Fabio Palomba, PhD

Curriculum Vitae – 11th August, 2019

1 Personal Information

Name: Fabio Palomba
Date of Birth: 3th August, 1989
Place of Birth: Naples, Italy

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8046 Zürich, Switzerland
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E-mail: palomba@ifi.uzh.ch
Website: https://fpalomba.github.io/
Google Scholar profile: https://goo.gl/dorFrh

2 Job Positions

2018 - now **Senior Research Associate**
Zurich Empirical Software Engineering Team - University of Zurich, Switzerland

2017 **Post-Doc Researcher**
Delft University of Technology (The Netherlands) and Eindhoven University of Technology (The Netherlands)

3 Qualifications/Licences

2019 **Italian Scientific Qualification as Associate Professor.**
Sector 01/B1 – Informatica.
Evaluation available at: https://asn18.cineca.it/pubblico/miur/esito/01%252FB1/2/1.

2019 **Italian Scientific Qualification as Associate Professor.**
Sector 09/H1 – Sistemi di Elaborazione delle Informazioni
Evaluation available at: https://asn18.cineca.it/pubblico/miur/esito/09%252FH1/2/1.

2014 **Licence Of Computer Engineer**
University of Molise, Italy

4 Education

2017 **Degree of European Doctor of Philosophy (Ph.D.) in Management & Information Technology**
University of Salerno, Italy
Funded by University of Salerno and University of Molise. Advisor: Prof. Andrea De Lucia

2013 **Master's Degree (M.Sc.) in Computer Science**
University of Salerno, Italy
110/110 magna cum laude and special commendation by the commission
Advisor: Prof. Andrea De Lucia

2011 **Bachelor's Degree (B.Sc.) in Computer Science**
University of Molise, Italy
110/110 cum laude

Advisor: Prof. Rocco Oliveto

5 RESEARCH

My research activity is in the area of Software Engineering and, in particular, is mainly focused (but not limited) to the following topics:

- Bad Code Smell Detection and Management;
- Test Code Quality;
- Bug Prediction;
- Mobile Software Engineering;
- Social Aspects in Software Engineering;
- Traceability Management;
- Mining Software Repositories;
- Empirical Software Engineering.

In these research topics I have published more than 50 papers in international journals and conferences indexed in DBLP, SCOPUS (number of citations = 809; h-index = 15), and Google Scholar (number of citations = 1.322; h-index = 19). My overall m-index (that is, the h-index normalized by the number of years of activity) is 2.5 and 3.2 considering SCOPUS and Google Scholar, respectively. I have been the recipient of two ACM/SIGSOFT Distinguished Paper Awards, one IEEE/TCSE Distinguished Paper Award, one Best Paper Award Honorable Mention, one Best Tool Demo Award, and one bronze medal at the ACM/SIGSOFT Student Research Competition. Furthermore, my PhD Thesis has been the recipient of the 2017 IEEE Computer Society Best Thesis Award.

In the following, I describe the research topics of interest with reference to the published or submitted results.

Bad Code Smell Detection and Management: Bad code smells have been defined by Martin Fowler as symptoms of poor design and implementation choices. Bad smells are usually introduced in software systems because developers poorly conceived the design of a code component. Complex Class, *i.e.,* a class that contain complex methods and it is very large in terms of LOC; or God Class, *i.e.,* a class that does too much/knows too much about other classes, are only some examples of a plethora of bad smells identified in well-known catalogues. Recent empirical studies showed that code smells hinder comprehensibility, and possibly increase change- and fault- proneness. For these reasons, the main research topics in this area are the definition of new approaches able to (i) detect bad code smells in the source code [C2, C5, C11, C19, J1]; (ii) study the reason behind their introduction and removal [C4, J4, J8]; (iv) study the impact of code smells on non functional attributes of source code [C3, C20, J7, J10, J11], and (v) recommend their removal via appropriate refactoring operations [C1, C6, C21, J2].

