

Dario Di Nucci – February 2021

Curriculum Vitae – Including Summary of Publications

Dario Di Nucci , Male, Italian DATE OF BIRTH: September 3rd, 1988 PLACE OF BIRTH: Isernia, Italy Languages: Italian (native), English (C1)	ADDRESS: Uilenburg 5E, 5211 EV 's-Hertogenbosch, The Netherlands PHONE: +31 (0) 6 123 66065 E-MAIL: d.dinucci@uvt.nl WEBSITE: http://dardin88.github.io
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Dario Di Nucci is an assistant professor at the Jheronimus Academy of Data Science, a collaboration between Tilburg University and Eindhoven Technical University. He received the European Ph.D. degree in Management & Information Technology from the University of Salerno in 2018, advised by Prof. Andrea De Lucia with a thesis entitled "Methods and Tools for Focusing and Prioritizing the Testing Effort". His research is on empirical software engineering, in particular software maintenance and evolution and software testing. To this aim, he applies several techniques such as machine learning, search-based algorithms, and mining of software repositories. He serves and has served as a program committee member of various international conferences and as a referee for various international journals in the field of software engineering and artificial intelligence.

EDUCATION

2014/12 – 2018/03	DOCTOR OF PHILOSOPHY (PH.D.) IN MANAGEMENT & INFORMATION TECHNOLOGY University of Salerno, Italy Fully funded by University of Salerno Dissertation: "Methods and Tools for Focusing and Prioritizing the Testing Effort" Supervisor: Prof. Andrea De Lucia
2017/06	13TH INTERNATIONAL SUMMER SCHOOL ON SOFTWARE ENGINEERING (ISSSE) University of Salerno, Italy
2017/03 – 2017/05	VISITING STUDENT Delft University of Technology, The Netherlands Supervisor: Prof. Andy Zaidman
2016/05 – 2016/07	VISITING STUDENT Delft University of Technology, The Netherlands Supervisor: Prof. Andy Zaidman
2016/06	12TH INTERNATIONAL SUMMER SCHOOL ON SOFTWARE ENGINEERING (ISSSE) University of Salerno, Italy
2015/09	INTERNATIONAL SUMMER SCHOOL ON SOFTWARE ENGINEERING (SE SCHOOL@UNIBZ 2015) Free University of Bolzano, Italy
2013/03	ERASMUS IP HUMAN-MACHINE INTERACTION Reims, France
2011/10 – 2014/09	MASTER'S DEGREE (M.Sc.) IN COMPUTER SCIENCE University of Salerno, Italy 110/110 cum laude Dissertation: "A defect prediction model based on relationships between developers and modified files" Promotor: Prof. Andrea De Lucia
2007/10 – 2011/05	BACHELOR'S DEGREE (B.Sc.) IN COMPUTER SCIENCE University of Molise, Italy 110/110 cum laude Dissertation: "Applications of mathematical models to semantic research" Promotor: Prof. Giovanni Capobianco

EMPLOYMENT HISTORY

01/2020 - CURRENT

ASSISTANT PROFESSOR

Jheronimus Academy of Data Science, Tilburg University, The Netherlands

- Work Package Leader of EU Horizon 2020 project “RADON: *Unlocking the benefits of serverless FaaS*” (<https://radon-h2020.eu/>)
- MSc Thesis Coordinator
- Course Coordinator for Introduction to Machine Learning (Pre-MSc in Data Science and Entrepreneurship)
- Lecturer for Data Engineering (MSc in Data Science and Entrepreneurship)
- Lecturer for Data Statistics (BSc in Data Science)

2018/01 – 2019/12

POST-DOCTORAL RESEARCHER

Vrije Universiteit Brussel, Belgium

- Researcher in the FWO EOS project “SECO-ASSIST: Automated Assistance for Developing Software in Ecosystems of the Future” (<https://secoassist.github.io/>)
- Researcher in the Innoviris TeampUP project “INTIMALS INTelligent Modernisation Assistance for Legacy Software” (<http://soft.vub.ac.be/intimals/>)
- Lecturer for “Capita Selecta of Software Engineering” (MSc in Computer Science)

2014/12 – 2018/03

PH.D. STUDENT IN MANAGEMENT & INFORMATION TECHNOLOGY

University of Salerno, Italy

Fully funded by University of Salerno. Advisor: Prof. Andrea De Lucia

TEACHING

INTRODUCTION TO MACHINE LEARNING (mandatory course of the Pre-Master's in Data Science and Entrepreneurship)
Jheronimus Academy of Data Science, (University of Tilburg, Eindhoven University of Technology), The Netherlands
Course coordinator - Spring 2021
Lecturer (course coordinator: Prof. Damian A. Tamburri) - Spring 2020

