

Fabio Calefato

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Current Position

- Associate Professor**, University of Bari, Dept. of Computer Science – Bari, Italy Nov 2022 – present
- Holds the national habilitation as Full Professor since Dec 2023
- Co-founder and CEO**, PeoplewareAI s.r.l. – Bari, Italy Feb 2021 – present
- PeoplewareAI 🌐 is a spin-off company of the University of Bari, founded to transfer the results of research in the field of AI and software engineering to the market

Education

- University of Bari, Italy, Inter-University Specialization School for Secondary Education in Physics, Computer Science, and Mathematics** July 2007 – June 2008
- Graduation grade: 42/42
- University of Bari, Italy, PhD in Computer Science** Jan 2004 – May 2007
- Thesis: “Supporting Synchronous Communication in Distributed Software Teams”
 - Thesis listed among the ACM SIGSOFT selected Ph.D. Dissertations in the Area of Software Engineering 🌐
- University of Bari, Italy, MSc in Computer Science** Sept 1996 – Oct 2002
- Thesis: “P2P Conferences in JXTA”
 - Graduation grade: 110/110 with honors

Research Experience

- Tenure-track Assistant Professor**, University of Bari, Dept. of Computer Science – Bari, Italy Nov 2019 – Nov 2022
- Untenured Assistant Professor**, University of Bari, Jonian Dept. – Taranto, Italy Nov 2015 – Nov 2019
- Postdoctoral Research Fellow**, University of Bari, Dept. of Computer Science – Bari, Italy July 2013 – July 2015
- Postdoctoral Research Fellow**, University of Bari, Dept. of Computer Science – Bari, Italy Apr 2010 – Mar 2013
- Postdoctoral Research Fellow**, University of Bari, Dept. of Computer Science – Bari, Italy Apr 2007 – Nov 2008

Bibliometrics

Google Scholar: *h*-index 30, 3,100+ citations

Scopus: *h*-index 21, 1,500+ citations

Selected Publications

- A multivocal literature review on the benefits and limitations of industry-leading AutoML tools** 2025
- L. Quaranta, K. Azevedo, *F. Calefato*, M. Kalinowski
Inf. Softw. Technol., vol. 178, doi: 10.1016/J.INFSOF.2024.107608 🌐, rank: SJR Q1
- A lot of talk and a badge: An exploratory analysis of personal achievements in GitHub** 2024
- F. Calefato*, L. Quaranta, F. Lanubile

Inf. Softw. Technol., vol. 176, doi: 10.1016/J.INFSOF.2024.107561 [↗](#), rank: SJR Q1

Generative AI in Software Engineering Must Be Human-Centered: The Copenhagen Manifesto 2024

D. Russo, S. Baltes, N. Berkel, P. Avgeriou, *F. Calefato*, B. Cabrero-Daniel, G. Catolino, J. Cito, N. Ernst, T. Fritz, H. Hata, R. Holmes, M. Izadi, F. Khomh, M. Kjærgaard, G. Liebel, A. Lluch-Lafuente, S. Lambiase, W. Maalej, G. Murphy, N. Moe, G. O'Brien, E. Paja, M. Pezzè, J. Persson, R. Prikladnicki, P. Ralph, M. Robillard, T. Silva, K.J. Stol, M.A. Storey, V. Stray, P. Tell, C. Treude, B. Vasilescu

J. Syst. Softw., vol. 216, doi: 10.1016/J.JSS.2024.112115 [↗](#), rank: SJR Q1

Assessing the Use of AutoML for Data-Driven Software Engineering 2023

F. Calefato, L. Quaranta, F. Lanubile, M. Kalinowski

ACM/IEEE International Symposium on Empirical Software Engineering and Measurement, ESEM 2023, New Orleans, LA, USA, October 26-27, 2023, doi: 10.1109/ESEM56168.2023.10304796 [↗](#), rank: ICORE A

Eliciting Best Practices for Collaboration with Computational Notebooks 2022

L. Quaranta, *F. Calefato*, F. Lanubile

Proc. ACM Hum. Comput. Interact., vol. 6, no. CSCW1, doi: 10.1145/3512934 [↗](#), rank: ICORE A

Using Personality Detection Tools for Software Engineering Research: How Far Can We Go? 2022

F. Calefato, F. Lanubile

ACM Trans. Softw. Eng. Methodol., vol. 31, no. 3, doi: 10.1145/3491039 [↗](#), rank: SJR Q1

What Makes Agile Software Development Agile? 2022

M. Kuhrmann, P. Tell, R. Hebig, J. Klünder, J. Münch, O. Linssen, D. Pfahl, M. Felderer, C. Prause, S. MacDonell, J. Nakatumba-Nabende, D. Raffo, S. Beecham, E. Tüzün, G. López, N. Paez, D. Fontdevila, S. Licorish, S. Küpper, G. Ruhe, E. Knauss, Ö. Özcan-Top, P. Clarke, F. McCaffery, M. Genero, A. Vizcaíno, M. Piattini, M. Kalinowski, T. Conte, R. Prikladnicki, S. Krusche, A. Coskunçay, E. Scott, *F. Calefato*, S. Pimonova, R.H. Pfeiffer, U. Schultz, R. Heldal, M. Fazal-Baqaie, C. Anslow, M. Nayebe, K. Schneider, S. Sauer, D. Winkler, S. Biffl, M. Bastarrica, I. Richardson

IEEE Trans. Software Eng., vol. 48, no. 9, doi: 10.1109/TSE.2021.3099532 [↗](#), rank: SJR Q1

Will you come back to contribute? Investigating the inactivity of OSS core developers in GitHub 2022

F. Calefato, M. Gerosa, G. Iaffaldano, F. Lanubile, I. Steinmacher

Empir. Softw. Eng., vol. 27, no. 3, doi: 10.1007/S10664-021-10012-6 [↗](#), rank: SJR Q1

A Preliminary Investigation of MLOps Practices in GitHub 2022

F. Calefato, F. Lanubile, L. Quaranta

ESEM '22: ACM / IEEE International Symposium on Empirical Software Engineering and Measurement, Helsinki, Finland, September 19 - 23, 2022, doi: 10.1145/3544902.3546636 [↗](#), rank: ICORE A