Test Code Quality: Test cases form the first line of defense against the introduction of software faults. As such, with the help of testing framework like, for instance, Junit developers create test methods and run these periodically on their code. To support the testing activities, the research community mainly focused on the definition of techniques and tools for (i) the automatic generation of test cases, or (ii) the improvement of the effectiveness of test classes with respect to code coverage. In this context, a little knowledge on the impact and the usefulness of code quality is available. The main research topic in this area relates to the definition of quality-aware methodologies for the automatic generation of test cases [C12] and the investigation of the impact of test smells, i.e., symptoms of the presence of bad design choices in test code, on the effectiveness [C23] and the maintainability of test cases [C10, C14].

Bug Prediction: Allocating resources for the testing and the verification of all the parts of a large software system is a cost-prohibitive task. To alleviate this issue, prediction models able to identify portions of source code more prone to contain bugs have been the object of several studies. The main research topic is the definition of accurate prediction models that, on the one hand use a suitable set of predictors able to characterize the bug-proneness of code components [C8, C13, C25. J5], and on the other hand is able to use appropriate machine learning techniques to distinguish those components affected by bug [J6].

Mobile Software Engineering: According to recent statistics, over two billion users rely on smartphones and tablets to perform their daily activities. Not only do users play games or send messages, they use mobile apps for every type of need,

including social and emergency connectivity. Mobile software engineering is the field responsible for the definition of techniques able to improve the life of both mobile developers and end users. The main research topic includes the application of mining software repositories techniques in the context of user reviews, with the goal of extracting actionable knowledge to incorporate in novel techniques and tools helping developers in performing their activities [C9, C16, C28, C29, J9].

Social Aspects in Software Engineering: The success of software engineering projects Is in large part dependent on social and organizational aspects of the development community. Indeed, as envisioned by the National Knowledge and Innovation Agenda ICT 2016 – 2019 in the Netherlands, *"software and system complexity is not solely of technological nature but also defined by people and processes"*. In the context, the role played by social aspects in software engineering has been mainly investigated in terms of socio-technical congruence, i.e., the coordination between social relationships and technical aspects of the source code. However, a few knowledge on the impact of social debt, i.e., sub-optimal characteristics or patterns across the organizational structure around a software system that may lead to additional unforeseen project costs, is available [Grant-1]. Key research topics in this area regard the understanding of the interplay between social and technical debt [C27], as well as the definition of techniques and tools able to make developers and project managers aware of the presence of social debt in the community [J13].

Traceability Management: Traceability has been defined as "the ability to describe and follow the life of an artifact, in both a forwards and backwards direction". Thus, traceability links help software engineers to understand the relationships and dependencies among various software artifacts (requirements, code, tests, models, etc.) developed during the software lifecycle. The two main research topics related to the traceability management are event-based systems for traceability management and information retrieval based methods and tools supporting the software engineer in the traceability link recovery [C9, C16, C29, J9].

Mining Software Repositories: Software repositories such as source control systems, archived communications between project personnel, and defect tracking systems are used to help in managing the progress of software projects. Software practitioners and researchers recognize the benefits of mining this information to support the maintenance and the evolution of software systems by improving software design/reuse and empirically validating novel ideas and techniques. Research is now proceeding to uncover the ways in which mining these repositories can help to understand software development and software evolution [C2, C4, C5, C10, C11, C13, C14, C17, C20, C21, C22, J1-J14], to support predictions about software development [J5, J6, J10, J10], and to exploit this knowledge in planning future development [C9 , C16, J7].

Empirical Software Engineering: Empirical software engineering is a sub-domain of software engineering focusing on experiments on software systems (software products, processes, and resources). It is interested in devising experiments on software [J1], in collecting data from these experiments [J3], and in devising laws and theories from this data [C4, C14, J4]. Proponents of experimental software engineering advocate that the nature of software is such that we can advance the knowledge on software through experiments only. The scientific method suggests a cycle of observations, laws, and theories to advance science. Empirical software engineering applies this method to software.

6 TEACHING

6.1 LECTURER

2019 **SOFTWARE DEPENDABILITY**
Lecturer at the Master's Degree of Computer Science at the University of Salerno.

2019 **SOFTWARE TESTING**
Co-Lecturer at the Bachelor's and Master's Degrees (joint course) of Computer Science at the University of Zurich.

