University Academic Curriculum Vitae

Personal information	Name: Jorge Augusto Melegati Goncalves ORCID: 0000-0003-1303-4173 Website: https://www.jmelegati.com Scopus profile: https://www.scopus.com/authid/detail.uri?authorId=57050359600 Google Scholar profile: https://scholar.google.com/citations?user=9CvUgJ0AAAAJ

Education since leaving school	• 02-2006/12-2010 – Instituto Tecnológico de Aeronáutica (São José dos Campos, Brazil)
	  ○ B. Sc. in Computer Engineering
	  ○ Award: Magna Cum Laude
	• 02-2014/03-2017 – University of São Paulo (Sao Paulo, Brazil)
	  ○ M. Sc. in Computer Science
	  ○ Thesis title: "Requirements Engineering in Software Startups: A Qualitative Investigation"
	• 11-2017/11-2021 – Free University of Bozen-Bolzano (Bolzano, Italy)
	  ○ Ph.D. in Computer Science
	  ○ Thesis title: "Improving experimentation in software startups through hypotheses engineering"
	  ○ Supervisor: Prof. Xiaofeng Wang

Present appointment	• Research assistant • Start date: 11/2021 • Free University of Bozen-Bolzano • Explore possible implementations of tools employing artificial intelligence techniques, such as natural language processing and conversational bots, to support startups. Teaching in undergraduate and graduate levels, co-supervision of bachelor and master theses, and support on the development of scientific project proposals.

Professional experience

From/to	Job title	Company name	Responsibilities
07-2012/ 10-2017	Senior Web developer	Cuponomia	Full stack web development C#, Javascript, CSS, HTML5. Database management (SQL Server). Management of the cloud infrastructure on Amazon Web Services (AWS). Supervision and hiring of interns and junior developers.
01-2010/ 06-2012	Software developer	GDX Investimentos	Development of algorithmic trading using C# and C++.
08-2008/ 12-2009	Programmer	Flight simulator system (Brazil)	Software development for flight simulator systems using C++ in a Linux environment.

Experience in academic teaching	Teaching: • "Tools and Techniques for Software Testing" (laboratory, 2021/22, 30h), Free University of Bozen-Bolzano, Computer Science, Bachelor level • "Design and Development of Business Software" (laboratory, 2021/22, 20h), Free University of Bozen-Bolzano, Software Engineering, Master level • Academic tutor for digital didactics (first semester, 2020/21), Free University of Bozen-Bolzano, Faculty of Economics and Management. Co-supervision of bachelor theses: • Angelina Dibenedetto Pavynska (2022), Bachelor in Informatics and Management of Digital Business, Free Uniersiversity of Bozen-Bolzano, subject: agile methods • Brigalante, Hugo Mitsumori, and Mateus Rocha Mazzari (2018, joint thesis), Bachelor in Computer Science, University of São Paulo, subject: agile methods. Available at: https://bcc.ime.usp.br/tccs/2017/fehuma/ • Caio Teixeira da Quinta e Eugênio Augusto Jimenes (2016, joint thesis), Bachelor in Computer Science, University of São Paulo, subject: agile methods. Available at: https://bcc.ime.usp.br/tccs/2016/caioquinta/
Other academic responsibilities	• Proceedings chair for the 5th International Workshop on Software-Intensive Business (IWSiB) hosted by International Conference on Software Engineering, Pittsburg, USA, 2022 • Social Media Co-chair for the 22nd International Conference on Agile Software Development (XP 2021), online • Student volunteer at the 19th International Conference on Agile Software Development (XP 2018), Porto, Portugal
Memberships and Reviewing activity	Reviews for the following academic journals: • European Journal of Information Systems o Certificate of Outstanding Contribution in Reviewing (2021) • Information and Software Technology • Computer Standards & Interfaces • E-informatica Software Engineering Journal Member of the Program Committee for the following events: • Special Track on Knowledge and Natural Language Processing of the 37th Annual ACM Symposium on Applied Computing (SAC 2022) • 12th International Conference on Software Business (ICSOB 2021) • 1st Workshop on Requirement Engineering for Software startups and Emerging Technologies (RESET 2021), hosted by the IEEE International Requirements Engineering Conference (RE)

Research and scholarships

Award:

- Distinguished Paper Award – 14th International Conference on Cooperative and Human Aspects of Software Engineering (CHASE 2021) for the paper "Surfacing Paradigms underneath Research on Human and Social Aspects of Software Engineering"

Member of research team in the following projects:

Year granted	Funding body	Title	Award holder
2022	UniBZ	Startup Digi-Dojo: A Digital Space Supporting All-Remote Startups towards a Sustainable Way of Working	Xiaofeng Wang
2020	UniBZ	A Study on the Impact of Code Annotations on Software Maintenance	Eduardo Guerra
2018	UniBZ	Exploring agile ways of teaching Agile (AGILE)	Ilenia Fronza
2018	UniBZ	A Model to identify Key Information in Software Startups: Towards Continuous Information Monitoring (OceanEye)	Xiaofeng Wang
2017	UniBZ	Towards effective visualization of learning for agile software development teams (STARGATE)	Ilenia Fronza

Publications

This is a comprehensive list of peer-reviewed publications I co-authored. The most important publications are flagged with an asterisk (*).