Pynblint: a static analyzer for Python Jupyter notebooks 2022

L. Quaranta, *F. Calefato*, F. Lanubile

Proceedings of the 1st International Conference on AI Engineering: Software Engineering for AI, CAIN 2022, Pittsburgh, Pennsylvania, May 16-17, 2022, doi: 10.1145/3522664.3528612 [↗](#)

An In-Depth Analysis of Occasional and Recurring Collaborations in Online Music Co-creation 2021

F. Calefato, G. Iaffaldano, L. Trisolini, F. Lanubile

ACM Trans. Soc. Comput., vol. 4, no. 4, doi: 10.1145/3493800 [↗](#)

Assessment of off-the-shelf SE-specific sentiment analysis tools: An extended replication study 2021

N. Novielli, *F. Calefato*, F. Lanubile, A. Serebrenik

- Empir. Softw. Eng., vol. 26, no. 4, doi: 10.1007/S10664-021-09960-W [↗](#), rank: SJR Q1
- Towards Productizing AI/ML Models: An Industry Perspective from Data Scientists** 2021
F. Lanubile, *F. Calefato*, L. Quaranta, M. Amoruso, F. Fumarola, M. Filannino
1st IEEE/ACM Workshop on AI Engineering - Software Engineering for AI, WAIN@ICSE 2021, Madrid, Spain, May 30-31, 2021, doi: 10.1109/WAIN52551.2021.00027 [↗](#)
- Love, Joy, Anger, Sadness, Fear, and Surprise: SE Needs Special Kinds of AI: A Case Study on Text Mining and SE** 2020
N. Novielli, *F. Calefato*, F. Lanubile
IEEE Softw., vol. 37, no. 3, doi: 10.1109/MS.2020.2968557 [↗](#), rank: SJR Q2
- Can We Use SE-specific Sentiment Analysis Tools in a Cross-Platform Setting?** 2020
N. Novielli, *F. Calefato*, D. Dongiovanni, D. Girardi, F. Lanubile
MSR '20: 17th International Conference on Mining Software Repositories, Seoul, Republic of Korea, 29-30 June, 2020, doi: 10.1145/3379597.3387446 [↗](#), rank: ICORE A
- A large-scale, in-depth analysis of developers' personalities in the Apache ecosystem** 2019
F. Calefato, F. Lanubile, B. Vasilescu
Inf. Softw. Technol., vol. 114, doi: 10.1016/J.INFSOF.2019.05.012 [↗](#), rank: SJR Q1
- RECODE: revision control for digital images** 2019
F. Calefato, G. Castellano, V. Rossano
Multim. Tools Appl., vol. 78, no. 23, doi: 10.1007/S11042-019-7735-9 [↗](#), rank: SJR Q2
- An empirical assessment of best-answer prediction models in technical Q&A sites** 2019
F. Calefato, F. Lanubile, N. Novielli
Empir. Softw. Eng., vol. 24, no. 2, doi: 10.1007/S10664-018-9642-5 [↗](#), rank: SJR Q1
- Agile Collaboration for Distributed Teams [Software Technology]** 2019
F. Calefato, C. Ebert
IEEE Softw., vol. 36, no. 1, doi: 10.1109/MS.2018.2874668 [↗](#), rank: SJR Q2
- How to ask for technical help? Evidence-based guidelines for writing questions on Stack Overflow** 2018
F. Calefato, F. Lanubile, N. Novielli
Inf. Softw. Technol., vol. 94, doi: 10.1016/J.INFSOF.2017.10.009 [↗](#), rank: SJR Q1
- Investigating Crowd Creativity in Online Music Communities** 2018
F. Calefato, G. Iaffaldano, F. Lanubile, F. Maiorano
Proc. ACM Hum. Comput. Interact., vol. 2, no. CSCW, doi: 10.1145/3274296 [↗](#), rank: ICORE A
- Assessing the impact of real-time machine translation on multilingual meetings in global software projects** 2016
F. Calefato, F. Lanubile, T. Conte, R. Prikladnicki
Empir. Softw. Eng., vol. 21, no. 3, doi: 10.1007/S10664-015-9372-X [↗](#), rank: SJR Q1
- Moving to Stack Overflow: Best-Answer Prediction in Legacy Developer Forums** 2016
F. Calefato, F. Lanubile, N. Novielli
Proceedings of the 10th ACM/IEEE International Symposium on Empirical Software Engineering and Measurement, ESEM 2016, Ciudad Real, Spain, September 8-9, 2016, doi: 10.1145/2961111.2962585 [↗](#), rank: ICORE A
- The role of social media in affective trust building in customer-supplier relationships** 2015
F. Calefato, F. Lanubile, N. Novielli