2019 **ADVANCED SOFTWARE ENGINEERING**
Lecturer at the Bachelor's Degree of Computer Science at the University of Zurich.

2017 **SOFTWARE ENGINEERING METHODS**
Co-Lecturer at the Bachelor's Degree of Computer Science at the Delft University of Technology.

6.2 TEACHING ASSISTANCE

2016 **PROGRAMMING LANGUAGES**
Teaching Assistant in the course of Prof. Maurizio Tucci at the Bachelor Degree of Computer Science at the University of Salerno

2016 **PROGRAMMING LANGUAGES II**
Teaching Assistant in the course of Prof. Carmine Gravino at the Bachelor Degree of Computer Science at the University of Salerno

2016 **SOFTWARE ENGINEERING II: MAINTENANCE, EVOLUTION, AND SOFTWARE PROJECT MANAGEMENT**
Teaching Assistant and Students' Projects Evaluator in the course of Prof. Andrea De Lucia at the Master Degree of Computer Science at the University of Salerno

2016 **SOFTWARE ENGINEERING I**
Teaching Assistant and Students' Projects Evaluator in the course of Prof. Andrea De Lucia at the Bachelor Degree of Computer Science at the University of Salerno

2015 **SOFTWARE ENGINEERING II: MAINTENANCE AND TESTING**
Teaching Assistant and Students' Projects Evaluator in the course of Prof. Andrea De Lucia at the Master Degree of Computer Science at the University of Salerno

2015 **SOFTWARE ENGINEERING I**
Teaching Assistant and Students' Projects Evaluator in the course of Prof. Andrea De Lucia at the Bachelor Degree of Computer Science at the University of Salerno

2014 **IT PROJECT AND SERVICE MANAGEMENT**
Teaching Assistant and Students' Projects Evaluator in the course of Prof. Andrea De Lucia at the Master Degree of Management and Information Technology at the University of Salerno

2014 **DECISION SUPPORT SYSTEMS**
Teaching Assistant and Students' Projects Evaluator in the course of Prof. Andrea De Lucia at the Master Degree of Business Economy at the University of Salerno

6.3 THESES ADVISING/CO-ADVISING

2019 **CLASSIFYING SOURCE CODE QUALITY IMPROVEMENT OPPORTUNITIES IN CONTINUOUS INTEGRATION**
Student: Jonas Klass. Advisor: Prof. Alberto Bacchelli.
Master Thesis – University of Zurich, Switzerland.

2019 **LAMBDIFIED JAVA APIS: THE DEVELOPER'S PERSPECTIVE**
Student: Fernando Petrulio. Advisor: Prof. Alberto Bacchelli.
Master Thesis – Joint project between University of Zurich, Switzerland, and University of Salerno, Italy.

2019 **THE SECRET LIFE OF SOFTWARE VULNERABILITIES: AN EMPIRICAL STUDY**
Student: Roberta Guadagni. Advisor: Prof. Alberto Bacchelli.
Master Thesis – Joint project between University of Zurich, Switzerland, and University of Salerno, Italy.

2019 **ON THE EFFECTIVENESS OF MANUAL AND AUTOMATIC UNIT TEST GENERATION: TEN YEARS LATER**
Student: Domenico Serra.
Master Thesis – Joint project between University of Zurich, Switzerland, and University of Salerno, Italy.

2018 **CLASSIFYING THE ROOT CAUSE OF FLAKY TESTS**
Student: Moritz Eck. Advisor: Prof. Alberto Bacchelli
Master Thesis – University of Zurich, Switzerland

2017 **Detecting Code Smells in Mobile Applications**
Students: Dustin Lim. Advisor: Prof. Andy Zaidman
Master Thesis – Delft University of Technology, The Netherlands

2017 **A Framework for the UI Testing of Android And iOS Applications**
Students: René Vennik and Wim de With.
Bachelor End Project – Delft University of Technology, The Netherlands

