

# DAVIDE FUCCI

<b>Citizenship</b>	Italian	
<b>Research Interests</b>	Empirical software engineering, Agile software development and testing, affective computing and psycho-physiology for software and requirements engineering. I have a strong interest in methodological aspects and empirical approaches, as well as open science.	
<b>Education</b>	University of Oulu, Oulu, Finland	2013–2016
	Ph.D. in Software Engineering with honors, May 2016	
	Advisors: Prof. Burak Turhan & Prof. Markku Oivo	
	Thesis title: The Role of Process Conformance and Developers' Skills in the Context of Test-driven Development.	
	University of Oulu, Oulu, Finland	2010–2012
	Master degree in Computer Science grade 4/5, September 2012	
	University of Bari, Bari, Italy	2009–2010
	Master degree in Computer Science	
	University of Bari, Bari, Italy	2004–2008
	Bachelor degree in Computer Science grade 96/100, December 2008	
<b>Employment</b>	Software Engineering Research Lab, Karlskrona, Sweden	10/2021–
	Senior Lecturer (Tenured)	
	Software Engineering Research Lab, Karlskrona, Sweden	9/2019–9/2021
	Assistant Professor (Tenure Track)	
	HITeC e.V. & University of Hamburg, Hamburg, Germany	2/2017–12/2019
	Post-doctoral Researcher	
	University of Oulu, Oulu, Finland	6/2016–12/2016
	Post-doctoral Researcher	
	Carnegie Mellon University (SV campus), Mountain View, CA, USA	01/2015–07/2015
	Visiting Researcher	
	PaneMerkille Oy, Oulu, Finland	07/2012–12/2014
	Founder & CTO	
	Founded a startup as a spin-off of university project.	
	Developed front-end and back-end using Javascript technologies.	
	Advanced Computer Systems, Trani, Italy	5/2007–08/2009
	Software developer	
	Developed test infrastructure for legacy code.	
	Developed in-house DHW solution using C# and .NET technologies.	

## Teaching Experience

Course responsible Quality Assurance of Security Aware Applications	Spring semester 2021–2022 Blekinge Institute of Technology
Course responsible Software Testing	Spring semester 2020–2021 Blekinge Institute of Technology
Course responsible Global Software Development	Fall semester 2020–2021 Blekinge Institute of Technology
Instructor Global Software Development	Fall semester 2019–2020 Blekinge Institute of Technology
Instructor Empirical Software Engineering	Spring semester 2017–2019 University of Hamburg
Instructor Software Patterns	Spring semester 2017–2019 University of Hamburg
Instructor, Creator Integration and Testing of Software Systems	Fall 2016 University of Bari
Instructor Software Quality and Testing	Spring semester 2014–2016 University of Oulu
Co-Instructor, Co-Creator Software Quality and Testing	Spring 2013 University of Oulu
Instructor Global and Distributed Software Engineering	Fall semester 2013–2015 University of Oulu
Supervisor Project II	Fall semester 2013–2015 University of Oulu

## Publications Journals

- §11. Simone Romano, Davide Fucci, Giuseppe Scanniello, Maria Teresa Baldassarre, Burak Turhan, and Natalia Juristo. On researcher bias in software engineering experiments. *Journal of Systems and Software*, 182:111068, 2021
- §10. Adrian Santos, Sira Vegas, Oscar Dieste, Fernando Uyaguari, Ayşe Tosun, Davide Fucci, Burak Turhan, Giuseppe Scanniello, Simone Romano, Itir Karac, et al. A family of experiments on test-driven development. *Empirical Software Engineering*, 26(3):1–53, 2021
- §9. Maria Teresa Baldassarre, Danilo Caivano, Davide Fucci, Natalia Juristo, Simone Romano, Giuseppe Scanniello, and Burak Turhan. Studying test-driven development and its retainment over a six-month time span. *Journal of Systems and Software*, 176:110937, 2021