- Electron. Commer. Res., vol. 15, no. 4, doi: 10.1007/S10660-015-9194-3 [↗](#), rank: SJR Q2
- Cost Savings in Global Software Engineering: Where's the Evidence?** 2015
D. Smite, *F. Calefato*, C. Wohlin
IEEE Softw., vol. 32, no. 4, doi: 10.1109/MS.2015.102 [↗](#), rank: SJR Q2
- Mining Successful Answers in Stack Overflow** 2015
F. Calefato, F. Lanubile, M. Marasciulo, N. Novielli
12th IEEE/ACM Working Conference on Mining Software Repositories, MSR 2015, Florence, Italy, May 16-17, 2015, doi: 10.1109/MSR.2015.56 [↗](#), rank: ICORE A
- Speech Recognition for Voice-Based Machine Translation** 2014
T. Duarte, R. Prikladnicki, *F. Calefato*, F. Lanubile
IEEE Softw., vol. 31, no. 1, doi: 10.1109/MS.2014.14 [↗](#), rank: SJR Q2
- An empirical simulation-based study of real-time speech translation for multilingual global project teams** 2014
F. Calefato, F. Lanubile, R. Prikladnicki, J. Pinto
2014 ACM-IEEE International Symposium on Empirical Software Engineering and Measurement, ESEM '14, Torino, Italy, September 18-19, 2014, doi: 10.1145/2652524.2652537 [↗](#), rank: ICORE A
- Group Awareness in Global Software Engineering** 2013
F. Lanubile, *F. Calefato*, C. Ebert
IEEE Softw., vol. 30, no. 2, doi: 10.1109/MS.2013.30 [↗](#), rank: SJR Q2
- Computer-mediated communication to support distributed requirements elicitation and negotiations tasks** 2012
F. Calefato, D. Damian, F. Lanubile
Empir. Softw. Eng., vol. 17, no. 6, doi: 10.1007/S10664-011-9179-3 [↗](#), rank: SJR Q1
- Assessing the impact of real-time machine translation on requirements meetings: a replicated experiment** 2012
F. Calefato, F. Lanubile, T. Conte, R. Prikladnicki
2012 ACM-IEEE International Symposium on Empirical Software Engineering and Measurement, ESEM '12, Lund, Sweden - September 19 - 20, 2012, doi: 10.1145/2372251.2372299 [↗](#), rank: ICORE A
- Investigating the use of tags in collaborative development environments: a replicated study** 2010
F. Calefato, D. Gendarmi, F. Lanubile
Proceedings of the International Symposium on Empirical Software Engineering and Measurement, ESEM 2010, 16-17 September 2010, Bolzano/Bozen, Italy, doi: 10.1145/1852786.1852818 [↗](#), rank: ICORE A
- Using frameworks to develop a distributed conferencing system: an experience report** 2009
F. Calefato, F. Lanubile
Softw. Pract. Exp., vol. 39, no. 15, doi: 10.1002/SPE.937 [↗](#), rank: SJR Q2
- A Controlled Experiment on the Effects of Synchronicity in Remote Inspection Meetings** 2007
F. Calefato, F. Lanubile, T. Mallardo
Proceedings of the First International Symposium on Empirical Software Engineering and Measurement, ESEM 2007, September 20-21, 2007, Madrid, Spain, doi: 10.1109/ESEM.2007.61 [↗](#), rank: ICORE A

Events Organization

Program Co-Chair

- 40th Int'l Conf. on Software Maintenance and Evolution (ICSME'24), Flagstaff, AZ, USA, Oct 2024, iCORE rank: A [🔗](#)
- 16th Int'l Conf. on Cooperative and Human Aspects of Software Engineering (CHASE'23), Melbourne, Australia, May 2023
- 8th Int'l Workshop on Social Software Engineering (SSE'16), Seattle, WA, USA, Nov 14, 2016 – co-located with FSE'16
- 1st Int'l Workshop on Trust in Virtual Teams: Theory and Tools, San Antonio, TX, USA, Feb 24, 2013 – co-located with CSCW'13

General Chair

- 14th Int'l Conf. on Global Software Engineering (ICGSE'19), Montreal, Canada, 25-26 May 2018, ICORE rank: C [🔗](#)

Steering Board Member

- Int'l Conf. on Global Software Engineering (ICGSE), 2019-2022, ICORE rank: C [🔗](#)

Track Co-Chair

- 43th Int'l Conf. on Software Engineering (ICSE'21), Student Contest on Software Engineering (SCORE) track, Madrid, Spain, May 2021, ICORE rank: [🔗](#)A*

Workshops & Tutorials Co-Chair

- 23rd Int'l Conf. on Product-Focused Software Process Improvement (PROFES'23), Jyväskylä, Finland, 21-23 November 2022, ICORE rank: B [🔗](#)

Workshops Co-Chair

- 10th Int'l Conf. on Global Software Engineering (ICGSE'15), Ciudad Real, Spain, 13-16 July 2015, ICORE rank: C [🔗](#)

Open-science Co-Chair

- 15th Int'l Symposium on Empirical Software Engineering and Measurement (ESEM'21), Bari, Italy, 11-15 Oct 2021, ICORE rank: A [🔗](#)
- 14th Int'l Symposium on Empirical Software Engineering and Measurement (ESEM'20), Bari, Italy, 5-9 Oct 2020, ICORE rank: A [🔗](#)

Publicity & Social Media Chair

- 21st Int'l Conf. on Agile Software Development (XP'20), Copenhagen, Denmark, 8-12 June 2020, ICORE rank: B [🔗](#)
- 13th Int'l Conf. on Global Software Engineering (ICGSE'18), Gothenburg, Sweden, 28-29 May 2018, ICORE rank: C [🔗](#)
- 8th Int'l Conf. on Global Software Engineering (ICGSE'13), Bari, Italy, 26-29 Aug 2013, ICORE rank: C [🔗](#)

Editorial Activities

Associate Editor

- Elsevier 'Journal of Systems and Software' (JSS), rank: SJR Q1
- Springer 'Automated Software Engineering' (ASE)

Guest Editor

- 2024 Springer 'Empirical Software Engineering' (EMSE), rank: SJR Q1. Special Issue on "Software Maintenance and Evolution." Co-editor: Sarah Nadi (New York University, Abu Dhabi)
- 2023: Springer 'Empirical Software Engineering' (EMSE), rank: SJR Q1. Special Issue on "Cooperative and Human Aspects of Software Engineering" [🔗](#). Co-editors: Hourieh Khalajzadeh (Deakin University, Australia) and Igor Steinmacher (NAU, USA)
- 2021: Elsevier 'Journal of System and Software' (JSS), rank: SJR Q1. Special Issue on "Global Software Engineering: Challenges and Solutions." [🔗](#) Vol. 174, Apr. 2021. Co-editors: Alpna Dubey (Accenture Labs, India), Christof Ebert (Vector Consulting, Germany), Paolo Tell (IT University of Copenhagen, Denmark)

Review Board Member

- 2023 – present: *Replicated Computational Results Distinguished Reviewers Board for ACM ‘Transactions on Software Engineering and Methodology’ (TOSEM)*, rank: SJR Q1
- 2020 – 2022: *ACM ‘Transactions on Software Engineering and Methodology’ (TOSEM)*, rank: SJR Q1
- 2015 – 2019: *Springer ‘Journal of Empirical Software Engineering’ (EMSE, SJR Q1)*, rank: SJR Q1