2016 **A Large Scale Empirical Study on the Performances of Within- and Cross-Project Bug Prediction Models**
Student: Salvatore Geremia. Advisor: Prof. Andrea De Lucia
Master Thesis – University of Salerno, Italy

2016 **A tool for Mining Performance Indicators of Java Applications**
Student: Elisa D'Eugenio. Advisor: Prof. Andrea De Lucia
Master Thesis – University of Salerno, Italy

2016 **Design and Implementation of a Tool for Experimenting Cross-Project Bug Prediction Models**
Student: Pasquale Martiniello. Advisor: Prof. Andrea De Lucia
Bachelor Thesis – University of Salerno, Italy

2016 **Using Ranking Algorithms in Mining User Reviews: Challenges and Opportunities**
Student: Michele Lotierzo. Advisor: Prof. Andrea De Lucia
Bachelor Thesis – University of Salerno, Italy

2016 **Design and Implementation of a Tool for Detecting Textual Code Smells in Source Code**
Student: Elena Sollai. Advisor: Prof. Andrea De Lucia
Bachelor Thesis – University of Salerno, Italy

2016 **Design and Implementation of a Tool for Running Bug Prediction Experimentations**
Student: Fabiano Pecorelli. Advisor: Prof. Andrea De Lucia
Bachelor Thesis – University of Salerno, Italy

2015 **Mining Energetic Code Smells in Android Apps**
Student: Antonio Prota. Advisor: Prof. Andrea De Lucia
Master Thesis – University of Salerno, Italy

2015 **Refactoring of Code Smells: An Empirical Study**
Student: Fabio Soggia. Advisor: Prof. Andrea De Lucia
Master Thesis – University of Salerno, Italy

2015 **An Eclipse Plug-in for Supporting Code Smell Identification Via Historical Information: The HIST Project**
Student: Alessandro Longo. Advisor: Prof. Andrea De Lucia
Bachelor Thesis – University of Salerno, Italy

2014 **On the Role of Developers' Scattering Metrics in Bug Prediction**
Student: Dario Di Nucci. Advisor: Prof. Andrea De Lucia
Master Thesis – University of Salerno, Italy

2014 **Design and Implementation of an Eclipse Plug-in for Extracting Issues from the Bugzilla Repository**
Student: Davide De Chiara. Advisor: Prof. Andrea De Lucia
Bachelor Thesis – University of Salerno, Italy

2014 **Design and Implementation of an Eclipse Plug-in for Mining Github**
Student: Santolo Tubelli. Advisor: Prof. Andrea De Lucia
Bachelor Thesis – University of Salerno, Italy

2014 **Design and Implementation of an Eclipse Plug-in for Extracting Quality Metrics from Source Code**

Student: Gianmarco Del Pozzo. Advisor: Prof. Andrea De Lucia
Bachelor Thesis – University of Salerno, Italy

7 PROFESSIONAL ACTIVITIES

7.1 ORGANIZATION COMMITTEE PARTICIPATION

2019 **CO-ORGANIZER**
3rd International Workshop on Machine Learning Techniques for Software Quality Evaluation (MaLTeSQuE 2019), Tallinn, Estonia

2019 **PROGRAM COMMITTEE MEMBER**
35th International Conference on Software Maintenance and Evolution (ICSME 2019), Cleveland, USA

2019 **PROGRAM COMMITTEE MEMBER**
27th International Conference on Program Comprehension (ICPC 2019), Montreal, Canada

2019 **PROGRAM COMMITTEE MEMBER**
15th International Conference on Mining Software Repositories (MSR 2019), Montreal, Canada

2019 **PROGRAM COMMITTEE MEMBER**
6th International Conference on Mobile Software Engineering and Systems (MobileSoft 2019), Montreal, Canada

2019 **PROGRAM COMMITTEE MEMBER**
26th International Conference on Software Analysis, Evolution, and Reengineering (SANER 2019), Hangzhou, China

2018 **CO-ORGANIZER**
2nd Workshop on Machine Learning Techniques for Software Quality Evaluation (MaLTeSQuE 2018), Campobasso, Italy

2018 **PROGRAM COMMITTEE MEMBER**
26th International Conference on Program Comprehension (ICPC 2018), Gothenburg, Sweden