<u>Journal papers in refereed academic journals:</u>

- **(*) Melegati, J.**, Edison, H., & Wang, X. (2022). XPro: a Model to Explain the Limited Adoption and Implementation of Experimentation in Software Startups. *IEEE Transactions on Software Engineering*, 48(6), pp. 1929-1946. https://doi.org/10.1109/TSE.2020.3042610
- **(*) Melegati, J.,** Guerra, E. and Wang, X. (2022). HyMap: eliciting hypotheses in early-stage software startups using cognitive mapping. *Information and Software Technology*, 144, 106807. https://doi.org/10.1016/j.infsof.2021.106807
- **(*) Melegati, J.**, Guerra, E., and Wang, X. (2021). Understanding Hypotheses Engineering in Software Startups through a Gray Literature Review. *Information and Software Technology*, 133, 106465. https://doi.org/10.1016/j.infsof.2020.106465
- **(*) Melegati, J.**, Goldman, A., Kon, F. and Wang, X. (2019). A model of requirements engineering in software startups. *Information and Software Technology*. 109, 92–107. https://doi.org/10.1016/j.infsof.2019.02.001.
- Bertuzzi, R., **Melegati, J.**, Bueno, S., Ghiarone, T., Pasqua, L.A., Gáspari, A.F., Lima-Silva, A.E. and Goldman, A. 2016. GEDAE-LaB: A free software to

calculate the energy system contributions during exercise. *PLoS ONE*. 11, 1, 1–13. DOI: https://doi.org/10.1371/journal.pone.0145733.

Peer-reviewed conference and workshop papers:

- **Melegati, J.,** Guerra, E., Scaliante Wiese, I., and Wang, X. (2022). Generated abstracts: evaluating automatic text summarization for blog posts in gray literature studies. The International Conference on Evaluation and Assessment in Software Engineering 2022 (EASE), 2022, pp. 282–287. https://doi.org/10.1145/3530019.3535308
- De Souza, W. S., Pereira, F. O., Albuquerque, V. G., **Melegati, J.,** and Guerra, E. (2022) A Framework Model to Support A/B Tests at the Class and Component Level. 2022 IEEE 46th Annual Computers, Software, and Applications Conference (COMPSAC), pp. 860–865. https://doi.org/10.1109/COMPSAC54236.2022.00136
- **Melegati, J.**, and X. Wang. (2022). Digital Mentor: towards a conversational bot to identify hypotheses for software startups. 2022 IEEE/ACM 4th International Workshop on Bots in Software Engineering (BotSE), pp. 10–13. https://doi.org/10.1145/3528228.3528407
- **(*) Melegati, J.**, and Wang, X. (2021). Surfacing Paradigms underneath Research on Human and Social Aspects of Software Engineering. 2021 IEEE/ACM 13th International Workshop on Cooperative and Human Aspects of Software Engineering (CHASE), pp. 41–50. **Distinguished Paper Award**. https://doi.org/10.1109/CHASE52884.2021.00013
- Rafiq, U., **Melegati, J.**, Khanna, D., Guerra, E., and Wang, X. (2021). Analytics Mistakes that Derail Software Startups. Evaluation and Assessment in Software Engineering (EASE 2021), 60–69. https://doi.org/10.1145/3463274.3463305
- **Melegati, J.** Towards a Framework to Guide the Creation of Development Practices for Software Startups, in *Agile Processes in Software Engineering and Extreme Programming – Workshops*, Springer International Publishing, 2021, pp. 155–164.
- **Melegati, J.** and Wang, X. (2020). Hypotheses Elicitation in Early-Stage Software Startups Based on Cognitive Mapping. *Proceedings of the 21st International Conference on Agile Software Development (XP 2020)* Springer, Cham. 211–220. https://doi.org/10.1007/978-3-030-49392-9_14
- Chanin, R., **Melegati, J.**, Detoni, M., Wang, X., Prikladnicki, R. and Sales, A. (2020). An Analysis of Students' Perception towards User Involvement in a Software Engineering Undergraduate Curriculum. *Proceedings of the 12th International Conference on Computer Supported Education* (CSEDU 2020), 325–332. https://doi.org/10.5220/0009188903250332
- **(*) Melegati, J.**, and Wang, X. (2020). Case Survey Studies in Software Engineering Research. *Proceedings of the 14th ACM / IEEE International Symposium on Empirical Software Engineering and Measurement (ESEM 2020)*, 1–12. https://doi.org/10.1145/3382494.3410683
- **Melegati, J.**, Chanin, R., Sales, A., Prikladnicki, R., and Wang, X. (2020). MVP and experimentation in software startups: a qualitative survey. *2020 46th Euromicro Conference on Software Engineering and Advanced Applications (SEAA 2020)*, 322–325. https://doi.org/10.1109/SEAA51224.2020.00060
- Kemell, K., Elonen, A., Suoranta, M., Nguyen-Duc, A., Garbajosa, J., Chanin, R., **Melegati, J.**, Rafiq, U., Aldaeej, A., Assyne, N., Sales, A., Hyrynsalmi, S., Risku, J., Edison, H., and Abrahamsson, P. (2020). Business Model Canvas