Peer Reviews (partial list) – verified record on Clarivate [↗](#)

- (23) *Springer ‘Journal of Empirical Software Engineering’ (EMSE)*, rank: SJR Q1
- (19) *IEEE ‘Transactions on Software Engineering’ (TSE)*, rank: SJR Q1
- (16) *ACM ‘Transactions on Software Engineering and Methodology’ (TOSEM)*, rank: SJR Q1
- (12) *Elsevier ‘Journal of System and Software’ (JSS)*, rank: SJR Q1
- (8) *Elsevier ‘Information and Software Technology’ (INFISOFT)*, rank: SJR Q1
- (7) *Wiley ‘Journal of Software: Evolution and Process’ (JSEP)*, rank: SJR Q2
- (5) *IEEE ‘Software,’* rank: SJR Q2
- (2) *IEEE ‘Transactions on Affective Computing,’* rank: SJR Q1
- (1) *ACM ‘Transactions on Internet Technologies’ (TOIT)*, rank: SJR Q1

Institutional Services

Rector’s Delegate for the GARR Network

- May 2023 - present: *The GARR Consortium is the Italian national research and education network, providing high-speed Internet connectivity and advanced services to universities and research institutions.*

CS Dept. Director’s Delegate for Internship Programs

- Mar 2023 - present: *Responsibilities include overseeing the development and implementation of internship programs, coordinating with industry partners, mentoring students, ensuring compliance with academic standards, and evaluating the effectiveness of the internship experiences.*

Awards

Best Paper Award: *14th Int’l Conf. on Global Software Engineering (ICGSE’19), Montreal, Canada*

FABBR 2017 Award [↗](#): *Winner of the national selection procedure ‘Fondo per il finanziamento delle attività base di ricerca (FFABR) 2017,’ established by the Italian Ministry of University and Research (MUR) and intended for the annual funding of basic research activities of associate professors and researchers*

Keynote Presentations





















The Potential and Challenges of Personality Detection in Software Engineering Research – 4th Int’l Workshop on Affective Computing in Requirements Engineering (AffectRE’21), co-located with RE’21 Sept 2021

Facing Communication Challenges in Distributed Software Development – 1st Int’l Workshop on Virtual Teams: Experiences in Global Software Engineering (VirtuES ’13), co-located with ICGSE’13 Aug 2016

Membership in Program Committees

- 32nd IEEE Int’l Conf. on Software Analysis, Evolution, and Reengineering (SANER’25), Montréal, Canada 4-7 Mar. 2025, ICORE rank: A* [↗](#)
- 47th IEEE/ACM Int’l Conf. on Software Engineering (ICSE’25) – SEIS track, Ottawa, Canada, April 27-May 3 2025, ICORE rank: A* [↗](#)
- 47th IEEE/ACM Int’l Conf. on Software Engineering (ICSE’25) – Workshops track, Ottawa, Canada, April 27-May 3 2025, ICORE rank: A* [↗](#)
- 46th IEEE/ACM Int’l Conf. on Software Engineering (ICSE’24) – SEIS track, Lisbon, Portugal, 14-20 Apr. 2024, ICORE rank: A* [↗](#)
- 46th IEEE/ACM Int’l Conf. on Software Engineering (ICSE’24) – Workshops track, Lisbon, Portugal, 14-20 Apr. 2024, ICORE rank: A* [↗](#)

- 46th IEEE/ACM Int'l Conf. on Software Engineering (*ICSE'24*) – Student Research Competition (SRC) track, Lisbon, Portugal, 14-20 Apr. 2024, ICORE rank: A* [🔗](#)
- 18th ACM/IEEE Int'l Symposium on Empirical Software Engineering and Measurement (*ESEM'24*), Barcelona, Spain 24-25 Oct. 2024, ICORE rank: A [🔗](#)
- 21st Int'l Conf. on Mining Software Repositories (*MSR'24*) – Mining Challenge track, Lisbon, Portugal, 15-16 Apr. 2024, ICORE rank: A [🔗](#)
- 3rd Int'l Conf. on AI Engineering – Software Engineering for AI (*CAIN'24*), Lisbon, Portugal, 14-15 Apr. 2024
- 1st IEEE/ACM Workshop on Multi-disciplinary, Open, and RElevant Requirements Engineering (*MO2RE'24*), Lisbon Portugal 16 Apr. 2024
- 17th ACM/IEEE Int'l Symposium on Empirical Software Engineering and Measurement (*ESEM'23*), New Orleans, USA 26-27 Oct. 2023, ICORE rank: A [🔗](#)
- 39th Int'l Conf. on Software Maintenance and Evolution (*ICSME'23*) – NIER track, Bogotá, Colombia, 1-6 Oct. 2023, ICORE rank: A [🔗](#)
- 45th IEEE/ACM Int'l Conf. on Software Engineering – Posters track (*ICSE'23*), Melbourne, Australia, 14-20 May 2023, ICORE rank: A* [🔗](#)
- 23rd Int'l Conf. on Product-Focused Software Process Improvement (*PROFES'23*), Dornbirn, Austria 10-13 Dec. 2023, ICORE rank: B [🔗](#)
- 30th IEEE/ACM Int'l Conf. on Program Comprehension – ERA track (*ICPC'22*), Pittsburgh, USA, 16–17 May 2022, ICORE rank: A [🔗](#)
- 17th Int'l Conf. on Global Software Engineering (*ICSSP/ICGSE'22*), Pittsburgh, USA, 19–20 May 2022, ICORE rank: C [🔗](#)
- 15th IEEE/ACM Int'l Conf. on Cooperative and Human Aspects of Software Engineering (*CHASE'22*) Pittsburgh, USA, 18–19 May 2022
- 1st IEEE/ACM Workshop on Natural Language-based Software Engineering (*NLBSE'22*), Pittsburgh, USA, 8 May 2022
- 29th IEEE Int'l Conf. on Software Analysis, Evolution and Reengineering (*SANER'22*), Honolulu, USA, 15 Mar. 2022, ICORE rank: A [🔗](#)
- 23rd Int'l Conf. on Agile Software Development (*XP'22*), Copenhagen, Denmark, 13-17 June 2022, ICORE rank: B [🔗](#)
- 16th ACM/IEEE Symposium on Empirical Software Engineering and Measurement (*ESEM'21*) - Emerging Results and Vision Track, online, 14-15 Oct. 2021, ICORE rank: A [🔗](#)
- 22nd Int'l Conf. on Agile Software Development (*XP'21*), online, 14-18 June 2021, ICORE rank: B [🔗](#)
- 37th IEEE Int'l Conf. on Software Maintenance and Evolution (*ICSME'21*) - NIER Track, online, 27 Sept. - 1 Oct. 2021, ICORE rank: A [🔗](#)
- 14th ACM/IEEE Int'l Conf. on Cooperative and Human Aspects of Software Engineering (*CHASE'21*), online, 20-21 May 2021
- 17th Int'l Conf. on Open-Source Software (*OSS'21*), online, 12 May 2021
- 16th ACM/IEEE Int'l Conf. on Global Software Engineering (*ICSSP/ICGSE'21*), online, 18-19 May 2021, ICORE rank: C [🔗](#)
- 17th IEEE/ACM Int'l Conf. on Mining Software Repositories (*MSR'20*) – Mining Challenge track, online, 29-30 June 2020, ICORE rank: A [🔗](#)
- 15th ACM/IEEE Symposium on Empirical Software Engineering and Measurement (*ESEM'20*) - Emerging Results and Vision Track, online, 5-7 Oct. 2020, ICORE rank: A [🔗](#)
- ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (*ESEC/FSE'20*) - SRC track, online, 6-16 Nov. 2020, ICORE rank: A* [🔗](#)
- 21st Int'l Conf. on Agile Software Development (*XP'20*), online, 8-12 June 2020, ICORE rank: B [🔗](#)
- 15th IEEE/ACM Int'l Conf. on Global Software Engineering (*ICGSE'20*), online, 26-28 June 2020, ICORE rank: C [🔗](#)
- 13th IEEE/ACM Int'l Conf. on Cooperative and Human Aspects of Software Engineering (*CHASE'20*), online, 1-2 July 2020