2018 **PROGRAM COMMITTEE MEMBER**
15th International Conference on Mining Software Repositories (MSR 2018), Gothenburg, Sweden

2018 **PROGRAM COMMITTEE MEMBER**
25th International Conference on Software Analysis, Evolution, and Reengineering (SANER 2018), Campobasso, Italy

2018 **PUBLICITY CO-CHAIR**
25th International Conference on Software Analysis, Evolution, and Reengineering (SANER 2018), Campobasso, Italy

2017 **PROGRAM COMMITTEE MEMBER**
33rd International Conference on Software Maintenance and Evolution (ICSME 2017), Shanghai, China

2017 **PROGRAM COMMITTEE MEMBER**
1st International Workshop on Technical Debt Analytics (TDA 2016), Hamilton, New Zealand

2017 **PROGRAM COMMITTEE MEMBER**
25st International Conference on Program Comprehension (ICPC 2016), Buenos Aires, Argentina

2017 **PROGRAM COMMITTEE MEMBER**
12nd International Conference on Software Engineering and Advances (ICSEA 2017), Vienna, Austria

2016 **PROGRAM COMMITTEE MEMBER**
1st International Workshop on Machine Learning Techniques in Software Quality Evaluation, Wroclaw, Polish

2016 **SCIENTIFIC SECRETARIAT**
12nd International Summer School on Software Engineering (ISSSE), University of Salerno

2016 **STUDENT VOLUNTEER**
38th International Conference on Software Engineering (ICSE 2016), Austin, USA

2015 **PROGRAM COMMITTEE MEMBER**
11st International Conference on Software Engineering and Advances (ICSEA 2016), Rome, Italy

2015 **PROGRAM COMMITTEE MEMBER**
13th Working Conference on Mining Software Repositories – Mining Challenge Track (MSR 2016), Austin, Texas

2015 **PROGRAM COMMITTEE MEMBER**
10th International Conference on Software Engineering and Advances (ICSEA 2015), Barcelona, Spain

2014 **WEB CHAIR**
23rd International Conference on Program Comprehension (ICPC 2015), Florence, Italy

2014 **STUDENT VOLUNTEER**
37th International Conference on Software Engineering (ICSE 2015), Florence, Italy

2014 **SCIENTIFIC SECRETARIAT**
11th International Summer School on Software Engineering (ISSSE), University of Salerno

7.2 JOURNAL SERVICES

Since 2019 **EDITORIAL ASSISTANT – ELSEVIER'S SCIENCE OF COMPUTER PROGRAMMING**

Since 2019 **EDITORIAL BOARD MEMBER – ELSEVIER'S SCIENCE OF COMPUTER PROGRAMMING**

Since 2019 **EDITORIAL BOARD MEMBER – ELSEVIER'S JOURNAL OF SYSTEMS AND SOFTWARE**

Since 2019 **SOCIAL MEDIA DIRECTOR – ACM TRANSACTIONS ON SOFTWARE ENGINEERING AND METHODOLOGY**

2019 **GUEST EDITOR – ELSEVIER'S JOURNAL OF SYSTEMS AND SOFTWARE**
Special Issue on "Machine Learning Techniques for Software Quality Evaluation"

2018 **GUEST EDITOR – SPRINGER'S JOURNAL OF EMPIRICAL SOFTWARE ENGINEERING**
Special Issue on "Mobile Software Engineering"

2018 **GUEST EDITOR – WILEY'S JOURNAL OF SOFTWARE MAINTENANCE AND EVOLUTION**
Special Issue on "Machine Learning Techniques for Software Quality Evaluation"

Since 2017 **REVIEW BOARD MEMBER – SPRINGER'S JOURNAL OF EMPIRICAL SOFTWARE ENGINEERING**

Since 2016 **REFEREE ACTIVITIES**

Referee for:

- TSE: IEEE Transactions on Software Engineering
- TOSEM: ACM Transactions on Software Engineering and Methodology
- TR: IEEE Transactions on Software Reliability
- EMSE: Springer's Empirical Software Engineering
- IST: Elsevier's Information and Software Technology
- JSS: Elsevier's Journal of Systems and Software
- JSME: Wiley's Journal of Software Maintenance and Evolution: Research and Practice

7.3 INVITED SPEAKER

2019 F. Palomba.
Software Design 101: Improving the Design of Existing Code, Tests, and Communities.
14th International Summer School on Software Engineering, University of Salerno, June 17th.