- §8. Davide Fucci and Ehsan Zabardast. Towards group development stages in software engineering courses projectwork. *Journal of Teaching and Learning in Higher Education at Malmö University*, 1(2), 2020
- §7. Davide Fucci, Giuseppe Scanniello, Simone Romano, and Natalia Juristo. Need for Sleep: the Impact of a Night of Sleep Deprivation on Novice Developers' Performance. *IEEE Transactions on Software Engineering*, 2018
- §6. Ayse Tosun, Oscar Dieste, Davide Fucci, Sira Vegas, Burak Turhan, Hakan Erdogmus, Adrian Santos, Markku Oivo, Kimmo Toro, Janne Järvinen, and Natalia Juristo. An Industry Experiment on the Effects of Test-driven Development on External Quality and Productivity. *Empirical Software Engineering*, 22(6):2763–2805, 2017
- §5. Oscar Dieste, Alejandrina M. Aranda, Fernando Uyaguari, Burak Turhan, Ayse Tosun, Davide Fucci, Markku Oivo, and Natalia Juristo. Empirical Evaluation of the Effects of Experience on Code Quality and Programmer Productivity: An Exploratory Study. *Empirical Software Engineering*, 22(5):2457–2542, 2017
- §4. Simone Romano, Davide Fucci, Giuseppe Scanniello, Burak Turhan, and Natalia Juristo. Findings From a Multi-method Study on Test-driven Development. *Information & Software Technology*, 89:64–77, 2017
- §3. Davide Fucci, Hakan Erdogmus, Burak Turhan, Markku Oivo, and Natalia Juristo. A Dissection of the Test-Driven Development Process: Does It Really Matter to Test-First or to Test-Last? *IEEE Trans. Software Eng.*, 43(7):597–614, 2017
- §2. Davide Fucci, Burak Turhan, Natalia Juristo Juzgado, Oscar Dieste, Ayse Tosun Misirli, and Markku Oivo. Towards an Operationalization of Test-driven Development Skills: An Industrial Empirical Study. *Information & Software Technology*, 68:82–97, 2015
- §1. Davide Fucci and Burak Turhan. On the Role of Tests in Test-driven Development: A Differentiated and Partial Replication. *Empirical Software Engineering*, 19(2):277–302, 2014

## Publications Conferences

- §27. Valentina Lenarduzzi, Oscar Dieste, Davide Fucci, and Sira Vegas. Towards a methodology for participant selection in software engineering experiments: A vision of the future. In *Proceedings of the 15th ACM/IEEE International Symposium on Empirical Software Engineering and Measurement (ESEM)*, pages 1–6, 2021
- §26. Oleksandr Kosenkov, Michael Unterkalmsteiner, Daniel Mendez, and Davide Fucci. Vision for an artefact-based approach to regulatory requirements engineering. In *Proceedings of the 15th ACM/IEEE International Symposium on Empirical Software Engineering and Measurement (ESEM)*, pages 1–6, 2021
- §25. Simone Romano, Giuseppe Scanniello, Maria Teresa Baldassarre, Davide Fucci, and Danilo Caivano. Results from a replicated experiment on the affective reactions of novice developers when applying test-driven development. In *International Conference on Agile Software Development*, pages 223–239. Springer, 2020