- 36th Int'l Conf. on Software Maintenance and Evolution (*ICSME'20*) Doctoral Symposium Program Committee, Adelaide, Australia, Sep 28-Oct 02, 2020, ICORE rank: A 
- 13th Int'l Conf. on the Quality of Information and Communications Technology (*QUATIC'20*), online, 9-11 Sept. 2020, ICORE rank: C 
- 16th Int'l Symposium on Open Collaboration (*OpenSym'20*), online, 26–27 Aug. 2020, ICORE rank: C 
- 15th Int'l Conf. on Global Software Engineering (*ICGSE'20*), online, 26-28 June 2020, ICORE rank: C 
- 27th IEEE Int'l Conf. on Software Analysis, Evolution and Reengineering (*SANER'20*), London, Ontario, Canada, February 18-21, 2020, ICORE rank: A 
- 13th Int'l Symposium on Empirical Software Engineering and Measurement (*ESEM'19*), Porto de Galinhas, Brazil, 16-20 Sept. 2019, ICORE rank: A 
- 20th Int'l Conf. on Agile Software Development (*XP'19*), Montréal, Canada, 21-25 May 2019, ICORE rank: B 
- 12th Int'l Symposium on Empirical Software Engineering and Measurement (*ESEM'18*), Oulu, Finland, 11-12 Oct. 2018, ICORE rank: A 
- 12th Workshop on Distributed Software Development, Software Ecosystems and Systems-of-Systems (*WDES'18*), Madrid, Spain, Sept. 24, 2018
- 40th Int'l Conf. on Software Engineering (*ICSE'18*) – Student Contest on Software Engineering (SCORE) track, Gothenburg, Sweden, May 27–June 3, 2018, ICORE rank: A* 
- 13th Int'l Conf. on Global Software Engineering (*ICGSE'18*), Gothenburg, Sweden, 24-26 May 2018, ICORE rank: C 
- 1st Int'l Workshop on Affective Computing for Requirements Engineering (*AffectRE'18*), Banff, Canada Aug 21, 2018
- 11th Int'l Symposium on Empirical Software Engineering and Measurement (*ESEM'17*) Toronto, Canada, 9-10 Nov. 2017, ICORE rank: A 
- 12th Int'l Conf. on Global Software Engineering (*ICGSE'17*), Buenos Aires, Argentina, 22-23 May 2017, ICORE rank: C 
- 10th Int'l Symposium on Empirical Software Engineering and Measurement (*ESEM'16*), Ciudad Real, Spain, 8-9 Sept. 2016, ICORE rank: A 
- 11th Int'l Conf. on Global Software Engineering (*ICGSE'16*), Orange County, CA, USA, 2-5 Aug. 2016, ICORE rank: C 
- 9th Int'l Symposium on Empirical Software Engineering and Measurement (*ESEM'15*), Beijing, China, 22-23 Oct. 2015, ICORE rank: A 
- 10th Int'l Conf. on Global Software Engineering (*ICGSE'15*), Ciudad Real, Spain, 13-16 July 2015, ICORE rank: C 
- 7th Software Quality Days (*SWQD'15*), Vienna, Austria, 20-23 Jan. 2015
- 6th Software Quality Days (*SWQD'14*), Vienna, Austria, 14-16 Jan. 2014
- 8th Int'l Conf. on Global Software Engineering (*ICGSE'13*), Bari, Italy, 26-29 Aug. 2013, ICORE rank: C 
- 7th Int'l Conf. on Global Software Engineering (*ICGSE'12*), Porto Alegre, Brazil, 27-30 Aug. 2012, ICORE rank: C 
- 5th Workshop of the Italian Eclipse Community (*Eclipse-IT'10*), Savona, Italy, Sep. 30-Oct. 1, 2010
- 5th Int'l Conf. on P2P, Parallel, Grid, Cloud and Internet Computing (*3PGCIC-2010*), Fukuoka, Japan, 4-6 Nov. 2010
- 2nd Int'l Workshop on Social Software Engineering and Applications (*SoSEA'09*), Amsterdam, The Netherlands, 24 Aug. 2009
- 4th Int'l Conf. on Global Software Engineering (*ICGSE'09*), Limerick, Ireland, 13-16 Jul. 2009, ICORE rank: C 
- 4th Workshop of the Italian Eclipse Community (*Eclipse-IT'09*), Bergamo, Italy, 28-29 Sept. 2009
- 14th Collaboration Researchers' International Workshop on Groupware (*CRIWG'08*), Omaha, NE, USA, 14-18 Sept. 2008
- 3rd Int'l Conf. on Global Software Engineering (*ICGSE'08*), Bangalore, India, 17-20 Aug. 2008, ICORE rank: C 
- 3rd Workshop of the Italian Eclipse Community (*Eclipse-IT'08*), Bari, Italy, 17-18 Nov. 2008
- 1st Int'l Conf. on Software Engineering and Applications (*ICSEA'06*), Tahiti, Polynesia, Oct. 29 – Nov. 3, 2006,

