INFORMAZIONI PERSONALI

Rocco Oliveto

+39 0874 404159 ----------
rocco.oliveto@unimol.it
https://dibt.unimol.it/staff/oliveto/
Skype rocco.oliveto@unimol.it

Sesso M | Data di nascita ---------- | Nazionalità Italiana

POSIZIONE RICOPERTA 01.02.2015 – OGGI

Professore associato per il settore scientifico-disciplinare ING-INF/05 all'Università degli Studi del Molise.

- Docente dei seguenti corsi:
  - dall'a.a. 2014-2015 all'a.a. 2018-2019: corso di "Evoluzione e Manutenzione di Sistemi Software", esame del III anno (48 ore di lezione frontali per un totale di 6 CFU) del corso di Laurea in Informatica (I livello);
  - dall'a.a. 2014-2015 all'a.a. 2017-2018: corso di "Programmazione e laboratorio", esame del I anno (96 ore di lezione frontali per un totale di 6 + 6 CFU) del corso di Laurea in Informatica (I livello);
  - dall'a.a. 2018-2019: corso di "Programmazione I", esame del I anno (84 ore di lezione frontali per un totale di 9 CFU) del corso di Laurea in Informatica (I livello);
  - dall'a.a. 2015-2016: corso di "Comunicazione efficace", esame a scelta del III anno (24 ore di lezione frontali per un totale di 3 CFU) del corso in Informatica (I livello);
  - dall'a.a. 2019-2020: corso di "Hands-on Machine Learning", esame a scelta del III anno (24 ore di lezione frontali per un totale di 3 CFU) del corso di Laurea in Informatica (I livello);
  - dall'a.a. 2017-2018: corso di "Software reliability and testing", esame del II anno (48 ore di lezione frontali per un totale di 6 CFU) del corso di Laurea Magistrale in Sicurezza dei Sistemi Software (II livello).
- Nel 2016 ha conseguito l'Abilitazione Scientifica Nazionale alle funzioni di **professore di I fascia sia nel settore concorsuale 01/B1 (INF/01) sia nel settore 09/H1 (ING-INF/05)**.

ESPERIENZA PROFESSIONALE

27.10.2017 – oggi

Co-Founder e CEO

datasound s.r.l., spin-off dell'Università degli Studi del Molise (www.datasound.it)

- L'azienda si pone come obiettivo l'ideazione, la progettazione e la realizzazione di innovativi sistemi di supporto alle decisioni (DSS) basati su tecniche di Machine Learning (ML). L'azienda collabora attivamente con l'azienda XEOS.it (www.xeos.it) e l'azienda Formula Medicine (http://www.formulamedicine.com) per lo **sviluppo di soluzioni innovative nell'ambito della tele-medicina e dell'eHealth in generale**.
- Principali prodotti in fase di sviluppo:
  - VIMENT: un sistema videoludico per bambini con difficoltà di apprendimento.
  - LSE: un motore di ricerca specializzato per sentenze.
  - AMIDAH: DSS basato su ML per l'individuazione di patologie cardiache a partire da ECG.
  - SMARTIME: un'applicazione per dispositivi mobili per il monitoraggio e la compilazione automatica del diario delle attività di una persona.

Attività o settore Sviluppo di software innovativi basati su tecniche di Machine Learning

09.11.2017 – oggi

Presidente del Consiglio di Corso di Studio Unificato di Informatica

Università degli Studi del Molise

- Coordinamento attività didattiche dei corsi di Laurea in Informatica e Laurea Magistrale in "Sicurezza dei Sistemi Software"
- Nominato con D.R. n. 984 del 09.11.2016 (I mandato) e D.R. n. 952 del 21.10.2019 (II mandato)

Attività o settore Università e ricerca

01.10.2016 – oggi

Direttore del Laboratorio di Ricerca STAKE Lab

Università degli Studi del Molise

- L'attività di ricerca dello STAKE (SofTware And Knowledge Engineering lab) ricade nella definizione di sistemi di supporto alle decisioni basati su intelligenza artificiale (principalmente machine learning e information retrieval) per diverse attività legate allo (i) sviluppo e manutenzione di grandi sistemi software; (ii) gestione di progetti e risorse in grandi organizzazioni; (iii) ottimizzazione del processo di produzione.

Attività o settore Università di ricerca

17.04.2014 – 08.11.2016

Presidente del Consiglio di Corso di Studio di Informatica

Università degli Studi del Molise

- Coordinamento delle attività didattiche del Corso di Laurea in Informatica
- Nominato con D. R. n. 361 del 17.04.2014

Attività o settore Università di ricerca

22.12.2010 – 31.01.2015

Ricercatore universitario per il settore scientifico disciplinare INF/01

Università degli Studi del Molise

- Docente dei seguenti corsi:
  - dall'a.a. 2009-2010 al 2013-2014: corso di "Ingegneria del software – II Modulo", esame del II anno (40 ore di lezione frontali per un totale di 5 CFU) del corso di Laurea in Informatica (I livello);
  - dall'a.a. 2013-2014: corso di "Evoluzione e Manutenzione di Sistemi Software", esame del III anno (48 ore di lezione frontali per un totale di 6 CFU) del corso di Laurea in Informatica (I livello);
  - dall'a.a. 2010-2011 al 2012-2013: corso di "Linguaggi di programmazione e laboratorio", esame del I anno (88 ore di lezione frontali per un totale di 6 + 5 CFU) del corso di Laurea in Informatica (I livello)
  - dall'a.a. 2014-2015: corso di "Linguaggi formali e compilatori", esame del I anno (48 ore di lezione frontali per un totale di 6 CFU) del corso di Laurea in Informatica (I livello);
  - dall'a.a. 2013-2014: corso di "Programmazione e laboratorio", esame del I anno (48 ore di lezione frontali per un totale di 6 + 6 CFU) del corso di Laurea in Informatica (I livello);
  - dall'a.a. 2011-2012: corso di "Basi di dati – I Modulo", esame del II anno (48 ore di lezione frontali per un totale di 6 CFU) del corso di Laurea in Informatica (I livello).