DATA ENGINEERING (mandatory course of the Master's in Data Science and Entrepreneurship)
Jheronimus Academy of Data Science, (University of Tilburg, Eindhoven University of Technology), The Netherlands
Lecturer (course coordinator: Prof. Damian A. Tamburri) - Fall 2020

DATA STATISTICS (mandatory course of the Bachelor in Data Science)
University of Tilburg, Eindhoven University of Technology, The Netherlands
Lecturer (course coordinator: Prof. Maurits C. Kaptein) - Fall 2019

CAPITA SELECTA OF SOFTWARE ENGINEERING (elective course of the Master's in Computer Science)
Vrije Universiteit Brussel, Belgium
Lecturer (course coordinator: Prof. Coen De Roover) - 2019-2020, 2018-2019 - annual course

SOFTWARE ENGINEERING, MANAGEMENT AND EVOLUTION (mandatory course of the Master's in Computer Science)
University of Salerno, Italy
Teaching assistant (course coordinator: Prof. Andrea De Lucia) - Spring 2017, Spring 2016

SOFTWARE ENGINEERING (mandatory course of the Bachelor in Computer Science)
University of Salerno, Italy
Teaching assistant (course coordinator: Prof. Andrea De Lucia) - Fall 2016, Fall 2015

WEB DEVELOPMENT (mandatory course in the Bachelor of Computer Science)
University of Salerno, Italy
Teaching assistant - Fall 2016

PROGRAMMING I (mandatory course in the Bachelor of Computer Science)
University of Salerno, Italy
Teaching assistant - Fall 2016 (course coordinator: Prof. Riccardo Di Stasi), Fall 2015 (course coordinator: Prof. Enrico Fischetti)

SOFTWARE ENGINEERING: MAINTENANCE AND TESTING (mandatory course of the Master's in Computer Science)
University of Salerno, Italy
Teaching assistant (course coordinator: Prof. Andrea De Lucia) - Fall 2015

SUPERVISION OF PH.D. THESES

2020 **[PT1] AN AUTOMATED DELTA-DEBUGGING APPROACH TO RESILIENCE TESTING OF ACTOR SYSTEMS THROUGH FAULT INJECTION**
Jonas De Bleser – Ph.D. in Computer Science – Promotor: Prof. Coen De Roover

SUPERVISION OF MASTER'S THESES

2021 **[MT11] VARIATIONAL TASK ENCODERS FOR MODEL-AGNOSTIC META-LEARNING WITH UNCERTAINTY OVER TASK DISTRIBUTIONS**
Luuk Schagen – M.Sc. in Data Science and Entrepreneurship – Promotor: dr. Joaquin Vanschoren

[MT10] PREDICTING REVENUE OF COMMERCIAL CLIENTS OF A DUTCH FINANCIAL INSTITUTION USING MACHINE LEARNING
Jens van de Zande – M.Sc. in Data Science and Entrepreneurship – Promotor: dr. Dario Di Nucci

- [MT9] PREDICTING SECURITY-RELEVANT COMMITS WITH STATIC CODE ANALYZERS**
Therese Fehrer – M.Sc. in Data Science and Entrepreneurship – Promotor: Prof. Damian A. Tamburri
- 2020**
- [MT8] SOURCE CODE MEASUREMENTS FOR MACHINE LEARNING-BASED SMELL DETECTION IN INFRASTRUCTURE AS CODE: A TOSCA CASE-STUDY**
Chiel van Asseldonk – M.Sc. in Data Science and Entrepreneurship – Promotor: Prof. Damian A. Tamburri
- [MT7] MEASURING COMPETITIVENESS BASED ON INSTAGRAM FOLLOWER COMMUNICATION**
Niels van Gorsel – M.Sc. in Data Science and Entrepreneurship – Promotor: Prof. Shantanu Mullick
- [MT6] HEURISTIC-GUIDED RESILIENCE TESTING OF PERSISTENT ACTOR IMPLEMENTATIONS**
Patrick Muriuki Gakuo – M.Sc. in Computer Science – Promotor: Prof. Coen De Roover
- 2016**
- [MT5] CHECKAPP: A TOOL FOR MONITORING JAVA APPLICATION PERFORMANCE**
Elisa D'Eugenio – M.Sc. in Computer Science – Promotor: Prof. Andrea De Lucia
- [MT4] PETRA: A POWER ESTIMATION TOOL FOR ANDROID APPLICATIONS**
Antonio Prota – M.Sc. in Computer Science – Promotor: Prof. Andrea De Lucia
- 2015**
- [MT3] DEVELOPMENT AND COMPARISON OF NOVEL TECHNIQUES FOR SEARCH BASED TEST DATA GENERATION**
Giovanni Grano – M.Sc. in Computer Science – Promotor: Prof. Andrea De Lucia
- [MT2] DESIGN AND DEVELOPMENT OF A TOOL FOR THE AUTOMATIC GENERATION OF TEST CASES**
Simone Scalabrino – M.Sc. in Computer Science – Promotor: Prof. Andrea De Lucia
- [MT1] A COMBINED MODEL FOR THE PREDICTION OF DEFECTS**
Giuseppe De Rosa – M.Sc. in Computer Science – Promotor: Prof. Andrea De Lucia