Research Activity

Summary: My research primarily focuses on the intersection of Software Engineering and Artificial Intelligence, while also encompassing human factors in software development and globally distributed software engineering. Throughout my career, I have maintained a strong focus on empirical validation of research findings, conducting controlled experiments, case studies, and mining open source software repositories. My work has consistently appeared in top-tier venues and has influenced both academic research and industry practices in software engineering. Below is a detailed description of some of my research activities, organized by recency and impact.

Software Engineering for AI-Enabled Systems: My current research focuses on improving the development workflows of AI/ML-based systems. This work includes developing software engineering techniques to enhance AI/ML development workflows (WAIN 2021, ESEM 2022), creating taxonomies of tools for ensuring machine learning experiment reproducibility (AI*IA 2021), and identifying best practices for collaborative development in the transition from exploration to production of AI systems (CSCW 2021, MSR 2021, CAIN 2022). I have also investigated MLOps practices in GitHub and security aspects of AI system development.

Human Factors in Software Development: In my research I have investigated how human factors such, as personality traits, emotions, and social dynamics, influence software development processes, leveraging AI/ML techniques for analysis across various developer platforms and communication channels. In technical Q&A platforms like Stack Overflow, I have conducted comprehensive studies analyzing both technical aspects (such as community guidelines for effective questions) and social factors affecting answer success rates (MSR 2015, ESEM 2016, IST 2018, EMSE 2019). This work has evolved into creating gold standards for sentiment analysis (SEM 2019) as well as the development of ML-based methods for recognizing emotions and sentiment polarity in technical communication (IEEE Software 2020), and conducting cross-platform evaluations of sentiment analysis tools (MSR 2020). I have also conducted extended replications evaluating how sentiment analysis tool selection impacts empirical study validity (EMSE 2021). Beyond sentiment analysis, I have investigated how developer personalities influence collaboration in large software ecosystems like Apache (ICGSE 2018, IST 2019), with particular attention to how traits like agreeableness impact code review activities and pull request acceptance (ICGSE 2017). This research has led to developing specialized tools for personality detection in technical contexts (TOSEM 2021). My work has demonstrated the critical importance of domain-specific approaches when analyzing developer communications, showing the limitations of general-purpose personality and sentiment analysis tools in software engineering contexts.

Global Software Engineering and Agile Development: My research has addressed the challenges of distributed software development, particularly focusing on agile methodologies in global contexts. Recent contributions include an industrial action research study on communication tools in distributed agile teams (ICGSE 2020) and a global survey identifying key characteristics of agile processes (TSE 2021). I served as General Chair for ICGSE 2019 and Guest Editor for JSS special issue on Global Software Engineering (JSS 2021). A significant focus has been on overcoming linguistic barriers in global teams through real-time machine translation tools (ICGSE 2010-2011, ESEM 2012-2014, ESE 2016), demonstrating their effectiveness while identifying efficiency trade-offs in distributed development activities.

Research Projects

PRONEM - Natural Language Processing for Global Software Development

Mar 2012 – Mar 2014

- *Funded by:* Brazilian Ministry of Education (PRONEM/FAPERGS/CNPQ 03/2011)
- *Unit funding:* R\$ 249,600.00
- *Partners:* Pontifícia Universidade Católica do Rio Grande do Sul (PUCRS, project coordinator), Federal University of Rio Grande do Sul (UFRGS), University of Bari
- *Description:* International project that aimed at investigating machine translation's impact on Brazil's global software development capabilities, addressing the critical challenge that only 10% of professional developers were proficient in English. Project coordination was led by Prof. Renata Vieira and Prof. Rafael Prikladnicki (PUCRS).
- *Role:* Scientific coordinator for the University of Bari unit. Designed and implemented an open-source real-time translation system for synchronous communication in distributed software requirements meetings. Developed comprehensive experimental methodology to evaluate machine translation effectiveness compared to native

language usage during requirements elicitation and negotiation meetings.

C3 - Creative Cultural Collaboration

Nov 2018 – July 2020

- *Funded by:* POR Puglia, Axis I, Action 1.6, INNONETWORK Program (FESR-FSE 2014-2020)
- *Project funding:* € 383.852,47
- *Partners:* AI2 srl (project coordinator), DABIMUS srl, Quorum Italia srl, Marshmallow Games srl, University of Bari
- *Description:* Regional project investigated methodological and technological frameworks for creating computational artifacts to enable scalable production processes and enhance collaboration in large, distributed multidisciplinary teams.
- *Role:* Workpackage Leader for the University of Bari unit. Led the Operational Unit responsible for the collaborative platform workpackage (OR3), which included conducting state-of-the-art analysis of open-source co-working solutions, platform design, and ongoing maintenance and evolution activities. The University of Bari unit was coordinated by Prof. Filippo Lanubile.

