

Felipe Fronchetti

Louisiana State University
Division of Computer Science and Engineering

Contact

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1. Summary

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), his work focuses on developing programming tools to support newcomers in robotics and open-source development. Among his projects, there are studies investigating the integration of newcomers in open-source projects, the benefits of social coding platforms, and the development of end-user programming environments for industrial robots. With more than 10 years of experience in research, his work resulted in papers published in top-tier journals and conferences, including ICSE, TSE, EMSE, and FSE (citations: 206, h-index: 9).

2. Education

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|---------------|--|
| (2020 - 2024) | Ph.D. in Computer Science
Virginia Commonwealth University (VCU), USA
Advised by Dr. Rodrigo Spinola
Working on “ <i>Developing tools to support end-users in robot programming</i> ” |
| (2018 - 2022) | M.Sc. in Computer Science
University of São Paulo (USP), Brazil
Advised by Dr. Marco Aurélio Gerosa
Working on “ <i>A classification model to identify newcomer-relevant documentation in open-source software projects</i> ” |
| (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 “ <i>An exploratory study on receptivity indicators in open-source software projects</i> ” |
| (2011 - 2012) | Technical Degree in Occupational Health and Safety
National Service for Industrial Training (SENAI), Brazil |

3. Work

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|------------------|--|
| (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

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|--------|---------------------|--|
| (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

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|--------|----------------------|--|
| (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

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|--------|----------------|--|
| (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

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|--------|---------------------------|---|
| (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

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| (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

Associate Professor at Virginia Commonwealth University

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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/>