- §24. Mohammad Ghafari, Timm Gross, Davide Fucci, and Michael Felderer. Why research on test-driven development is inconclusive? In 2020 ACM/IEEE International Symposium on Empirical Software Engineering and Measurement, ESEM. IEEE, 2020
- §23. Daniela Girardi, Alessio Ferrari, Nicole Novielli, Paola Spoletini, Davide Fucci, and Thaïde Huichapa. The way it makes you feel: Predicting users' engagement during interviews with biofeedback and supervised learning. In 2020 IEEE 28th International Requirements Engineering Conference (RE), pages 32–43, 2020
- §22. Simone Romano, Davide Fucci, Giuseppe Scanniello, Maria Teresa Baldassarre, Burak Turhan, and Natalia Juristo. Researcher bias in software engineering experiments: a qualitative investigation. In Euromicro Conference on Software Engineering and Advanced Applications SEAA. LNCS, 2020
- §21. Jannik Fischbach, Henning Femmer, Daniel Méndez-Fernández, Davide Fucci, and Andreas Vogelsang. What makes agile test artifacts useful? an activity-based quality model from a practitioners' perspective. In 2020 ACM/IEEE International Symposium on Empirical Software Engineering and Measurement, ESEM. IEEE, 2020
- §20. Daniela Girardi, Nicole Novielli, Davide Fucci, and Filippo Lanubile. Recognizing developers' emotions while programming. In Proceedings of the IEEE/ACM International Conference on Software Engineering, ICSE 2020, Seoul, South Korea, May 24–31., 2020
- §19. Simone Romano, Davide Fucci, Maria Teresa Baldassarre, Danilo Caivano, and Giuseppe Scanniello. An empirical assessment on affective reactions of novice developers when applying test-driven development. In Product-Focused Software Process Improvement - 20th International Conference, PROFES 2019, Barcelona, Spain, November 27–29, 2019, Proceedings, volume 11915 of Lecture Notes in Computer Science, pages 3–19. Springer, 2019
- §18. Valentina Lenarduzzi and Davide Fucci. Towards a holistic definition of requirements debt. In 2019 ACM/IEEE International Symposium on Empirical Software Engineering and Measurement, ESEM 2019, Porto de Galinhas, Recife, Brazil, September 19–20, 2019, pages 1–5. IEEE, 2019
- §17. Davide Fucci, Alireza Mollaalizadehbahnemiri, and Walid Maalej. On using machine learning to identify knowledge in API reference documentation. In Proceedings of the ACM Joint Meeting on European Software Engineering Conference and Symposium on the Foundations of Software Engineering, ESEC/SIGSOFT FSE 2019, Tallinn, Estonia, August 26–30, 2019., pages 109–119, 2019
- §16. Davide Fucci, Daniela Girardi, Nicole Novielli, Luigi Quaranta, and Filippo Lanubile. A replication study on code comprehension and expertise using lightweight biometric sensors. In Proceedings of the 27th International Conference on Program Comprehension, ICPC 2019, Montreal, QC, Canada, May 25–31, 2019, pages 311–322, 2019
- §15. Davide Fucci, Cristina Palomares, Dolors Costal, Xavier Franch, Mikko Raatikainen, Martin Stettinger, Zijad Kurtanovic, Tero Kojo, Lars Koenig, Andreas Falkner, Gottfried Schenner, Fabrizio Brasca, Tomi Mannisto, Alexander Felfernig, and Walid

Maalej. Needs and Challenges for a Platform to Support Large-scale Requirements Engineering. In Proceedings of the 12th ACM/IEEE International Symposium on Empirical Software Engineering and Measurement, ESEM 2018, Oulu, Finland, October 12-13, 2018