SUPERVISION OF BACHELOR THESES

- 2017**
- [BT9] DESIGN AND DEVELOPMENT OF METHODS FOR TEST CASE MINIMIZATION**
Francesco De Feo – B.Sc. in Computer Science – Promotor: Prof. Andrea De Lucia
- [BT8] DESIGN AND DEVELOPMENT OF METHODS FOR TEST CASE PRIORITIZATION**
Giuseppe Sessa – B.Sc. in Computer Science – Promotor: Prof. Andrea De Lucia
- [BT7] DESIGN AND DEVELOPMENT OF A PLUGIN FOR OPTIMIZING REGRESSION TESTING**
Gerardo Della Monica – B.Sc. in Computer Science – Promotor: Prof. Andrea De Lucia
- [BT6] DESIGN AND DEVELOPMENT OF A PLUGIN FOR THE DETECTION OF ENERGY DEFECTS OF MOBILE APPLICATIONS**
Sara Zaino – B.Sc. in Computer Science – Promotor: Prof. Andrea De Lucia
- [BT5] DESIGN AND DEVELOPMENT OF A DEFECT PREDICTION TOOL**
Giuseppina Tufano – B.Sc. in Computer Science – Promotor: Prof. Andrea De Lucia
- [BT4] DEVELOPMENT OF A SOFTWARE ENERGY ESTIMATION METHODOLOGY IN AN INTEGRATED DEVELOPMENT ENVIRONMENT**
Roberto Contaldo – B.Sc. in Computer Science – Promotor: Prof. Andrea De Lucia
- [BT3] DESIGN AND DEVELOPMENT OF A DEFECT PREDICTION TOOL BY USING CROSS-PROJECT TECHNIQUES**
Pasquale Martiniello – B.Sc. in Computer Science – Advisor: Prof. Andrea De Lucia
- 2016**
- [BT2] TRIO: A TOOL FOR REGRESSION TESTING OPTIMIZATION**
Antonio Luca D'Avanzo – B.Sc. in Computer Science – Promotor: Prof. Andrea De Lucia
- [BT1] DESIGN AND DEVELOPMENT OF A DEFECT PREDICTION TOOL**

ACADEMIC RECORD

Journal Articles: 12

Conference Papers: 12 (main track), 7 (tool demonstration track), 5 (miscellaneous tracks)

Workshop Papers: 9

Citations: 688, h-index: 15, <https://scholar.google.it/citations?user=YJqcbnIAAAAJ>

1. JOURNAL PAPERS

[J12] ADAPTIVE SELECTION OF CLASSIFIERS FOR BUG PREDICTION: A LARGE-SCALE EMPIRICAL ANALYSIS OF ITS PERFORMANCES AND A BENCHMARK STUDY

F. Pecorelli, D. Di Nucci

Elsevier Science of Computer Programming (SCICO), 2021, Volume 295

[J11] WITHIN-PROJECT DEFECT PREDICTION OF INFRASTRUCTURE-AS-CODE USING PRODUCT AND PROCESS METRICS

S. Dalla Palma, D. Di Nucci, F. Palomba, D. A. Tamburri

IEEE Transactions on Software Engineering (TSE), 2021, To Appear

[J10] PRIORITISING SERVER SIDE REACHABILITY VIA INTER-PROCESS CONCOLIC TESTING

M. Vandercammen, L. Christophe, D. Di Nucci, W. De Meuter, C. De Roover

The Art, Science, and Engineering of Programming, 2021, Volume 5, Issue 2, Article 5, 34 pages

[J9] ANSIBLEMETRICS: A PYTHON LIBRARY FOR MEASURING INFRASTRUCTURE-AS-CODE BLUEPRINTS IN ANSIBLE

S. Dalla Palma, D. Di Nucci, D. A. Tamburri

SoftwareX, 2020, Volume 12, 6 pages, 1-6

[J8] TOWARD A CATALOG OF SOFTWARE QUALITY METRICS FOR INFRASTRUCTURE CODE

S. Dalla Palma, D. Di Nucci, F. Palomba, D. A. Tamburri

Elsevier Journal of Systems and Software (JSS), 2020, Volume 170, 8 pages, 1-8

[J7] A LARGE EMPIRICAL ASSESSMENT OF THE ROLE OF DATA BALANCING IN MACHINE-LEARNING-BASED CODE SMELL DETECTION

F. Pecorelli, D. Di Nucci, C. De Roover, A. De Lucia

Elsevier Journal of Systems and Software (JSS), 2020, Volume 169, 16 pages, 1-16

[J6] SCENTED SINCE THE BEGINNING: ON THE DIFFUSENESS OF TEST SMELLS IN AUTOMATICALLY GENERATED TEST CODE

G. Grano, F. Palomba, D. Di Nucci, A. De Lucia, H. Gall

Elsevier Journal of Systems and Software (JSS), 2019, Volume 156, 16 pages, 312-327