Attività o settore Università di ricerca

01.11.2007 – 30.11.2010

Titolare di assegni di ricerca

Università degli Studi del Molise

- Titolare di diversi assegni di ricerca su progetti di ingegneria del software, con particolare riferimento alla progettazione e alla sperimentazione empirica di sistemi di raccomandazioni basati su tecniche di machine learning o information retrieval.

Attività o settore Università di ricerca

01.03.2005 – 21.12.2010

Docente a contratto

Università degli Studi del Molise

- Docente dei seguenti corsi:
  - dall'a.a. 2004-2005 al 2008-2009: corso di "Laboratorio di ingegneria del software", esame del II anno (48 ore di lezione frontali per un totale di 6 CFU) del corso di Laurea in Informatica (I livello);
  - dall'a.a. 2009-2010: corso di "Ingegneria del software – II Modulo", esame del III anno (40 ore di lezione frontali per un totale di 5 CFU) del corso di Laurea in Informatica (I livello);
  - dall'a.a. 2006-2007 al 2007-2008: corso di "Linguaggi di programmazione", esame del I anno (48 ore di lezione frontali per un totale di 6 CFU) del corso di Laurea in Informatica (I livello);
  - dall'a.a. 2008-2009: corso di "Linguaggi di programmazione e laboratorio", esame del I anno (88 ore di lezione frontali per un totale di 6 + 5 CFU) del corso di Laurea in Informatica (I livello).

Attività o settore Università di ricerca

ISTRUZIONE E FORMAZIONE

01.11.2004 – 07.03.2008

Dottorato di Ricerca in Informatica

Livello 8

Università degli Studi di Salerno

- L'attività di ricerca è stata svolta nell'ambito della gestione della tracciabilità tra artefatti software, in

particolare ha riguardato la definizione di un'innovativa metodologia basata su tecniche di information retrieval per il recupero semi-automatico di link di tracciabilità tra artefatti software.
- Titolo della tesi: "*Traceability Management meets Information Retrieval Methods: Strengths and Limitations*".
- Giudizio: "*Le ricerche oggetto della tesi sono molto originali, le metodologie appaiono ottime, i risultati sono molto interessanti ed analizzati con acuto senso critico; nel colloquio il candidato dimostra un'ottima conoscenza delle problematiche trattate*". Giudizio complessivo: ottimo.

01.10.1999 – 15.07.2004

Laurea in Informatica

Livello 7

Università degli Studi di Salerno

- Votazione: 110/110 e lode
- Titolo della tesi: "*Recupero di Link di Tracciabilità in un Sistema per la Gestione di Artefatti Software*".
- Specifiche competenze acquisite: programmazione, linguaggi formali e compilatori, tecnologie di sviluppo di sistemi software, basi di dati, ingegneria del software, teoria della computazione.

Anno scolastico 1998/1999

Diploma di Perito Tecnico (Sez. Informatica)

Livello 4

Istituto Tecnico Industriale Statale "Basilico Focaccia" di Salerno

- Votazione 100/100
- Specifiche competenze acquisite: programmazione, basi di dati, sistemi di elaborazione delle informazioni, elettronica

COMPETENZE PERSONALI

Lingua madre: Italiano

Altre lingue

	COMPRENSIONE		PARLATO		PRODUZIONE SCRITTA
	Ascolto	Lettura	Interazione	Produzione orale	
Inglese	C1	C1	C1	C1	C1

Competenze comunicative

Elevate competenze comunicative acquisite in circa 15 anni di didattica universitaria e partecipazione, come relatore, ad oltre 20 eventi internazionali nell'ambito dell'ingegneria del software.
- Ha tenuto in diverse università italiane e straniere il seminario "Presentation tips". Il seminario punta ad illustrare come preparare, sviluppare e tenere una presentazione efficace. Il seminario si ispira al libro "Presentation Zen" di Garr Reynolds.

Competenze organizzative e gestionali

Ha rivestito i seguenti ruoli nei comitati organizzativi di congressi internazionali:
- General Chair:
  - SANER 2018: 25th IEEE International Conference on Software Analysis, Evolution, and Reengineering (Campobasso, Italy)
- Program (Co-)Chair:
  - ICPC 2015: 23rd IEEE International Conference on Program Comprehension (Florence, Italy) – con Christian Bird
  - SST 2015: 8th International Symposium on Software and Systems Traceability (Florence, Italy)
  - SCAM 2014: 14th IEEE International Working Conference on Source Code Analysis and Manipulation (Victoria, Canada) – con Abram Hindle
  - WCRE 2013: 20th International Working Conference on Reverse Engineering (Koblenz, Germany) – con Romain Robbes
  - WCRE 2012: 19th International Working Conference on Reverse Engineering (Kingston, Ontario, Canada) – con Denys Poshyvanyk
  - TEFSE 2009: 5th International Workshop on Traceability in Emerging Forms of Software Engineering (Vancouver, Canada)
- (Co-)Chair di alter track:
  - WCRE-CSMR 2014 (Project track): 1st IEEE Software Evolution Week, joint meeting of the 21st International Working Conference on Reverse Engineering and the 18th European Conference on Software Maintenance and Reengineerinng (Antwerp, Belgium)
  - ICPC 2013 (ERA Track): 21st IEEE International Conference on Program Comprehension (San Francisco, California, USA) – con Mark Grechanik

- ICSM 2011 (Tool Demonstrations Track): 27th International Conference on Software Maintenance (Williamsburg, VA, USA) – con Denys Poshyvanyk
- WCRE 2011 (Industrial Experience Track): 18th International Working Conference on Reverse Engineering (Limerick, Ireland)
- TEFSE 2011 (Traceability Challenge Track): 6th International Workshop on Traceability in Emerging Forms of Software Engineering (Honolulu, Hawaii, USA)

- Altri ruoli in comitati organizzativi:
  - TEFSE 2013: Publicity Chair: 7th International Workshop on Traceability in Emerging Forms of Software Engineering (San Francisco, California, USA)
  - NATURALIZE 2013 (Co-organizer): 1st Workshop on Natural Language Analysis in Software Engineering, collocated with the 35th International Conference on Software Engineering, 2013 (San Francisco, USA)
  - Co-organizer of the 1st Workshop on The Next Five Years of Text Analysis in Software Maintenance, 2012 (Riva del Garda, Italy)
  - Co-organizer of the working session "Software Artefact Traceability: the Never-ending Challenge" included in the program of the 23rd IEEE International Conference on Software Maintenance, 2007 (Paris, France).