OpEn - Open up Entrepreneurship

Sept 2015 – Sept 2017

- *Funded by:* EU Erasmus+ Program (2015-1-EL-KA202-014168)
- *Project funding:* € 229.193,00
- *Partners:* Small Enterprises' Institute of the Hellenic Confederation of Professionals, Craftsmen, and Merchants (IME GSEVEE, project coordinator), The European Business and Innovation Centre of Burgos (CEEI-Burgos), University of Bari, University of Patras, Manchester Metropolitan University
- *Description:* International project aimed at addressing the critical gap between entrepreneurs' digital technology needs and their e-business capabilities in global markets. The project developed multidisciplinary open educational resources to foster entrepreneurial mindset and digital business competencies for existing and prospective entrepreneurs. Project coordination was led by Vassilis Siomadis (IME GSEVEE).
- *Role:* Workpackage Leader for the University of Bari unit. Led operational teams in two key workpackages: designed thematic unit structure and e-class outline for the e-learning portal (WP2: E-module Service Design and Setup), and developed educational content focusing on web-based knowledge management tools (WP3: OpEn Educational Material). The University of Bari unit was coordinated by Prof. Filippo Lanubile.

VINCENTE - A Virtual Collective Intelligence Environment to Develop Sustainable Technology Entrepreneurship Ecosystems

Sept 2013 – Sept 2015

- *Funded by:* MUR PONREC 2007-2013 (PON02_00563_3470993)
- *Project funding:* € 8.548.807,40
- *Partners:* Engineering Computer Engineering, Exprivia SpA, ST Microelectronics, San Raffaele Hospital, AVIO, Alenia, Tozzi Renewable Energy, CNR, University of Salento, University of Bari, Politecnico di Bari, DHITECH
- *Description:* National project aimed at strengthening research cooperation networks between academia and industry to enhance competitiveness and economic growth, while promoting the adoption of advanced technologies and services.
- *Role:* Work package leader. Led the work unit on 'Innovative Models and Components for Social Networking' (OR6), focusing on developing interaction frameworks for collaborative environments. Specifically designed computer-mediated communication frameworks and selected appropriate communication tools for the VINCENTE virtual environment. The University of Bari unit was coordinated by Prof. Donato Malerba.

INTERSOCIAL - Unleashing the Power of Social Networking for Enhancing Regional Systems

Nov 2011 – Nov 2013

- *Funded by:* EU INTERREG Greece-Italy 2007-13, Priority Axis 1: Strengthening competitiveness and innovation
- *Partners:* University of Ioannina (project coordination), University of Bari, University of Patras, Euro-Mediterranean Cultural Heritage Agency
- *Description:* European project aimed at fostering regional development through the creation of a cross-border network of social innovation and entrepreneurship. The project developed a social networking platform to facilitate knowledge sharing and collaboration among regional stakeholders, enhancing SME competitiveness through social networking technologies and business data analytics. Project coordination was led by Prof. Evaggelia Pitoura.

- *Role:* Work package leader. Led operational teams across two work packages: conducted state-of-the-art analysis of social networking tools and enterprise-level social web presence policies (WP3: Development of Innovation Devices), and managed requirements analysis, deployment, and experimental evaluation of ESA (Enterprise Social Aggregator), a custom social networking tool for SMEs (WP4: Deployment and evaluation of innovation devices). The University of Bari unit was coordinated by Prof. Filippo Lanubile.

LOGIN - LOGistica Integrata

June 2012 – Oct 2015

- *Funded by:* MISE - call Industria 2015 - Made in Italy New Technologies Program 2012-2015 (MI01_00294)
- *Partners:* DAISY-NET s.c.a.r.l (project coordination), University of Bari, Politecnico di Bari, University of Salento, University of Foggia, Cetma
- *Description:* National project developing an integrated logistics platform based on Service Oriented Architecture (SOA) for tracking goods movement and monitoring related information flows through web services.
- *Role:* Work package leader. Led work packages focused on the CollabWeb component: defined specifications within the integrated LOGIN model (WP2) and designed component architecture (WP3). Project coordination for University of Bari unit was led by Prof. Giuseppe Visaggio.

Research Visits

M-Group, University of Oulu – Oulu, Finland	Sept 2023 – Sept 2023
• <i>Host:</i> Prof. Davide Taiibi	
STRUDEL, Carnegie Mellon University (CMU) – Pittsburgh, USA	July 2017 – Oct 2017
• <i>Host:</i> Prof. Bogdan Vasilescu	
CHISEL, University of Victoria – Victoria, Canada	Nov 2016 – Dec 2016
• <i>Host:</i> Prof. Margaret-Anne Storey	
SEGAL, University of Victoria – Victoria, Canada	Jan 2006 – Apr 2006
• <i>Host:</i> Prof. Daniela Damian	
Distributed Systems Group, Vienna University of Technology – Vienna, Austria	May 2005 – June 2005
• <i>Host:</i> Prof. Schaharm Dustdar	

Invited Seminars

Collaboration in Software Engineering: 10 Years in Review – Carnegie Mellon University, USA	Oct 2017
Classification Models in Software Engineering: From Defect to Best-Answer Prediction – University of Victoria, Canada	Nov 2016

Ph.D. Students Supervision

Kelly Azevedo Borges Leal – Pontifical Catholic University of Rio de Janeiro (PUR-Rio), Brazil	July 2023 – present
• <i>Topic:</i> AutoML for Software Engineering	
• <i>Co-supervised with prof.</i> Co-supervised with prof. Marcos Kalinowski	
Luigi Quaranta – University of Bari, Italy	Nov 2022
• <i>Thesis:</i> “Collaboration Around Computational Notebooks To Build AI-enabled Systems”	
• <i>Co-supervised with prof.</i> Filippo Lanubile	
Giuseppe Iaffaldano – University of Bari, Italy	Feb 2020
• <i>Thesis:</i> “Investigating the Dynamics of Online Creative Communities”	
• <i>Co-supervised with prof.</i> Filippo Lanubile	