[J5] THIRD-PARTY LIBRARIES IN MOBILE APPS WHEN, HOW, AND WHY DEVELOPERS UPDATE THEM

P. Salza, F. Palomba, D. Di Nucci, A. De Lucia, F. Ferrucci

Springer Empirical Software Engineering (EMSE), 2019, Volume 25, 37 pages, 2341-2377

[J4] A TEST CASE PRIORITIZATION GENETIC ALGORITHM GUIDED BY THE HYPERVOLUME INDICATOR

D. Di Nucci, A. Panichella, A. Zaidman, A. De Lucia

IEEE Transactions on Software Engineering (TSE), 2019, Volume 46, Issue 6, 674-696

[J3] ON THE IMPACT OF CODE SMELLS ON THE ENERGY CONSUMPTION OF MOBILE APPLICATIONS

F. Palomba, D. Di Nucci, A. Panichella, A. Zaidman, A. De Lucia

Elsevier Information and Software Technology (INFSOFT), 2019, Volume 105, 13 pages, 43-55

[J2] A DEVELOPER CENTERED BUG PREDICTION MODEL

D. Di Nucci, F. Palomba, G. De Rosa, G. Bavota, R. Oliveto, A. De Lucia

IEEE Transactions on Software Engineering (TSE), 2018, Volume 44 Issue 1, 21 pages, 5-24

[J1] DYNAMIC SELECTION OF CLASSIFIERS IN BUG PREDICTION: AN ADAPTIVE METHOD

D. Di Nucci, F. Palomba, R. Oliveto, A. De Lucia

IEEE Transactions on Emerging Topics in Computational Intelligence (TETCI), 2017, Volume 1, Issue 3, 11 pages, 202-212

2. CONFERENCE PAPERS, MAIN TRACK (I.E., FORMALLY PUBLISHED IN INTERNATIONAL CONFERENCE PROCEEDINGS WITH PEER REVIEW)

[C12] A DELTA-DEBUGGING APPROACH TO ASSESSING THE RESILIENCE OF ACTOR PROGRAMS THROUGH RUN-TIME TEST PERTURBATIONS

J. De Bleser, D. Di Nucci, C. De Roover

1st IEEE/ACM International Conference on Automation of Software Test (AST 2020)

Virtual (originally Seoul, South Korea), 2020, 10 pages, 21-30

[C11] COMPARING HEURISTIC AND MACHINE LEARNING APPROACHES FOR METRIC-BASED CODE SMELL DETECTION

F. Pecorelli, F. Palomba, D. Di Nucci, A. De Lucia

27th IEEE/ACM International Conference on Program Comprehension (ICPC 2019)

Montreal, Canada, 2019, 12 pages, 93-104

[C10] CROSS-PROJECT JUST-IN-TIME BUG PREDICTION FOR MOBILE APPS: AN EMPIRICAL ASSESSMENT

G. Catolino, D. Di Nucci, F. Ferrucci

6th IEEE/ACM International Conference on Mobile Software Engineering and Systems (MOBILESoft 2019)

Montreal, Canada, 2019, 12 pages, 99-110

[C9] ASSESSING DIFFUSION AND PERCEPTION OF TEST SMELLS IN SCALA PROJECTS

J. De Bleser, D. Di Nucci, C. De Roover

16th IEEE/ACM International Conference on Mining Software Repositories (MSR 2019)

Montreal, Canada, 2019, 11 pages, 457-467

[C8] MINING SCALA FRAMEWORK EXTENSIONS FOR RECOMMENDATION PATTERNS

Y. Pacheco, J. De Bleser, T. Molderez, D. Di Nucci, W. De Meuter, C. De Roover

26th IEEE International Conference on Software Analysis, Evolution, and Reengineering (SANER 2018)

Hangzhou, China, 2019, 10 pages, 514-523

[C7] DO DEVELOPERS UPDATE THIRD-PARTY LIBRARIES IN MOBILE APPS?

P. Salza, F. Palomba, D. Di Nucci, C. D'Uva, A. De Lucia, F. Ferrucci

IEEE/ACM 26th International Conference on Program Comprehension (ICPC 2018)

Gothenburg, Sweden, 2018, 11 pages, 255-265

[C6] SELF-REPORTED ACTIVITIES OF ANDROID DEVELOPERS

L. Pascarella, F. Geiger, F. Palomba, D. Di Nucci, I. Malavolta, A. Bacchelli

5th IEEE/ACM International Conference on Mobile Software Engineering and Systems (MOBILESoft)

Gothenburg, Sweden, 2018, 12 pages, 144-155

[C5] DETECTING CODE SMELLS USING MACHINE LEARNING TECHNIQUES: ARE WE THERE YET?