Competenze professionali

Ha partecipato ai seguenti comitati di programma di conferenze internazionali (*n.b.*, quando non è specificato ha partecipato nella "main track" della conferenza):

- ICSE – International Conference on Software Engineering: 2012 (Tool Demo Track), 2015 (ACM Student Research Competition), 2021 (Research track)
- ESEC/FSE – joint meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering: 2011 (Tool Demo Track)
- ASE – IEEE/ACM International Conference on Automated Software Engineering: 2017 (Program Committee)
- ICSME – IEEE International Conference on Software Maintenance and Evolution: 2016, 2017, 2019 (ERA Track)
- ICSM – IEEE International Conference on Software Maintenance: 2010 (Research and ERA Tracks), 2011, 2012, 2013, 2014 (ERA Track)
- MSR – ACM/IEEE International Conference on Mining Software Repositories: 2016, 2017, 2019
- SANER – IEEE International Conference on Software Analysis, Evolution, and Reengineering: 2016, 2017
- WCRE – International Working Conference on Reverse Engineering: 2009, 2010, 2011
- CSMR – European Conference on Software Maintenance and Reengineering: 2009 (Tool Demo Track), 2011 (European Project Track)
- CSMR/WCRE – joint meeting of the 21st International Working Conference on Reverse Engineering and the 18th European Conference on Software Maintenance and Reengineering: 2014
- ICPC – IEEE International Conference on Program Comprehension: 2009 (Tool Demo Track), 2010 (Research and Tool Demo Tracks), 2011, 2012, 2013, 2014, 2016
- SCAM – IEEE International Working Conference on Source Code Analysis & Manipulation: 2012, 2013, 2015, 2016
- TEFSE – International Workshop on Traceability in Emerging Forms of Software Engineering: 2011, 2013
- International Workshop on Traceability, Dependencies and Software Architecture: 2011
- International Workshop on Aligning Research on Code Smells: 2013
- International Workshop on Mining Unstructured Data: 2014
- International Workshop on Software Analytics: 2015
- Projects Showcase at Software Technologies: Applications and Foundations: 2015

Svolge o ha svolto le seguenti attività nell'*editorial board* di riviste internazionali:

- Dal 2017 Social Media Engagement Editor of IEEE Software Magazine
- Dal 2012 al 2017 editorial board member di Advances in Software Engineering, Hindawi Publishing Corporation
- Member of the Review Board of Empirical Software Engineering Journal (Springer): 2014/2015 and 2015/2016
- Guest Editor of EMSE 2015 – Empirical Software Engineering (Springer): special issue on "Program Comprehension" (Selection of best papers of ICPC 2015)
- Guest Editor of EMSE 2015 – Empirical Software Engineering (Springer): special issue on "Software artefact Traceability"
- Guest Editor of JSS 2014 – Journal of Systems and Software (Elsevier): special issue on "Source Code Analysis and Manipulation" (Selection of best papers of SCAM 2014)
- Gest Editor of EMSE 2013 – Empirical Software Engineering (Springer): special issue on "Software Reverse Engineering" (Selection of best papers of WCRE 2013)

- Guest editor of JSEP 2012 – Journal of Software: Evolution and Process (Elsevier): special issue on “Mining Source Code Artifacts for Reverse Engineering” (Selection of best papers of WCRE 2012)

È (o è stato) revisore per le seguenti riviste internazionali:

- IEEE Transactions on Software Engineering (TSE): 2013, 2014, 2015, 2016, 2017, 2018, 2019
- ACM Transactions on Software Engineering and Methodology (TOSEM): 2013, 2014, 2015, 2018, 2019
- IEEE Transactions on Evolutionary Computation (TEVC): 2018
- Empirical Software Engineering Journal (EMSE) edited by Springer: 2012, 2013, 2014, 2015, 2016, 2018, 2019
- Information and Software Technology (IST) edited by Elsevier: 2009, 2012, 2013, 2014, 2015, 2016, 2017, 2019
- Journal of Systems and Software (JSS) edited by Elsevier: 2010, 2011, 2013
- Journal of Software Maintenance and Evolution: Research and Practice (JSME) edited by Wiley: 2007, 2011
- Journal of Software: Evolution and Process (JSEP) edited by Wiley: 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019
- Software Quality Journal (SQJO) edited by Springer: 2017
- Software Testing, Verification and Reliabiliy (STVR) edited by Wiley: 2011
- Science of Computer Programming (SCP) edited by Elsevier: 2010, 2011
- Computing (COMP) edited by Springer: 2015
- Information Processing Letters (IPL) edited by Elsevier: 2009
- Knowledge-Based Systems (KNOSYS) edited by Elsevier: 2017
- Information Technology and Management (ITEM) edited by Springer: 2012
- Journal of Computer Science and Technology (JCST) edited by Springer: 2012
- Journal of Software Engineering Research and Development (SERD) edited by Springer: 2016
- IET Software (IET): 2010, 2011, 2013
- Knowledge-Based Systems (KNOSYS) edited by Elsevier: 2017
- Information Technology and Management (ITEM) edited by Springer: 2012
- Journal of Computer Science and Technology (JCST) edited by Springer: 2012
- Journal of Software Engineering Research and Development (SERD) edited by Springer: 2016
- IET Software (IET): 2010, 2011, 2013

Competenze digitali

AUTOVALUTAZIONE				
Elaborazione delle informazioni	Comunicazione	Creazione di Contenuti	Sicurezza	Risoluzione di problemi
Utente Avanzato	Utente Avanzato	Utente Avanzato	Utente Avanzato	Utente Avanzato

Altre competenze

Restauro oggetti e mobili antichi.

- Nel 1998 ha organizzato dal 14 al 16 agosto a Sasso di Castalda (PZ) una mostra “Onore a Re Luigi Filippo” per avvicinare i visitatori all’arte del restauro. La mostra ha ricevuto, in un paesino con circa 1.000 abitanti, circa 1.500 visitatori.