2019 F. Palomba.
Software Design 101: Improving the Design of Existing Code, Tests, and Communities.
2nd International Summer School on Software Engineering, Tampere University of Technology, June 6th.

2018 F. Palomba.
Managing Source Code Quality in Mobile Applications.
4th International Summer School on Software Engineering, Free-University of Bolzano, July 10th.
F. Palomba.

2018 Exploiting Machine Learning Techniques for the Automatic Identification of Code Smells
1st International Summer School on Machine Learning, Eindhoven University of Technology, July 20th

2018 F. Palomba.
Machine Learning for Mobile Applications.
IFI Summer School on Machine Learning, University of Zurich, June 28th.

2017 F. Palomba.
Does Refactoring of Test Smells Induce Fixing Flaky Tests?
CREST Open Workshop organized by the University College of London, November 27th.

2017 F. Palomba.
Not Only Maintainability: Revisiting Test Smells as a Measure of Test Code Effectiveness.
IPA Fall Days on System and Software Analysis organized by the CWI institute, Nunspeet (The Netherlands), November 8th

2016 F. Palomba.
Mining Version Histories for Detecting Code Smells.
CREST Open Workshop organized by the University College of London, November 29th.

2015 F. Palomba.
Using Alternative Sources of Information for Smell Detection.
Delft University of Technology, October 23rd.

2014 F. Palomba
Software Metrics and Antipatterns: Challenges and Solution
University of Molise, November, 12nd.

5.4 GUEST LECTURER

2017 F. Palomba.
Code Smells: Relevance of the Problem and Novel Detection Techniques
Software Maintenance and Evolution Course at the University of Zurich, December 8th

2017 F. Palomba.
Mining User Reviews to Support the Evolution of Mobile Applications.
Green Lab at the University of Amsterdam, October 19th

2017 F. Palomba.
Mining User Reviews to Support the Evolution of Mobile Applications.
Mining Software Repositories Course at the Delft University of Technology, September 26th

2016 F. Palomba.
The Back-end Side of Compilers.
Software Engineering Course at the University of Salerno, June 4th

2016 F. Palomba.
Bug Prediction: An Overview.
Software Engineering Course at the University of Salerno, May 27th

2016 F. Palomba.
Code Smell Detection and Refactoring Automation.
Software Engineering Course at the University of Salerno, May 19th

8 Conferences and Schools Participations

8.1 Conferences

2019 **41st IEEE International Conference on Software Engineering (ICSE 2019)**
Montreal, Canada

2018 **34th IEEE International Conference on Software Maintenance and Evolution (ICSME 2018)**
Madrid, Spain
Presentation of [C36].

2018 **40th IEEE International Conference on Software Engineering (ICSE 2018)**
Gothenburg, Sweden
Presentation of [J7], [J8].

2018 **25th IEEE International Conference on Software Analysis, Evolution, and Reengineering (SANER 2018)**
Campobasso, Italy

2017 **33rd IEEE International Conference on Software Maintenance and Evolution (ICSME 2017)**
Shanghai, China
Presentation of [C23].

2017 **39th IEEE/ACM International Conference on Software Engineering (ICSE 2017)**
Buenos Aires, Argentina
Presentation of [C16], [C18].

2017 **25th IEEE International Conference on Program Comprehension (ICPC 2017)**
Buenos Aires, Argentina
Presentation of [C21], [C22].

2016 **49TH CREST OPEN WORKSHOP (COW) ON SOFTWARE ARCHITECTURE AND TECHNICAL DEBT**
London, United Kingdom
Presentation of [J1].

2016 **32ND IEEE INTERNATIONAL CONFERENCE ON SOFTWARE MAINTENANCE AND EVOLUTION (ICSME 2016)**
Raleigh, USA
Presentation of [C13], [C15].

