE)
- (2021) **Session Chair** Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE)
- (2021) **Session Chair** International Conference on Automated Software Engineering (ASE)
- (2020) **Session Chair** International Conference on Global Software Engineering (ICGSE)

6. 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.

7. Teaching

- (2024) **Teaching Assistant** Introduction to Software Analysis, Testing, and Verification (CMSC 425 and 525). Virginia Commonwealth University.
- (2023) **Instructor** 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.

8. Awards

- (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)

9. Projects

Mista: A tool to manually control robots in mixed reality

Role: Project Manager, Developer.

Source: <https://github.com/vcuse/mista>

Funding: 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>

Funding: 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>

Funding: FAPESP (Award #2018/02596-1)

10. References

Dr. Rodrigo Spinola

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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

11. Additional Information

Google Scholar: <https://scholar.google.com/citations?user=-6JlJG8AAAAJ&hl>

LinkedIn: <https://www.linkedin.com/in/fronchat>

GitHub: <https://github.com/fronchetti>

Twitter: <https://twitter.com/fronchat>

Website: <https://fronchetti.github.io/>