Patente di guida

A e B

ULTERIORI INFORMAZIONI

Riconoscimenti e premi

Vincitore di *6 ACM SIGSOFT Distinguished Paper Awards*:

- 16th International Conference on Mining Software Repositories, 2019 - MSR 2019, per l’articolo “*Data-driven Solutions to Detect API Compatibility Issues in Android: an Empirical Study*”, con S. Scalabrino, G. Bavota, M. Linares-Vàsquez, M. Lanza, R. Oliveto.
- 32nd IEEE/ACM International Conference on Automated Software Engineerign, 2017 – ASE 2017, per l’articolo “Automatically Assessing Code Understandability: How Far Are We?”, con S. Scalabrino, M. Linares-Vasquez, D. Poshyvanyk.
- 24th International Conference on Program Comprehension, 2016 – ICPC 2016, per l’articolo “Improving Code Readability Models with Textual Features”, con S. Scalabrino, M. Linares-Vasquez, D. Poshyvanyk.
- 10th Joint Meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering, 2015 – ESEC/FSE 2015, per l’articolo

"Optimizing Energy Consumption of GUIs in Android Apps: A Multi-objective Approach" con M. Linares-Vasquez, G. Bavota, C. Bernal-Cardenas, M. Di Penta, D. Poshyvanyk.

- 37th IEEE/ACM International Conference on Software Engineering, 2015 – ICSE 2015 per l'articolo "When and Why Your Code Starts to Smell Bad" con M. Tufano, F. Palomba, G. Bavota, M. Di Penta, A. De Lucia, and D. Poshyvanyk.
- 28th IEEE/ACM International Conference on Automated Sotware Engineering, 2013 – ASE 2013, per l'articolo "Detecting Bad Smells in Source Code Using Change History Information" con F. Palomba, A. De Lucia, and D. Poshyvanyk.

- Vincitor di 3 *Best Paper Awards*:
  - 12th International Working Conference on Source Code Analysis and Manipulation, 2012 -SCAM 2012, per il paper "When does a Refactoring Induce Bugs? An Empirical Study" con G. Bavota, B. De Carluccio, A. De Lucia, M. Di Penta, O. Strollo.
  - 19th International conference on Program Comprehension, 2011 – ICPC 2011, per il paper "Improving IR-based Traceability Recovery Using Smoothing Filters" con A. De Lucia, M. Di Penta, A. Panichella, S. Panichella.
  - ERA track of the 26th International Conference on Software Maintenance, 2010 – ICSM-ERA 2010, per il paper "Physical and Conceptual Identifier Dispersion: Measures and Relation to Fault Proneness" con V. Arnaoudova, L. Eshkevari, Y.-G. Guhneuc, G. Antioniol.
- Nel 2013 ha pubblicato 3 articoli scientifici alla 35th International Conference on Software Engineering (tenutasi dal 18 al 26 maggio 2013 a San Francisco, USA). Dei 465 articoli sottomessi solo 85 sono stati accettati (acceptance rate 18.5%). Nei 35 anni di storia di ICSE (la conferenza più importante nel settore dell'ingegneria del software) solo 11 gruppi di ricerca hanno ottenuto un simile risultato.

Presentazioni Conferenze Seminari

- Relatore in oltre 20 conferenze internazionali nel campo dell'Ingegneria del Software
- Keynote speaker "Not Only Statements: the Role of Textual Analysis in Software Quality" alla 2th International Workshop on Mining Unstructured Data, Kingston, Ontario, Canada. October 17th.
- Tutorial "Learning Empirical Software Engineering Empirically" alla 14th Edition of the International Summer School on Software Engineering, University of Salerno, Italy. June 20th, 2017.
- Tutorial "Learning Empirical Software Engineering from my Mistakes" alla 2th Edition of International Summer School on Software Engineering, University of Bozen-Bolzano, Italy. September 13th, 2016.
- Tutorial "Software Artefact Traceability Management and Recovery" alla 9th Edition of the International Summer School on Software Engineering, University of Salerno, Italy. June 25th, 2012 – con Prof. Andrea De Lucia.
- Relazione su invito "Improving IR-based Traceability Recovery: What Works, What Doesn't" alla The College of William & Mary, USA. September 22nd, 2011.
- Relazione su invito "IR-based Traceability Recovery: Reducing the Noise using Smoothing Filters" alla Wayne State University, USA. October 4th, 2011.
- Relazione su invito "Recovering Traceability Links via Information Retrieval Methods: Challenges and Opportunities" al Polytechnique of Montreal, Canada. September 3rd, 2009 e alla University of Montreal, Canada. September 17th, 2009.

Pubblicazioni

- Gli interessi di ricerca del Prof. Oliveto ricadono nell'ambito dell'ingegneria del software. Nello specifico, i contributi maggiori allo stato dell'arte riguardano la definizione di innovativi sistemi di raccomandazioni basati su machine learning o information retrieval a supporto delle fasi di sviluppo ed evoluzione di sistemi software. Nell'ultimo anno, anche grazie alla creazione dello spin-off datasound, il Prof. Oliveto si sta occupando di sistemi software basati su machine learning a supporto della telemedicina e dell'eHealth.
- Autore di oltre 164 pubblicazioni così suddivise (si veda l'allegato elenco):
  - 50 articoli pubblicati in riviste internazionali
  - 75 full research paper in conferenze internazionali
  - 13 tool demo paper in conferenze internazionali
  - 11 short paper in conferenze internazionali
  - 9 articoli in workshop internazionali
  - 5 capitoli di libri
  - 1 articolo su invito (tutorial)

Indicatori bibliometrici (al 20.01.2020)

- Google Scholar
  - Citazioni: 8.221
  - H-index: 54
- Scopus
  - Citazioni: 5.037
  - H-index: 41

- L'articolo con il maggior numero di citazioni (405), "*Recovering traceability links in software artifact management systems using information retrieval methods*", pubblicato sulla rivista internazionale ACM Transactions on Software Engineering and Methodology (TOSEM) nel 2007, riassume i risultati riportati nella tesi di dottorato.