D. Di Nucci, F. Palomba, D. A. Tamburri, A. Serebrenik, A. De Lucia

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

Campobasso, Italy, 2018, 10 pages, 612-621

[C4] SOFTWARE-BASED ENERGY PROFILING OF ANDROID APPS: SIMPLE, EFFICIENT AND RELIABLE?

D. Di Nucci, F. Palomba, A. Prota, A. Panichella, A. Zaidman, A. De Lucia

24th IEEE International Conference on Software Analysis, Evolution, and Reengineering (SANER 2017)

Klagenfurt, Austria, 2017, 12 pages, 103-114

[C3] SEARCH-BASED TESTING OF PROCEDURAL PROGRAMS: ITERATIVE SINGLE-TARGET OR MULTI-TARGET APPROACH?

S. Scalabrino, G. Grano, D. Di Nucci, R. Oliveto, A. De Lucia

Symposium on Search-Based Software Engineering (SSBSE 2016)

Raleigh, NC, United States, 2016, 15 pages, 64-79

[C2] ON THE ROLE OF DEVELOPER'S SCATTERED CHANGES IN BUG PREDICTION

D. Di Nucci, F. Palomba, S. Siravo, G. Bavota, R. Oliveto, A. De Lucia

31st IEEE International Conference on Software Maintenance and Evolution (ICSME 2015)

Bremen, Germany, 2015, 10 pages, 241-250

[C1] HYPERVOLUME-BASED SEARCH FOR TEST CASE PRIORITIZATION

D. Di Nucci, A. Panichella, A. Zaidman, A. De Lucia

Symposium on Search-Based Software Engineering (SSBSE 2015)

Bergamo, Italy, 2015, 15 pages, 157-172

3. CONFERENCE PAPERS, TOOL DEMONSTRATIONS TRACK (I.E., FORMALLY PUBLISHED IN INTERNATIONAL CONFERENCE PROCEEDINGS WITH PEER REVIEW)

[D7] REFACTORING ANDROID-SPECIFIC ENERGY SMELLS: A PLUGIN FOR ANDROID STUDIO

E. Iannone, F. Pecorelli, D. Di Nucci, F. Palomba, A. De Lucia
IEEE/ACM 28th International Conference on Program Comprehension (ICPC 2020)
Virtual (originally Seoul, South Korea), 2020, 5 pages, 451-455

[D6] SOCRATES - SCALA RADAR FOR TEST SMELLS

J. De Bleser, D. Di Nucci, C. De Roover
10th ACM SIGPLAN Scala Symposium (SCALA 2019)
London, United Kingdom, 2019, 5 pages, 22-26

[D5] OCELOT: A SEARCH-BASED TEST-DATA GENERATION TOOL FOR C

S. Scalabrino, G. Grano, D. Di Nucci, M. Guerra, A. De Lucia, H. Gall, R. Oliveto
33rd IEEE/ACM International Conference on Automated Software Engineering (ASE 2018)
Montpellier, France, 2018, 4 pages, 868-871

[D4] A GRAPH-BASED DATASET OF COMMIT HISTORY OF REAL-WORLD ANDROID APPS

F. Geiger, I. Malavolta, L. Pascarella, F. Palomba, D. Di Nucci, A. Bacchelli
IEEE/ACM 15th International Conference on Mining Software Repositories (MSR 2018)
Gothenburg, Sweden, 2018, 5 pages, 30-33

[D3] PETRA: A SOFTWARE-BASED TOOL FOR ESTIMATING THE ENERGY PROFILE OF ANDROID APPLICATIONS

D. Di Nucci, F. Palomba, A. Prota, A. Panichella, A. Zaidman, A. De Lucia
39th IEEE/ACM International Conference on Software Engineering (ICSE 2017)
Buenos Aires, Argentina, 2017, 4 pages, 3-6

[D2] LIGHTWEIGHT DETECTION OF ANDROID-SPECIFIC CODE SMELLS: THE ADOCTOR PROJECT

F. Palomba, D. Di Nucci, A. Panichella, A. Zaidman, A. De Lucia
24th IEEE International Conference on Software Analysis, Evolution, and Reengineering (SANER 2017)
Klagenfurt, Austria, 2017, 5 pages, 487-491

[D1] LANDFILL: AN OPEN DATASET OF CODE SMELLS WITH PUBLIC EVALUATION

F. Palomba, D. Di Nucci, M. Tufano, G. Bavota, R. Oliveto, D. Poshyvanyk, A. De Lucia
IEEE/ACM 12th Working Conference on Mining Software Repositories (MSR 2015)
Florence, Italy, 2015, 4 pages, 482-485