2016 **38TH IEEE/ACM INTERNATIONAL CONFERENCE ON SOFTWARE ENGINEERING (ICSE 2016)**
Austin, USA
Presentation of [C9], [C10].

2015 **1ST INTERNATIONAL SUMMER SCHOOL ON SOFTWARE ENGINEERING (ISSSE)**
Free University of Bozen-Bolzano, Bolzano, Italy
Presentation of [C1].

2015 **37TH IEEE/ACM INTERNATIONAL CONFERENCE ON SOFTWARE ENGINEERING (ICSE 2015)**
Florence, Italy
Presentation of [C4], [C5] and [C6].

2014 **30TH IEEE INTERNATIONAL CONFERENCE ON SOFTWARE MAINTENANCE AND EVOLUTION (ICSME 2014)**
Victoria, British Columbia, Canada
Presentation of [C3].

2014 **11TH INTERNATIONAL SUMMER SCHOOL ON SOFTWARE ENGINEERING (ISSSE)**
University of Salerno, Fisciano, Italy
Scientific Secretarial of the School

2013 **28TH IEEE/ACM INTERNATIONAL CONFERENCE ON AUTOMATED SOFTWARE ENGINEERING (ASE 2013)**
Palo Alto, USA
Presentation of [C2].

9 INTERNATIONAL EXPERIENCES

2016 **VISITING PHD STUDENT AT THE DELFT UNIVERSITY OF TECHNOLOGY, DELFT, THE NETHERLAND**
3 Months as Visitor Student under the supervision of Prof. Andy Zaidman. The research conducted in this time period resulted in the definition of TACO, a code smell detection approach exploiting textual-based information, and its empirical evaluation [C11, J8].

10 AWARDS AND RECOGNITION

2019 **DISTINGUISHED REVIEWER AWARD**
27th IEEE/ACM International Conference on Program Comprehension (ICPC)**.**

2018 **BEST PAPER HONOURABLE MENTION FOR [C40]**
21th ACM International Conference on Computer Supported Cooperative Work (CSCW), New York, USA.

2018 **DISTINGUISHED REVIEWER AWARD**
Springer's Journal of Empirical Software Engineering (EMSE)**.**

2018 **OUTSTANDING REVIEWER AWARD**
Elsevier's Journal of Systems and Software (JSS)**.**

2018 **OUTSTANDING REVIEWER AWARD**
Elsevier's Information and Software Technology Journal (IST)**.**

2018 **BEST TOOL DEMO AWARD FOR [C29]**
33rd IEEE International Conference on Software Maintenance and Evolution (ICSME), Shanghai, China.

2017 **IEEE COMPUTER SOCIETY BEST PHD THESIS AWARD**
For my PhD Thesis named: "Code Smells: Relevance of the Problem and Novel Detection Techniques".

2017 **DISTINGUISHED REVIEWER AWARD**
Springer's Journal of Empirical Software Engineering (EMSE)**.**

2017 **IEEE/TCSE DISTINGUISHED PAPER AWARD FOR [C23]**
33rd IEEE International Conference on Software Maintenance and Evolution (ICSME), Shanghai, China.

2016 **OUTSTANDING REVIEWER AWARD**
Elsevier's Information and Software Technology Journal (IST)**.**

2015 **ACM/SIGSOFT DISTINGUISHED PAPER AWARD FOR [C4]**
37th ACM/IEEE International Conference of Software Engineering (ICSE), Firenze, Italy.

2015 **BRONZE MEDAL AT THE STUDENT RESEARCH COMPETITION FOR [C5]**
37th ACM/IEEE International Conference of Software Engineering (ICSE), Firenze, Italy.

2013 **ACM/SIGSOFT DISTINGUISHED PAPER AWARD FOR [C2]**
28th ACM/IEEE International Conference on Automated Software Engineering (ASE), Palo Alto, USA.