Progetti

- **Responsabile scientifico del progetto ATTICUS – Progetto finanziato nell'ambito del bando MiUR "Progetti di Ricerca industriale e Sviluppo Sperimentale nelle 12 aree di specializzazione individuate dal PNR 2015 - 2020". Costo complessivo del progetto: circa 5.5M euro.**
  - L'obiettivo primario del progetto ATTICUS è lo sviluppo di un sistema hardware e software basato su intelligenza artificiale, in grado di monitorare costantemente un individuo e di accorgersi di anomalie che riguardano sia il suo stato di salute sia i suoi comportamenti (*e.g.*, abitudini, spostamenti). Un dispositivo "smart wearable", ovvero un capo indossabile (*e.g.*, maglia) realizzato con tessuti innovativi acquisisce, in maniera non invasiva, i parametri vitali della persona (*e.g.*, ECG, GSR, comportamenti respiratori) e li trasmette ad un dispositivo elettronico, integrato nel tessuto, che oltre a processare localmente i dati acquisti è capace di analizzare gli spostamenti sia in casa sia all'esterno dell'utente. I dati sono inviati ad un dispositivo di "ambient intelligence", ovvero una stazione domestica, in grado di analizzare in tempo reale i dati di misura, utilizzando algoritmi di intelligenza artificiale, e identificare situazioni anomale. L'eventuale anomalia riscontrata è inviata ad un sistema di supporto alle decisioni (per una successiva verifica) e in caso di conferma dell'allarme, il sistema allerta una centrale operativa di soccorso, fornendo i tracciati, in tempo reale, dei sensori che hanno prodotto l'anomalia. ATTICUS è capace di operare in diversi scenari applicativi; nell'ambito del presente progetto è calato nella Silver Economy, con l'obiettivo di monitorare parametri vitali e comportamentali di persone anziane favorendo la sicurezza, la salute, l'invecchiamento attivo, e l'assistenza domiciliare. L'obiettivo finale del progetto è anche la creazione di una centrale di monitoraggio da installare presso l'ASReM.
  - Partner del progetto: (i) Regione Molise (Capofila e fornirà competenze medicali attraverso l'ASReM); (ii) Università degli Studi del Molise (si occuperà della definizione degli algoritmi predittivi); (iii) Università degli Studi del Sannio (si occuperà dell'elettronica); (iv) Disc spa (si occuperà dello sviluppo del sistema software); (iv) ModaImpresa (si occuperà dello sviluppo del wearable); (v) Consorzio Italia Coop Sociale (azienda che gestisce diverse case di riposo per anziani e offrirà supporto alla sperimentazione della piattaforma).
- **Co-PI e Responsabile ICT del progetto HEIPLADI – Progetto finanziato del European Union Erasmus+ programme. Costo complessivo del progetto: circa 300K euro.**
  - Il progetto HEI PLADI si basa su una costruttiva cooperazione e integrazione tra cinque università. Istituti di ricerca e organizzazioni che forniscono tutte una forte esperienza nel campo della caratterizzazione, gestione e conservazione della biodiversità vegetale e nell'apprendimento permanente.

ALLEGATI

- Elenco dettagliato delle pubblicazioni

Dati personali

Autorizzo il trattamento dei miei dati personali per le finalità e con le modalità di cui al Regolamento europeo (UE) n.2016/679 del 27 aprile 2016 e del decreto legislativo 30 giugno 2003, n. 196.

Pesche (IS), 05.03.2020

Rocco Oliveto

Publication list

Table of Contents

Authors are usually listed in alphabetic order.
When such a rule is not followed, authors are listed by seniority (students first).
Authors marked with * are (former) students I (co-)advised.

1 Refereed Book Chapters

B1 F. Ferrucci, C. Gravino, **R. Oliveto**, and F. Sarro. Using Evolutionary Based Approaches to Estimate Software Development Effort. In *Evolutionary Computation and Optimization Algorithms in Software Engineering: Applications and Techniques*. M. Chis (ed.). IGI Global, 2010. ISBN 9-7816-1520-8098.

B2 A. De Lucia, A. Marcus, **R. Oliveto**, D. Poshyvanyk. Information Retrieval Methods for Automated Traceability Recovery. In *Software and Systems Traceability*. J. Cleland-Huang, O. Gotel, and A. Zisman (eds.), 2012. Springer Press. ISBN 978-1-4471-2238-8.

B3 G. Bavota, M. Di Penta, **R. Oliveto**. Search Based Software Maintenance: Methods and Tools. In *Evolving Software Systems*. T. Mens, A. Serebrenik, A. Cleve (eds.), 2014. Springer Press. ISBN 978-3-6424-5397-7.

B4 G. Bavota*, A. De Lucia, A. Marcus, **R. Oliveto**. Recommending Refactoring Operations in Large Software Systems. In *Recommendation Systems in Software Engineering*. M. Robillard, W. Maalej, R. J. Walker, and T. Zimmermann (eds.), 2014. Springer Press. ISBN 978-3-642-45134-8.

B5 F. Palomba*, G. Bavota*, **R. Oliveto**, A. De Lucia. Anti-Pattern Detection: Methods, Challenges, and Open Issues. In *Advances in Computers*. Volume 95: 201-238. A. Memon (ed.), 2015. Elsevier Press.

2 Refereed Journal Publications

R1 G. Costagliola, F. Ferrucci, V. Fuccella, and **R. Oliveto**. eWorkbook: a Computer Aided Assessment System. *International Journal of Distance Educational Technologies*, 5(3):24-41, 2007. Idea Group Press.

R2 A. De Lucia, F. Fasano, **R. Oliveto**, and G. Tortora. Recovering Traceability Links in Software Artefact Management Systems using Information Retrieval Methods. *ACM Transactions on Software Engineering and Methodology*, 16(4): 13 (article number), 2007.

R3 A. De Lucia, **R. Oliveto**, and G. Tortora. Assessing IR-based Traceability Recovery Tools through Controlled Experiments. *Empirical Software Engineering journal*. 14(1):57-93, 2009. Springer Press.

R4 F. Fasano, and **R. Oliveto**. Supporting Project Management with Fine-Grained Artefact Management in ADAMS. *International Journal of Computers and Applications*. 31(3):145-152, 2009. ACTA Press.

R5 A. De Lucia, C. Gravino, **R. Oliveto**, and G. Tortora. An Experimental Comparison of ER and UML Class Diagrams for Data Modelling. *Empirical Software Engineering journal*. 15(5):455-489, 2010. Springer Press.