Membership in Doctoral Boards

Ph.D. program in Computer Science and Mathematics (XL cycle) – University of Bari, Italy	2024 – 2025
Ph.D. program in Computer Science and Mathematics (XXXIX cycle) – University of Bari, Italy	2023 – 2024
Ph.D. program in Computer Science and Mathematics (XXXVIII cycle) – University of Bari, Italy	2022 – 2023
Interuniversity Ph.D. program in Aerospace Engineering and Sciences (XXXVII cycle) – Polytechnic University of Bari, Italy	2021 – 2022
Interuniversity Ph.D. program in Aerospace Engineering and Sciences (XXXVI cycle) – Polytechnic University of Bari, Italy	2020 – 2021

Teaching

Reti di Calcolatori (Computer Networks) [6 ECTS] , BSc in Computer Science and Software Production Technologies (ITPS), 2nd year, University of Bari, Dept. of Computer Science – Bari, Italy • <i>Teaching evaluation scores: 2023-25: N/A; 2022-23: 95.52%</i>	2022 – 2025
Social Computing [6 ECTS] , MSc in Computer Science, 1st year, University of Bari, Dept. of Computer Science – Bari, Italy • <i>Teaching evaluation scores: 2023-24: N/A; 2022-23: 100%; 2021-22: 100%</i>	2021 – 2024
Software Solutions for Reproducible Experiments [2 ECTS] , Ph.D. program in Computer Science and Mathematics (XXXVIII cycle), University of Bari, Dept. of Computer Science – Bari, Italy	2022 – 2023
Social Computing [5 ECTS] , MSc in Computer Science and Engineering, University of Oulu – Oulu, Finland • <i>Course taught as the winner of an EU-funded grant ‘Erasmus+ TUCEP Selection Call Mobility for teaching staff’ (2022-23), for university professors and researchers mobility</i>	2022 – 2023
Reti di Calcolatori (Computer Networks) [9 ECTS] , BSc in Computer Science, 3rd year in University of Bari, Dept. of Computer Science – Bari, Italy • <i>Teaching evaluation scores: 97.07%</i>	2021 – 2022
Reti di Calcolatori (Computer Networks) [6 ECTS] , BSc in Computer Science and Software Production Technologies (ITPS), 2nd year, University of Bari, Dept. of Computer Science – Bari, Italy • <i>Teaching evaluation scores: 2020-21: 94.59%; 2019-20: 89.74%</i>	2019 – 2021
Reti di Calcolatori (Computer Networks) [9 ECTS] , BSc in Computer Science, 3rd year in University of Bari, Dept. of Computer Science – Bari, Italy • <i>Teaching evaluation scores: 93.4%</i>	2018 – 2019
Mining Socio-technical Repositories [3 ECTS] , Ph.D. program in Computer Science and Mathematics (XXXIII cycle), University of Bari, Dept. of Computer Science – Bari, Italy	2017 – 2018
IT Tools Supporting Legal and Economic Research: Blockchain for Tracking Production and Transportation Chains [2 ECTS] , Ph.D. program in Rights, Economies, and Cultures of the Mediterranean (XXXIII cycle), University of Bari, Jonian Dept. (Law and Business School) – Taranto, Italy	2017 – 2018
Classification Models in Software Engineering [2 ECTS] , Ph.D. program in Computer Science, University of Oulu – Oulu, Finland • <i>Course taught as the winner of an EU-funded grant ‘Erasmus+ TUCEP Selection Call Mobility for teaching staff’ (2015-16), for university professors and researchers mobility</i>	2016 – 2017

Emotion Awareness in Social Computing [2 ECTS] , Ph.D. program in Computer Science and Mathematics (XXXII cycle), University of Bari, Dept. of Computer Science – Oulu, Finland	2016 – 2017
• Co-taught with Prof. Nicole Novielli	
IT Tools Supporting Legal and Economic Research [2 ECTS] , Ph.D. program in Rights, Economies, and Cultures of the Mediterranean (XXXII cycle), University of Bari, Jonian Dept. (Law and Business School) – Taranto, Italy	2016 – 2017
Informatica (Computer Science) [9 ECTS] , BSc in Maritime Sciences and Management (SGAM), 2nd year – Italian Navy Petty Officers School (Mariscuola), Taranto, Italy, University of Bari, Dept. of Computer Science	2015 – 2020
• <i>Teaching evaluation scores: 2019-20: 95.2%; 2018-19: 95.9%; 2017-18: 97.4%; 2016-17: 91.9%; 2015-16: 83.5%</i>	
Abilità Informatica (Computer Skills) [4 ECTS] , Bachelor of Law, 1st year, University of Bari, Jonian Dept. (Law and Business School) – Taranto, Italy	2015 – 2020
• <i>Teaching evaluation scores: 2019-20: 93.1%; 2018-19: 95.9%; 2017-18: 93.8%; 2016-17: 89.8%; 2015-16: 87.8%</i>	
Laboratorio di Informatica (C Programming Lab) [9 ECTS] , BSc in Computer Science and Software Production Technologies (ITPS), 1st year, University of Bari, Dept. of Computer Science – Bari, Italy	2013 – 2015
• <i>Teaching evaluation scores: 2014-15: 88.3%; 2013-14: 93.1%</i>	
Linguaggi di Programmazione + Laboratorio (Programming Languages + Lab) [12 ECTS] , BSc in Computer Science, 1st year, University of Bari, Dept. of Computer Science – Brindisi, Italy	2013 – 2014
• <i>Teaching evaluation scores: 95.7%</i>	
Laboratorio di Informatica (C Programming Lab) [5/6 ECTS] , BSc in Computer Science, 1st year, University of Bari, Dept. of Computer Science – Brindisi, Italy	2008 – 2013
• <i>Teaching evaluation scores: N/A</i>	

Software

EMTk (Emotion-Mining Toolkit)	EMTk on GitHub 🔗
• EmoTxt is the module for training custom emotion classifiers from text. It provides out of the box an emotion classifier specifically tuned for mining emotion from developers' communication channels, such as Stack Overflow.	
• Senti4SD is the module for emotion-polarity classification (sentiment analysis) specifically trained on technical corpora from developers' communication channels, such as GitHub and StackOverflow.	