- §14. Simone Romano, Giuseppe Scanniello, Davide Fucci, Natalia Juristo, and Burak Turhan. The Effect of Noise on Software Engineers' Performance. In Proceedings of the 12th ACM/IEEE International Symposium on Empirical Software Engineering and Measurement, ESEM 2018, Oulu, Finland, October 12-13, 2018, 2018
- §13. Davide Fucci, Simone Romano, Maria Teresa Baldassarre, Danilo Caivano, Giuseppe Scanniello, Burak Turhan, and Natalia Juristo. A Longitudinal Cohort Study on the Retainment of Test-Driven Development. In Proceedings of the 12th ACM/IEEE International Symposium on Empirical Software Engineering and Measurement, ESEM 2018, Oulu, Finland October 12-13, 2018, 2018
- §12. Christoph Stanik, Lloyd Montgomery, Daniel Martens, Davide Fucci, and Walid Maalej. A Simple NLP-based Approach to Support Onboarding and Retention in Open-Source Communities. In Proceedings of the 34th ACM/IEEE International Conference on Software Maintenance and Evolution, ICSME 2018, Madrid, Spain September 26-28, 2018, 2018
- §11. Oscar Dieste, Alejandrina Aranda, Fernando Uyaguari, Burak Turhan, Ayse Tosun, Davide Fucci, Markku Oivo, and Natalia Juristo. Empirical Evaluation of the Effects of Experience on Code Quality and Programmer Productivity: An Exploratory Study. In Proceedings of the 2018 International Conference on Software and System Process, ICSSP 2018, Gothenburg, Sweden, May 26-27, 2018, pages 111-112, 2018
- §10. Cristina Palomares, Xavier Franch, and Davide Fucci. Personal Recommendations in Requirements Engineering: The OpenReq Approach. In Requirements Engineering: Foundation for Software Quality - 24th International Working Conference, REFSQ 2018, Utrecht, The Netherlands, March 19-22, 2018, Proceedings, pages 297-304, 2018
- §9. Simone Romano, Giuseppe Scanniello, Davide Fucci, Natalia Juristo, and Burak Turhan. The Effect of Noise on Requirements Comprehension. In Proceedings of the 40th International Conference on Software Engineering: Companion Proceedings, ICSE 2018, Gothenburg, Sweden, May 27 - June 03, 2018, pages 308-309, 2018
- §8. Davide Fucci, Giuseppe Scanniello, Simone Romano, Martin Shepperd, Boyce Sigweni, Fernando Uyaguari, Burak Turhan, Natalia Juristo, and Markku Oivo. An External Replication on the Effects of Test-driven Development Using a Multi-site Blind Analysis Approach. In Proceedings of the 10th ACM/IEEE International Symposium on Empirical Software Engineering and Measurement, ESEM 2016, Ciudad Real, Spain, September 8-9, 2016, pages 3:1-3:10, 2016
- §7. Giuseppe Scanniello, Simone Romano, Davide Fucci, Burak Turhan, and Natalia Juristo. Students' and Professionals' Perceptions of Test-driven Development: A Focus group Study. In Proceedings of the 31st Annual ACM Symposium on Applied Computing, Pisa, Italy, April 4-8, 2016, pages 1422-1427, 2016

- §6. Davide Fucci, Burak Turhan, and Markku Oivo. On the Effects of Programming and Testing Skills on External Quality and Productivity in a Test-driven Development Context. In Proceedings of the 19th International Conference on Evaluation and Assessment in Software Engineering, EASE 2015, Nanjing, China, April 27-29, 2015, pages 25:1–25:6, 2015
- §5. Davide Fucci, Burak Turhan, and Markku Oivo. Conformance Factor in Test-driven Development: Initial Results From an Enhanced Replication. In 18th International Conference on Evaluation and Assessment in Software Engineering, EASE '14, London, England, United Kingdom, May 13-14, 2014, pages 22:1–22:4, 2014
- §4. Davide Fucci, Burak Turhan, and Markku Oivo. Impact of Process Conformance on the Effects of Test-driven Development. In 2014 ACM-IEEE International Symposium on Empirical Software Engineering and Measurement, ESEM '14, Torino, Italy, September 18-19, 2014, pages 10:1–10:10, 2014
- §3. Davide Fucci. Understanding the Dynamics of Test-driven Development. In 36th International Conference on Software Engineering, ICSE '14, Companion Proceedings, Hyderabad, India, May 31 - June 07, 2014, pages 690–693, 2014
- §2. Davide Fucci and Burak Turhan. A Replicated Experiment on the Effectiveness of Test-First Development. In 2013 ACM / IEEE International Symposium on Empirical Software Engineering and Measurement, Baltimore, Maryland, USA, October 10-11, 2013, pages 103–112, 2013
- §1. Xiang Su, Davide Fucci, and Jukka Riekk. A Framework to Enable Two-Layer Inference for Ambient Intelligence. In Ambient Intelligence and Future Trends - International Symposium on Ambient Intelligence (ISAmI 2010), Guimarães, Portugal, 16-18 June 2010, pages 29–36, 2010