R6 A. De Lucia, F. Fasano, **R. Oliveto**, and G. Tortora. Fine-grained Management of Software Artefacts: The ADAMS System. *Software: Practice and Experience*. 40(11):1007-1034, 2010. Wiley InterScience Press.

R7 A. De Lucia, M. Di Penta, and **R. Oliveto**. Improving Source Code Lexicon using Information Retrieval. *IEEE Transactions on Software Engineering*. 37(2): 205-227, 2011.

R8 G. Bavota*, A. De Lucia, and **R. Oliveto**. Identifying Extract Class Refactoring Opportunities Using Structural and Semantic Cohesion Metrics. *Journal of Systems and Software*. 84(3): 397-414, 2011. Elsevier Press.

R9 A. De Lucia, M. Di Penta, **R. Oliveto**, A. Panichella*, S. Panichella*. Applying a Smoothing Filter to Improve IR-based Traceability Recovery Processes: An Empirical Investigation. *Information & Software Technologies*. 55(4): 741-754, 2013. Elsevier Press.

R10 G. Capobianco, A. De Lucia, **R. Oliveto**, A. Panichella*, S. Panichella*. Improving IR-based Traceability Recovery via Noun-based Indexing of Software Artifacts. *Journal of Software: Evolution and Process*. 25(7): 743-762, 2013. Wiley InterScience Press.

R11 G. Bavota*, A. De Lucia, A. Marcus, and **R. Oliveto**. Using Structural and Semantic Measures to Improve Software Modularization. *Empirical Software Engineering journal*. 18(5): 901-932, 2013. Springer Press.

R12 A. Qusef*, G. Bavota*, **R. Oliveto**, A. De Lucia, D. Binkley. Evaluating Test-to-Code Traceability Recovery Methods through Controlled Experiments. *Journal of Software: Evolution and Process*. 25(11): 1167-1191. Wiley InterScience Press.

R13 G. Bavota*, A. De Lucia, **R. Oliveto**, G. Tortora. Enhancing Software Artefact Traceability Recovery Processes

with Link Count Information. *Information and Software Technology*. 56(2): 163-182, 2014. Elsevier Press.

R14 A. Qusef*, G. Bavota, **R. Oliveto**, A. De Lucia, D. Binkley. Recovering Test-To-Code Traceability Using Slicing and Textual Analysis. *Journal of Systems and Software*. 88: 147-168, 2014. Elsevier Press.

R15 G. Bavota*, M. Gethers, **R. Oliveto**, D. Poshyvanik, A. De Lucia. Improving Software Modularization via Automated Analysis of Latent Topics and Dependencies. *ACM Transactions on Software Engineering and Methodologies*, 23(1): 4, 2014.

R16 V. Arnaoudova, L. Eshkevari, M. Di Penta, **R. Oliveto**, G. Antoniol, Y.-G. Guhneuc. REPENT: Analyzing the Nature of Identifier Renamings. *IEEE Transactions on Software Engineering*. 40(5): 502-532, 2014.

R17 G. Bavota*, **R. Oliveto**, M. Gethers, D. Poshyvanik, A. De Lucia. Methodbook: Recommending Move Method Refactorings via Relational Topic Models. *IEEE Transactions on Software Engineering*. 40(7): 671-694, 2014.

R18 A. De Lucia, M. Di Penta, **R. Oliveto**, A. Panichella*, S. Panichella. Labeling Source Code with Information Retrieval Methods: An Empirical Study. *Empirical Software Engineering*. Springer Press. 19(5): 1383-1420, 2014.

R19 G. Bavota*, A. De Lucia, A. Marcus, and **R. Oliveto**. Automating Extract Class Refactoring: an Improved Method and its Evaluation. *Empirical Software Engineering journal*. Springer Press. 19(6): 1617-1664, 2014.

R20 G. Bavota*, C. Gravino, **R. Oliveto**, A. De Lucia, G. Tortora, M. Genero, J. A. Cruz-Lemus. A Fine-Grained Analysis of the Support Provided by UML Class Diagrams and ER Diagrams During Data Model Maintenance. *Journal of Software and Systems Modeling*. Springer Press. 14(1): 287-306, 2015.

R21 A. Panichella*, **R. Oliveto**, M. Di Penta, A. De Lucia. Improving Multi-Objective Test Case Selection by Injecting Diversity in Genetic Algorithms. *IEEE Transactions on Software Engineering*. IEEE Press. 41(4): 358-383, 2015.

R22 G. Bavota, M. Linares-Vasquez, C. Bernal-Cardenas, M. Di Penta, **R. Oliveto**, D. Poshyvanyk. The Impact of API Change- and Fault-Proneness on the User Ratings of Android Apps. *IEEE Transactions on Software Engineering*. IEEE Press. 41(4): 384-407, 2015.

R23 F. Palomba*, G. Bavota, M. Di Penta, **R. Oliveto**, A. De Lucia, D. Poshyvanyk. Mining Version Histories for Detecting Code Smells. *IEEE Transactions on Software Engineering*. IEEE Press. 41(5): 462-489, 2015.

R24 G. Bavota*, A. Qusef*, **R. Oliveto**, A. De Lucia, D. Binkley. Are Test Smells Really Harmful? An Empirical Study. *Empirical Software Engineering*. Springer Press. 20(4):1052-1094, 2015.

R25 G. Bavota, G. Canfora, M. Di Penta, **R. Oliveto**, S. Panichella. How the Apache Community Upgrades Dependencies: An Evolutionary Study. *Empirical Software Engineering*. Springer Press. 20(5): 1275-1317, 2015.

R26 G. Canfora, A. De Lucia, M. Di Penta, **R. Oliveto**, A. Panichella*, S. Panichella. Defect Prediction as a Multi-Objective Optimization Problem. *Software Testing, Verification and Reliability*. Wiley Press. 25(4): 426-459, 2015.

R27 G. Bavota, A. De Lucia, M. Di Penta, **R. Oliveto**, F. Palomba*. An Experimental Investigation on the Innate Relationship between Quality and Refactoring. *Journal of Systems and Software*. Elsevier Press. 107: 1-14, 2015.