4. CONFERENCE PAPERS, MISCELLANEOUS TRACKS (I.E., FORMALLY PUBLISHED IN INTERNATIONAL CONFERENCE PROCEEDINGS WITH PEER REVIEW)

[M5] THE MAKING OF ACCESSIBLE ANDROID APPLICATIONS: AN EMPIRICAL STUDY ON THE STATE OF THE PRACTICE

M. Di Gregorio, D. Di Nucci, F. Palomba, G. Vitiello
36th IEEE International Conference on Software Maintenance and Evolution (ICSME 2020)
Virtual (originally Melbourne, Australia), 2020, 2 pages, 857-861

[M4] COUNTERTERRORISM FOR CYBER-PHYSICAL SPACES: A COMPUTER VISION APPROACH

G. Cascavilla, J. Slabber, F. Palomba, D. Di Nucci, D. A. Tamburri, W.J. van den Heuvel
International Conference on Advanced Visual Interfaces (AVI 2020)
Ischia, Italy, 2020, 5 pages, 1-5

[M3] QUALITY MANAGEMENT OF INFRASTRUCTURE CODE IN SERVERLESS COMPUTING: THE RADON APPROACH

S. Dalla Palma, M. Garriga, D. Di Nucci, D. A. Tamburri, W.J. van den Heuvel
8th European Conference On Service-Oriented And Cloud Computing (ESOCC 2020)
Virtual (originally Heraklion, Greece), 2020, 5 pages, to appear

[M2] MINING PATTERNS IN SOURCE CODE USING TREE MINING ALGORITHMS

H. Son Pham, S. Nijssen, K. Mens, D. Di Nucci, T. Molderez, C. De Roover, J. Fabry, V. Zaytsev.
22nd International Conference on Discovery Science (DS 2019)
Split, Croatia, 2019, 10 pages, 471-480

[M1] METHODS AND TOOLS FOR FOCUSING AND PRIORITIZING THE TESTING EFFORT

D. Di Nucci

34th IEEE International Conference on Software Maintenance and Evolution (ICSME 2018)
Doctoral Symposium Track, Madrid, Spain, 2018, 5 pages, 7-726

5. PUBLISHED WORKSHOP PAPERS (I.E., FORMALLY PUBLISHED IN INTERNATIONAL WORKSHOP PROCEEDINGS WITH PEER REVIEW)

[W9] DEEPIAC: DEEP LEARNING-BASED LINGUISTIC ANTI-PATTERN DETECTION FOR IAC

N. Borovits, I. Kumara, P. Krishnan, S. Dalla Palma, D. Di Nucci, F. Palomba, D. A. Tamburri, W.J. van den Heuvel
4th ACM SigSoft International Workshop on Machine Learning Techniques for Software Quality Evaluation (MaLTesQuE 2020)
Virtual (originally Sacramento, USA), 2020, 6 pages, 7-12

[W8] SINGLING THE ODD ONES OUT: A NOVELTY DETECTION APPROACH TO FIND DEFECTS IN INFRASTRUCTURE-AS-CODE

S. Dalla Palma, M. Mohammadi, D. Di Nucci, D. A. Tamburri
4th ACM SigSoft International Workshop on Machine Learning Techniques for Software Quality Evaluation (MaLTesQuE 2020)
Virtual (originally Sacramento, USA), 2020, 6 pages, 31-36.

[W7] ON THE ROLE OF DATA BALANCING FOR MACHINE LEARNING-BASED CODE SMELL DETECTION

F. Pecorelli, D. Di Nucci, C. De Roover, A. De Lucia
3rd ACM SigSoft International Workshop on Machine Learning Techniques for Software Quality Evaluation (MaLTesQuE 2019)
Tallinn, Estonia, 2019, 6 pages, 19-24

[W6] A LANGUAGE-PARAMETRIC MODULAR FRAMEWORK FOR MINING IDIOMATIC CODE PATTERNS

D. Di Nucci, H. Son Pham, J. Fabry, C. De Roover, K. Mens, T. Molderez, S. Nijssen and V. Zaytsev
In Proceedings of the 12th Seminar Series on Advanced Techniques & Tools for Software Evolution (SATTOSSE 2019)
Bolzano, Italy, 2019

[W5] MINING EXTENSION POINT PATTERNS IN SCALA

Y. Pacheco, J. De Bleser, T. Molderez, D. Di Nucci, W. De Meuter, C. De Roover
17th Belgium-Netherlands Software Evolution Workshop (BENEVOL 2018)
Delft, The Netherlands, 2018, 5 pages, 16-20

[W4] OMNISCIENT DEVOPS ANALYTICS

D. Tamburri, F. Palomba, D. Di Nucci, L. Di Giacomo
1st International Workshop on Software Engineering Aspects of Continuous Development and New Paradigms of Software Production and Deployment (DEVOPS 2018)
Chateau de Villebrumier, France, 2018, 12 pages, 48-59