11 GRANTS

2018 **FORSCHUNGSCREDIT POSTDOC GRANT – AMOUNT: 60.000 CHF**
The grant has the main goal to study how test code quality can be exploited to improve test code effectiveness, with the aim of producing novel techniques and tools to help developers in designing effective test cases.

2017 **4TU.NIRICT.2017 – AMOUNT: 70.000** €
The grant has the main goal to reinforce the collaboration among the four technical Universities in Netherlands. The proposal is related to the relationship between social and technical aspects of source code, and mainly concerned with the understanding of the impact of social debt on the introduction of code smells and fault.

12 LIST OF PAPERS

12.1 INTERNATIONAL JOURNALS

[J31] L. Di Geronimo, **F. Palomba**, A. Bacchelli.
Visualising Defect Prediction Warnings in Code Review.
IEEE Transactions on Software Engineering (TSE) – Submitted.

[J30] P. Wurzelova, **F. Palomba**, M. Seeber, A. Bacchelli.
Developers Seen and Unseen: Characterizing (Non-)Open-Source Software Contributors From the Stack Overflow Developer's Survey.
Springer's Journal of Empirical Software Engineering (EMSE) – Submitted.

[J29] G. Catolino, **F. Palomba**, A. Zaidman, F. Ferrucci.
A Holistic Developer-Oriented Model for Estimating the Effort of Maintenance Tasks.
Springer's Journal of Empirical Software Engineering (EMSE) – Submitted.

[J28] D. A. Tamburri, **F. Palomba**, R. Kazman.
Success and Failure in Software Engineering: A Replicated Systematic Literature Review.
ACM Computing Surveys (CSUR) – Submitted.

[J27] G. Grano, **F. Palomba**, D. Di Nucci, A. De Lucia, H. Gall.
Scented since the Beginning: On the Diffuseness of Test Smells in Automatically Generated Test Code.
Elsevier's Journal of Systems and Software (JSS), in press.

[J26] C. Vassallo, S. Panichella, **F. Palomba**, S. Proksch, H. Gall, A. Zaidman.
An Empirical Study on Where and How Developers Use Static Analysis Tools.
Springer's Journal of Empirical Software Engineering (EMSE), in press.

[J25] P. Salza, **F. Palomba**, D. Di Nucci, A. De Lucia, F. Ferrucci.
Third-Party Libraries in Mobile Apps: When, How, and Why Developers Update Them.
Springer's Journal of Empirical Software Engineering (EMSE), in press.

[J24] C. Vassallo, G. Grano, **F. Palomba**, H. Gall, A. Bacchelli.
A Large-Scale Empirical Exploration on Refactoring Activities in Open Source Software Projects.
Elsevier's Science of Computer Programming (SCP), in press.

[J23] G. Catolino, **F. Palomba**, F. Arcelli Fontana, A. Zaidman, A. De Lucia, F. Ferrucci.
Improving Change Prediction Models with Code Smell-Related Information.
Springer's Journal of Empirical Software Engineering (EMSE), in press.

[J22] G. Catolino, **F. Palomba**, A. Zaidman, F. Ferrucci.
Not All Bugs are the Same: Understanding, Characterizing, and Classifying the Root Cause of Bugs.
Elsevier's Journal of Systems and Software (JSS), in press.

[J21] G. Grano, **F. Palomba**, H. Gall.
Lightweight Assessment of Test Case Effectiveness using Source Code Quality Indicators.
IEEE Transactions on Software Engineering (TSE), in press.

[J20] D. A. Tamburri, **F. Palomba**, R. Kazman.
Exploring Community Smells in Open-Source: An Automated Approach.
IEEE Transactions on Software Engineering (TSE), in press.

[J19] M. Ilyas Azeem, **F. Palomba**, Q. Wang.
Machine Learning Techniques for Code Smell Detection: A Systematic Literature Review and Meta-Analysis.
Elsevier's Information and Software Technology (IST), Vol. 108, pp. 115-138, 2019.

[J18] **F. Palomba**, A. Zaidman.
The Smell of Fear: On the Relation between Test Smells and Flaky Tests.
Springer's Journal of Empirical Software Engineering (EMSE), in press.

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Zurich, 11/08/2019