R28 L. Ponzanelli, G. Bavota, M. Di Penta, **R. Oliveto**, M. Lanza. Turning the IDE into a Self-confident Programming Assistant. *Empirical Software Engineering Journal*. Springer Press. 21: 2190-2231, 2016

R29 I. Candela*, G. Bavota, B. Russo, **R. Oliveto**. Using Cohesion and Coupling for Software Remodularization: Is it Enough? *Transactions on Software Engineering and Methodology*. ACM press. 25: 1-28, 2016.

R30 M. Tufano, F. Palomba*, G. Bavota, M. Di Penta, **R. Oliveto**, A. De Lucia, D. Poshyvanyk. When and Why Your Code Starts to Smell Bad (and Whether the Smells Go Away). *IEEE Transactions on Software Engineering*. IEEE press. 43(11): 1063-1088, 2017.

R31 L. Moreno, G. Bavota, M. Di Penta, **R. Oliveto**, A. Marcus, G. Canfora. ARENA: An Approach for the Automated Generation of Release Notes. *IEEE Transactions on Software Engineering*. IEEE Press. 43(2): 106-127, 2017.

R32 C. Mills, G. Bavota, S. Haiduc, **R. Oliveto**, A. Marcus, A. De Lucia. Predicting Query Quality for Applications of Text Retrieval to Software Engineering Tasks. *ACM Transactions on Software Engineering and Methodologies*. ACM Press. 26(1): 3:1-3:45, 2017.

R33 D. Di Nucci, F. Palomba*, **R. Oliveto**, A. De Lucia. Dynamic Selection of Classifiers in Bug Prediction: An Adaptive Method. *IEEE Transactions on Emerging Topics in Computational Intelligence*. IEEE Press. 1(3): 202-212, 2017.

R34 M. Tufano, F. Palomba*, G. Bavota, M. Di Penta, **R. Oliveto**, A. De Lucia, D. Poshyvanyk. There and Back Again: Can you Compile that Snapshot? *Journal of Software: Evolution and Process*. Wiley press. 29(4), 2017.

R35 M. Tufano, G. Bavota, D. Poshyvanyk, M. Di Penta, **R. Oliveto**, A. De Lucia. An Empirical Study on Developer Related Factors Characterizing Fix-Inducing Commits. *Journal of Software: Evolution and Process*. Wiley press. 29(1), 2017.

R36 F. Palomba*, A. Panichella, A. Zaidman, R.Oliveto, A. De Lucia. The Scent of a Smell: An Extensive Comparison

between Textual and Structural Smells. *IEEE Transactions on Software Engineering*. IEEE press. 44(10): 977-1000, 2018.

R37 D. Di Nucci, F. Palomba*, G. De Rosa, G. Bavota, **R. Oliveto**, A. De Lucia. A Developer Centered Bug Prediction Model. *IEEE Transactions on Software Engineering*. IEEE press. 44(1): 5-24, 2018.

R38 M. Linares-Vsquez, G. Bavota, C. Bernal-Crdenas, M. Di Penta, **R. Oliveto**, D. Poshyvanyk. Multi-Objective Optimization of Energy Consumption of GUIs in Android Apps. *ACM Transactions on Software Engineering and Methodologies*. IEEE press. 27(3): 14:1-14:47, 2018.

R39 S. Scalabrino, M. Linares-Vsquez, **R. Oliveto**, D. Poshyvanyk. A comprehensive model for code readability. *Journal of Software: Evolution and Process*. Elsevier Press. 30(6), 2018.

R40 F. Palomba, M. Linares Vsquez, G. Bavota, **R. Oliveto**, M. Di Penta, D. Poshyvanyk, A. De Lucia. Crowdsourcing user reviews to support the evolution of mobile apps. *Journal of Systems and Software*. Elsevier Press. 137: 143-162, 2018.

R41 F. Palomba, G. Bavota, M. Di Penta, F. Fasano, **R. Oliveto**, A. De Lucia. A large-scale empirical study on the lifecycle of code smell co-occurrences. *Information & Software Technology*. Elsevier Press. 99: 1-10, 2018.

R42 F. Palomba*, G. Bavota, M. Di Penta, F. Fasano, **R. Oliveto**, A. De Lucia. On the Diffuseness and the Impact on Maintainability of Code Smells: A Large Scale Empirical Study. *Empirical Software Engineering Journal*. Springer Press. 23(3): 1188-1221, 2018.

R43 L. Ponzanelli, G. Bavota, A. Mocci, **R. Oliveto**, M. Di Penta, S. Haiduc, B. Russo, M. Lanza. Automatic Identification and Classification of Software Development Video Tutorial Fragments. *IEEE Transactions on Software Engineering*. IEEE press. 45(5): 464-488, 2019.

R44 F. Palomba*, M. Zanoni, F. Arcelli, A. De Lucia, **R. Oliveto**. Toward a Smell-aware Bug Prediction Model. *IEEE Transactions on Software Engineering*. IEEE press. 45(2): 194-218, 2019.

R45 S. Scalabrino*, G. Bavota, B. Russo, M. Di Penta, **R. Oliveto**. Listening to the Crowd for the Release Planning of Mobile Apps. *IEEE Transactions on Software Engineering*. IEEE press. 45(1): 68-86, 2019.

3 Refereed Conferences Publications

3.1 Full papers

C1 A. De Lucia, F. Fasano, **R. Oliveto**, and G. Tortora. Enhancing an Artefact Management System with Traceability Recovery Features. In *Proceedings of 20th IEEE International Conference on Software Maintenance*, pages 306-315, Chicago IL, USA, 2004. IEEE Computer Society Press. ISBN 0-7695-2213-0.

C2 A. De Lucia, F. Fasano, **R. Oliveto**, and G. Tortora. ADAMS ReTrace: a Traceability Recovery TooI. In *Proceedings of 9th European Conference on Software Maintenance and Reengineering*, pages 32-41, Manchester, UK, 2005. IEEE Computer Society Press. ISBN 0-7695-2304-8.

C3 A. De Lucia, M. Di Penta, **R. Oliveto**, and F. Zurolo*. Improving Comprehensibility of Source Code via Traceability Information. In *Proceedings of 14th IEEE International Conference on Program Comprehension*, pages 317-326, Athens, Greece, 2006. IEEE Computer Society Press. ISBN 0-7695-2601-2.