[W3] EVALUATING THE ADAPTIVE SELECTION OF CLASSIFIERS FOR CROSS-PROJECT BUG PREDICTION

D. Di Nucci, F. Palomba, A. De Lucia
6th International Workshop on Realizing Artificial Intelligence Synergies in Software Engineering (RAISE 2018)
Gothenburg, Sweden, 2018, 7 pages, 48-54

[W2] THE ROLE OF META-LEARNERS IN THE ADAPTIVE SELECTION OF CLASSIFIERS

D. Di Nucci, A. De Lucia
2nd Workshop on Machine Learning Techniques for Software Quality Evaluation (MaLTesQuE 2018)
Campobasso, Italy, 2018, 6 pages, 7-12

[W1] ON THE DIFFUSION OF TEST SMELLS IN AUTOMATICALLY GENERATED TEST CODE: AN EMPIRICAL STUDY

F. Palomba, D. Di Nucci, A. Panichella, R. Oliveto, A. De Lucia
9th International Workshop on Search-Based Software Testing (SBST 2016)
Austin, TX, United States, 2016, 10 pages, 5-14

INVITED TALKS

- 2020**
- [T7] MACHINE LEARNING FOR SOFTWARE ENGINEERING: THE GOOD, THE BAD, AND THE UGLY**
Technical University Eindhoven, Virtual, December 10th, 2020
- [T6] IMPROVING ENERGY EFFICIENCY OF MOBILE APPLICATIONS IN THE INTERNET OF THINGS**
Summer School on IoT, University of Salerno, Fisciano, Virtual, June 3rd, 2020
- [T5] DEFECT PREDICTION: USING MACHINE LEARNING FOR FOCUSING THE TESTING EFFORT**
University of Salerno, Fisciano, Virtual, March 25th, 2020
- 2019**
- [T4] MINING SOURCE CODE^3: MINING IDIOMS, USAGES, AND EDITS**
FOSDEM, Brussels, Belgium, February 3rd, 2019
- 2018**
- [T3] DEFECT PREDICTION: USING MACHINE LEARNING FOR FOCUSING THE TESTING EFFORT**
Jheronimus Academy of Data Science, 's-Hertogenbosch, The Netherlands, March 9th, 2018
- 2017**
- [T2] DEFECT PREDICTION: USING MACHINE LEARNING FOR FOCUSING THE TESTING EFFORT**
Jheronimus Academy of Data Science, 's-Hertogenbosch, The Netherlands, December 5th, 2017
- [T1] DIAGNOSE AND DETECT ENERGY FLAWS OF ANDROID APPS**
Vrije Universiteit Brussel, Brussels, Belgium. March 23rd, 2017

SERVICE TO THE SCIENTIFIC COMMUNITY

ORGANIZATION OF SCIENTIFIC EVENTS

- 2021**
- TOOL DEMO CO-CHAIR**
29th IEEE/ACM International Conference on Program Comprehension (ICPC)
Virtual (originally Madrid, Spain)
- 2020**
- ORGANIZER**
3rd International Workshop on Software Health (SoHeal)
Virtual (originally Seoul, South Korea)
- PUBLICITY CO-CHAIR**
28th IEEE/ACM International Conference on Program Comprehension (ICPC)
Virtual (originally Seoul, South Korea)
- PROGRAM CHAIR**
1st Workshop on ENGINEERING Intelligent Applications' Code (ENIAC)
Virtual (originally Porto, Portugal)
- 2019**
- ORGANIZER**
18th Belgium-Netherlands Software Evolution Workshop (BENEVOL)
Brussels, Belgium
- COMMITTEE MEMBER**
14th International Summer School on Software Engineering (ISSSE)
University of Salerno, Italy
- 2017**
- SCIENTIFIC SECRETARIAT**
13th International Summer School on Software Engineering (ISSSE)
University of Salerno, Italy

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

COMMITTEE MEMBER OF PH.D. JURIES

2020 **INVESTIGATING PERFORMANCE ISSUES IN MOBILE APPS**
Teerath Das. Gran Sasso Science Institute (IT)
promoted by Prof. Massimiliano Di Penta and Dr. Ivano Malavolta

PROGRAM COMMITTEE MEMBER OF INTERNATIONAL CONFERENCES

2021 37th IEEE International Conference on Software Maintenance and Evolution (ICSME)
Tool Demo Track

8th IEEE/ACM International Conference on Mobile Software Engineering and Systems (MOBILESoft)
Technical Papers Track

28th IEEE International Conference on Software Analysis, Evolution, and Reengineering (SANER)
Research Track, Reproducibility Studies and Negative Results Track, Tool Demo Track

2020 20th IEEE International Working Conference on Source Code Analysis and Manipulation (SCAM)
New Ideas and Emerging Results Track