Should Pay More Attention to the Software Startup Team. *2020 46th Euromicro Conference on Software Engineering and Advanced Applications (SEAA 2020)*, 342–345. https://doi.org/10.1109/SEAA51224.2020.00063

- **Melegati, J.**, Chanin, R., Sales, A., and Prikladnicki, R. (2020). Towards Specific Software Engineering Practices for Early-Stage Startups. *Agile Processes in Software Engineering and Extreme Programming (XP 2020) – Workshops.* pp. 18–22. Springer International Publishing. https://doi.org/10.1007/978-3-030-58858-8_2

- Silva, K., Guerra, E., and **Melegati, J.** (2020). An Approach for Software-Intensive Business Innovation Based on Experimentation in Non-Software-Intensive Companies. *Agile Processes in Software Engineering and Extreme Programming (XP 2020) – Workshops.* pp. 9–17. Springer International Publishing. https://doi.org/10.1007/978-3-030-58858-8_1

- **Melegati, J.**, Chanin, R., Wang, X., Sales, A. and Prikladnicki, R. (2019). Enablers and Inhibitors of Experimentation in Early-Stage Software Startups. *Proceedings of the 20th International Conference on Product-Focused Software Process Improvement (PROFES 2019)* Springer, Cham. 554–569. DOI: https://doi.org/10.1007/978-3-030-35333-9_39

- **Melegati, J.**, Chanin, R., Wang, X., Sales, A. and Prikladnicki, R. (2019). Perceived Benefits and Challenges of Learning Startup Methodologies for Software Engineering Students. *Proceedings of the 50th ACM Technical Symposium on Computer Science Education - SIGCSE '19*, 204–210. https://doi.org/10.1145/3287324.3287382

- **Melegati, J.**, Wang, X. and Abrahamsson, P. (2019). Hypotheses Engineering: First Essential Steps of Experiment-Driven Software Development. *2019 IEEE/ACM Joint 4th International Workshop on Rapid Continuous Software Engineering and 1st International Workshop on Data-Driven Decisions, Experimentation and Evolution (RCoSE/DDrEE)*, 16–19. https://doi.org/10.1109/RCoSE/DDrEE.2019.00011

- **Melegati, J.**, and Wang, X. (2019). QUESt: new practices to represent hypotheses in experiment-driven software development. Proceedings of the 2nd ACM SIGSOFT International Workshop on Software-Intensive Business: Start-Ups, Platforms, and Ecosystems - IWSiB 2019, 13–18. https://doi.org/10.1145/3340481.3342732

- **Melegati, J.** and Goldman, A. (2016). Requirements Engineering in Software Startups: A Grounded Theory Approach. *2016 International Conference on Engineering, Technology and Innovation/IEEE International Technology Management Conference (ICE/ITMC 2016)*, 1–7. https://doi.org/10.1109/ICE/ITMC39735.2016.9026036

- Cukier, D., Kon, F., and **Melegati, J.** (2016). Early-Stage Software Startup Patterns - Towards a Pattern Language. 11th Latin American Conference on Pattern Languages of Programs (SugarLoafPLoP'16), 1–16. https://dl.acm.org/doi/10.5555/3124362.3124371

- **Melegati, J.**, and Goldman, A. (2015). Seven patterns for software startups. Proceedings of the 22nd Conference on Pattern Languages of Programs. https://dl.acm.org/citation.cfm?id=3124521

Chapter in book:

- **Melegati, J.** and Kon, F. (2020). Early-Stage Software Startups: Main Challenges and Possible Answers. *Fundamentals of Software Startups*.

Springer International Publishing. 129–143. https://doi.org/10.1007/978-3-030-35983-6_8

Statement of Interest

I believe that, with my experience, I could contribute to this position and to the University overall. My background combines software development, as shown by my experience in the industry, with research in software engineering, as shown by my scientific publications. My current main research interest is human aspects of software engineering and I see that there is a high potential to explore these aspects for the research problems regarding vulnerabilities and resilience of software. Besides that, I have several other interests, including meta-research topics and agile software development, in which I could collaborate with other internal or external researchers.

Language competence

- Portuguese: first language
- English: Fluent (written and spoken) – C1 (Language Center of the Free University of Bozen-Bolzano, July 2022; TOEFL 108 out of 120, February 2016)
- Italian: Fluent (written and spoken) – C1 (Language Center of the Free University of Bozen-Bolzano, June 2020)
- German: Intermediate (written and spoken) – B1 course - Free University of Bozen-Bolzano (no certification)

Bolzano, September 16th, 2022