## Publications Workshops

- §6. Daniela Girardi, Filippo Lanubile, Nicole Novielli, and Davide Fucci. Sensing Developers Emotions: The Design of a Replicated Experiment. In Proceedings of the 3rd International Workshop on Emotion Awareness in Software Engineering, SEmotion, ICSE 2018, Gothenburg, Sweden, June 2, 2018, pages 51–54, 2018
- §5. Muesluem Atas, Thi Ngoc Trang Tran, Ralph Samer, Alexander Felfernig, Martin Stettinger, and Davide Fucci. Liquid democracy in group-based configuration. In Proceedings of the 20th International CEUR Workshop on Configuration, ConfWS18, Graz, Austria. September 23, 2018, pages 93–98, 2018
- §4. Yen Dieu Pham, Davide Fucci, and Walid Maalej. A First Implementation of a Design Thinking Workshop During a Mobile App Development Course Project. In Proceedings of the 2nd International Workshop on Software Engineering Education for Millennials, SEEM@ICSE 2018, Gothenburg, Sweden, June 2, 2018, pages 56–63, 2018
- §3. Davide Fucci, Christoph Stanik, Lloyd Montgomery, Zijad Kurtanovic, Timo Johann, and Walid Maalej. Research on NLP for RE at the university of hamburg: A report. In Joint Proceedings of REFSQ-2018 Workshops, Doctoral Symposium, Live Studies

Track, and Poster Track co-located with the 23rd International Conference on Requirements Engineering: Foundation for Software Quality (REFSQ 2018), Utrecht, The Netherlands, March 19, 2018., 2018

- §2. Mathias Ellmann, Alexander Oeser, Davide Fucci, and Walid Maalej. Find, Understand, and Extend Development Screenshots on YouTube. In Proceedings of the 3rd ACM SIGSOFT International Workshop on Software Analytics, SWAN@ESEC/SIGSOFT FSE 2017, Paderborn, Germany, September 4, 2017, pages 1–7, 2017
- §1. Damiano Torre, Giuseppe Procaccianti, Davide Fucci, Sonja Lutovac, and Giuseppe Scanniello. On the Presence of Green and Sustainable Software Engineering in Higher Education Curricula. In 1st IEEE/ACM International Workshop on Software Engineering Curricula for Millennials, SECM@ICSE 2017, Buenos Aires, Argentina, May 27, 2017, pages 54–60, 2017

## External Service

Organizer:

- 5th Intl. Workshop on Emotion Awareness in Software Engineering (SEmotion) 2020
- 3rd Intl. Workshop on Natural Language Processing for Requirements Engineering (NLP4RE) 2020
- 2nd Intl. Workshop on Affective Computing for Requirements Engineering (AffectRE) 2019
- 4th Intl. Workshop on Emotion Awareness in Software Engineering (SEmotion) 2019
- 1st Intl. Workshop on Affective Computing for Requirements Engineering (AffectRE) 2018

Organizing Committee Member:

- Intl. Conference on Software Engineering (ICSE) 2021
- Intl. Symposium on Empirical Software Engineering and Measurement (ESEM) 2018

Program Committee Member:

- Intl. Conf. on Program Comprehension (ICPC) 2021
- Intl. Conf. on Human Aspects of Software Engineering (CHASE) 2021
- Intl. Conf. on Software Analysis, Evolution, and Re-engineering (SANER) 2020
- Intl. Working Conf. on RE: Foundation for Software Quality (REFSQ) 2020
- Intl. Symposium on Empirical Software Engineering and Measurement (ESEM) 2015–2021
- Intl. Conf. on Evaluation and Assessment in Software Engineering (EASE) 2018–2020
- Intl. Conference on Software and System Processes (ICSSP) 2016–2020
- Intl. Conf. on on Product-Focused Software Process Improvement (PROFES) 2018–2020
- Software Engineering and Advanced Applications (SEAA) 2018
- Intl. Conference on Extreme Programming (XP) 2014

Reviewer:

- IEEE Transactions on Software Engineering (TSE) since 2016
- Requirements Engineering Journal (REEN) since 2017
- Empirical Software Engineering Journal (EMSE) since 2015

Information and Software Technology Journal (IST)	since 2016
Journal of Software and Systems (JSS)	since 2016
PeerJ Computer Science (PeerJCS)	since 2017
IEEE Software Magazine (IEEESW)	since 2019

Ph.D. theses reviewer and committees	
Maria Carulo “Mining GitHub to Study Developers-related Aspects” (University of Basilicata, Italy)	2021

Publicity:	
Information and Software Technology Journal (IST)	2018–2021

### Diversity & Outreach

Pint of Science (City co-ordinator)	2018, 2019
An international festival which brings scientific discussion to the local pubs	

Rails Girls (Coach)	2014, 2016
Tutoring women in their first approach to software development	

Best Paper Award (Industry Track), ESEM2020	2020
Best Paper Award, SEAA2020	2020
Open Data Recognition Award, ESEM2018	2018
Best Paper Award, ConfWS	2018
Best Paper Award, ESEM2016	2016
Most Commended Paper Award, EASE2016	2016
Nokia Foundation Award for Junior Researcher	2014
ISACA Finland Chapter	2014

### Invited Talks

Sorry Rocky, but Ivan Drago Can Code Better Than You SERT Virtual Conference	September 2020
Things I would have loved to know during my PhD ISSRE'17, Toulouse (France)	October 2017
What do We Know About TDD and Agile Testing? University of Bari	November 2016
TDD: Carefully Read the Information Leaflet Before Using Bari Startup Hub	July 2014

### Supervised students

Nayla Nassir	06/2020–01/2021
Acceptance Testing in Agile Software Development M.Sc. thesis, Blekinge Institute of Technology	
Abhinav Ram Kola	02/2020–09/2020
Customer communication challenges in Agile Requirements Engineering M.Sc. thesis, Blekinge Institute of Technology	



- Nynesh Reddy Gujjula 02/2020–09/2020  
Practices and Advantages of Submitting Images in OSS projects  
M.Sc. thesis, Blekinge Institute of Technology
- Yujie Huang & Qianneng Wang 02/2020–09/2020  
Identification and Management of Requirements Debt  
M.Sc. thesis, Blekinge Institute of Technology
- Alireza Mollaalizadehbahnemiri 10/2017–02/2018  
Knowledge Extraction from API Reference Documentation Using Deep Learning  
M.Sc. thesis, University of Hamburg
- Alexander Oeser 8/2017–1/2018  
Finding, Understanding, and Enriching Developers Screencast on YouTube  
M.Sc. thesis, University of Hamburg
- Teemu Moisainen 10/2016–4/2017  
A DataViz tool for Test-Driven Development  
M.Sc. thesis, University of Oulu

## References

Burak Turhan, Full Professor  
University of Oulu  
☎ +358 40 822 7702  
✉ burak.turhan@oulu.fi

Natalia Juristo, Full Professor  
Universidad Politecnica de Madrid  
☎ +34 91 336 6922  
✉ natalia@fi.upm.es

Filippo Lanubile, Full Professor  
University of Bari  
☎ +39 080 544 3261  
✉ lanubile@uniba.it

Walid Maalej, Full Professor  
University of Hamburg  
☎ +49 040 428 832073  
✉ maalej@informatik.uni-hamburg.de