28th ACM Joint European Software Engineering Conference and Symposium on the Foundations of
Software Engineering (ESEC/FSE)
Tool Demo Track

35th IEEE/ACM International Conference on Automated Software Engineering
Late Breaking Results Track

46th Euromicro Conference on Software Engineering and Advanced Applications (SEAA)
Journal First Track

28th International Conference on Program Comprehension (ICPC)
Research Track

27th IEEE International Conference on Software Analysis, Evolution, and Reengineering (SANER)
Research Track, Journal First Track, Tool Demo Track

2019 35th IEEE International Conference on Software Maintenance and Evolution (ICSME)
Tool Demo Track

27th ACM Joint European Software Engineering Conference and Symposium on the Foundations of
Software Engineering (ESEC/FSE)
Artefact Evaluation Track

6th IEEE/ACM International Conference on Mobile Software Engineering and Systems (MOBILESoft)
Student Research Competition

5th International Conference on Advances and Trends in Software Engineering (SOFTENG)

2018 34th IEEE International Conference on Software Maintenance and Evolution (ICSME)
Tool Demo Track

5th IEEE/ACM International Conference on Mobile Software Engineering and Systems (MOBILESoft)
Student Research Competition

PROGRAM COMMITTEE MEMBER OF INTERNATIONAL WORKSHOPS

2021	4 th International Workshop on Software Health (SoHeal)
2020	19 th Belgium-Netherlands Software Evolution Workshop (BENEVOL) 4 th International Workshop on Machine Learning Techniques for Software Quality Evaluation (MaLTeSQuE)
2019	2 nd International Workshop on Cloud-Native Applications Design and Experience (CNAX) 3 rd International Workshop on Machine Learning Techniques for Software Quality Evaluation (MaLTeSQuE)
2018	1 st International Workshop on Cloud-Native Applications Design and Experience (CNAX) 2 nd Workshop on Machine Learning Techniques for Software Quality Evaluation (MaLTeSQuE) 10 th International Conference on Advances in System Testing and Validation Lifecycle (VALID)
2017	9 th International Conference on Advances in System Testing and Validation Lifecycle (VALID)

EDITORIAL BOARD MEMBER OF INTERNATIONAL JOURNALS AND BLOG

2020 - CURRENT	Guest Editor for Science of Computer Programming (SCICO) for a Special Issue on "Software Health of Software Ecosystems"
2020 - CURRENT	IEEE Software Initiatives Team
2019 - CURRENT	IEEE Software Blog

REVIEWER

INTERNATIONAL JOURNALS	Advances in Software Engineering - Elsevier Applied Soft Computing - Elsevier Computational Intelligence - Wiley Empirical Software Engineering - Springer IEEE Access - IEEE IET Software - Institution of Engineering and Technology Information Processing Letters - Elsevier Journal of Software: Evolution and Process - Wiley Journal of Systems and Software - Elsevier Neurocomputing - Elsevier Science of Computer Programming - Elsevier Scientific Programming - Hidawi Software Quality Journal - Springer Transactions on Knowledge and Data Engineering - IEEE Transactions on Software Engineering - IEEE Transactions on Software Engineering and Methodology - ACM
INTERNATIONAL CONFERENCES	IEEE International Conference on Program Comprehension: 2021, 2019, 2016 International Conference on Evaluation and Assessment in Software Engineering: 2020 IEEE International Conference on Software Analysis, Evolution, and Reengineering: 2018, 2017

IEEE International Conference on Software Maintenance and Evolution: 2020, 2019, 2018, 2016(New Ideas and Emerging Results Track)
International Conference on Business Information Systems: 2016, 2015
International Conference on Distributed Multimedia Systems: 2016, 2015
International Conference on Enterprise Information Systems: 2017, 2016, 2015
International Conference on Mining Software Repositories: 2019

LICENSES AND CERTIFICATIONS

2020	ABILITAZIONE SCIENTIFICA NAZIONALE - SETTORE CONCORSUALE 01/B1 – INFORMATICA - FASCIA II Issued by Italian Ministry of University and Research. Valid from 23/11/2020 to 23/11/2029
2020	ABILITAZIONE SCIENTIFICA NAZIONALE - SETTORE CONCORSUALE 09/H1 - SISTEMI DI ELABORAZIONE DELLE INFORMAZIONI - FASCIA II Issued by Italian Ministry of University and Research. Valid from 13/11/2020 to 13/11/2029
2014	ABILITAZIONE ALLA PROFESSIONE DI INGEGNERE Issued in December 2014

AWARDS

2020	BEST REVIEWER AWARD 2019 Journal of Systems and Software, Elsevier
2017	NSF TRAVEL SUPPORT Symposium on Search-Based Software Engineering (SSBSE), Raleigh, NC, United States
2015	ACM SIGSOFT STUDENT TRAVEL GRANT 37 th ACM/IEEE International Conference on Software Engineering (ICSE), Florence, Italy