C4 A. De Lucia, F. Fasano, **R. Oliveto**, and G. Tortora. Can Information Retrieval Techniques Effectively Support Traceability Link Recovery? In *Proceedings of 14th IEEE International Conference on Program Comprehension*, pages 307-316, Athens, Greece, 2006. IEEE Computer Society Press. ISBN 0-7695-2601-2.

C5 A. De Lucia, **R. Oliveto**, and P. Sgueglia*. IncrementaI Approach and User Feedbacks: a Silver Bullet for Traceability Recovery? In *Proceedings of 22nd IEEE International Conference on Software Maintenance*, pages 299-309, Philadelphia, Pennsylvania, USA, 2006. IEEE Computer Society Press. ISBN 0-7695-2354-4.

C6 A. De Lucia, **R. Oliveto**, and G. Tortora. Recovering Traceability Links using Information Retrieval Tools: a Controlled Experiment. In *Proceedings of International Symposium on Grand Challenges in Traceability*, pages 46-55, Lexington, Kentucky, 2007. ACM Press. ISBN 1-59593-6017.

C7 A. De Lucia, C. Gravino, **R. Oliveto**, and G. Tortora. Assessing the Support of ER and UML Class Diagrams during Maintenance Activities on Data Models. In *Proceedings of 12th European Conference on Software Maintenance and Reengineering*, pages 173-182, Athens, Greece, 2008. IEEE Press. ISBN 978-1-4244-2157-2. Acceptance rate: 24/86 (28%).

C8 A. De Lucia, C. Gravino, **R. Oliveto**, and G. Tortora. Data Model Comprehension: an Empirical Comparison of ER and UML Class Diagram. In *Proceedings of 16th IEEE International Conference on Program Comprehension*,

pages 93-102, Amsterdam, The Netherlands, 2008. IEEE Press. ISBN 978-0-7695-3176-2. Acceptance rate: 20/57 (35%)

C9 A. De Lucia, **R. Oliveto**, and G. Tortora. IR-based Traceability Recovery Processes: an Empirical Comparison of "One-Shot" and Incremental Processes. In *Proceedings of 23rd IEEE/ACM International Conference on Automated Software Engineering*, pages 39-48, L'Aquila, Italy, 2008. ACM Press. ISBN 978-1-4244-2188-6. Acceptance rate: 34/280 (12%).

C10 A. De Lucia, **R. Oliveto**, and L. Vorraro*. Using Structural and Semantic Metrics to Improve Class Cohesion. In *Proceedings of 24th IEEE International Conference on Software Maintenance*, pages 27-36, Beijing, China, 2008. IEEE Press. ISBN 978-1-4244-2613-3. Acceptance rate: 40/156 (26%).

C11 G. Capobianco, A. De Lucia, **R. Oliveto**, A. Panichella*, and S. Panichella*. On the Role of the Nouns in IR-based Traceability Link Recovery. In *Proceedings of 17th International Conference on Program Comprehension*, pages 140-157, Vancouver, British Columbia, Canada, 2009. IEEE Press. ISBN 978-1-4244-3998-0. Acceptance Rate: 20/74 (27%).

C12 A. De Lucia, **R. Oliveto**, G. Tortora. The Role of the Coverage Analysis during IR-based Traceability Recovery: a Controlled Experiment. In *Proceedings of 25th International Conference on Software Maintenance*, pages 371-380, Edmonton, Canada, 2009. IEEE Press. ISBN 978-1-4244-4897-5. Acceptance Rate: 35/162 (22%).

C13 F. Ferrucci, C. Gravino, **R. Oliveto**, and F. Sarro. Using Tabu Search to Estimate Software Development Effort. In *Proceedings of 4th International Conference on Software Process and Product Measurement*, pages 307-320, Amsterdam, The Netherlands, 2009. LCNS Press. ISBN 978-3-642-05414-3.

C14 G. Capobianco, A. De Lucia, **R. Oliveto**, A. Panichella*, and S. Panichella*. Traceability Recovery using Numerical Analysis. In *Proceedings of 16th International Working Conference on Reverse Engineering*, pages 195-204, Lille, France, 2009. IEEE Press. ISBN 978-0-7695-3867-9.

C15 F. Ferrucci, C. Gravino, **R. Oliveto**, and F. Sarro. Genetic Programming for Effort Estimation: an Analysis of the Impact of Different Fitness Functions. In *Proceedings of the 2nd International Symposium on Search Based Software Engineering*, pages 89-98, Benevento, Italy, 2010. IEEE Press. ISBN 978-0-7695-4195-2.

C16 A. Qusef*, **R. Oliveto**, and A. De Lucia. Traceability Recovery between Unit Tests and Classes Under Test: An Improved Approach. In *Proceedings of the 26th IEEE International Conference on Software Maintenance*, pages 129-138, Timisoara, Romania, 2010. IEEE Press. Acceptance Rate: 36/133 (27%).

C17 G. Bavota*, A. De Lucia, A. Marcus, and **R. Oliveto**. Software Re-Modularization based on Structural and Semantic Metrics. In *Proceedings of the 17th IEEE Working Conference on Reverse Engineering*, pages 195-204, Beverly, Massachusetts, USA, 2010. IEEE Press. ISBN 978-0-7695-4123-5. Acceptance Rate: 21/67 (31%).

C18 L. M. Eshkevari, V. Arnaoudova, M. Di Penta, **R. Oliveto**, Y.-G. Guhneuc, G. Antoniol. An Exploratory Study of Identifier Renamings. In *Proceedings of the 8th Working Conference on Mining Software Repositories*, pages 33-42, Hawaii, USA, 2011. ACM Press. ISBN 978-1-4503-0574-7. Acceptance Rate: 20/61 (33%).

C19 A. De Lucia, M. Di Penta, **R. Oliveto**, A. Panichella*, S. Panichella*. Improving IR-based Traceability Recovery Using Smoothing Filters. In *Proceedings of the 19th International Conference on Program Comprehension*, pages 21-30, Kingston, Canda, 2011. IEEE Press. ISBN 978-1-61284-308-7. Acceptance Rate: 18/76 (24%). **Best paper award**.

C20 A. Qusef*, G. Bavota, **R. Oliveto**, A. De Lucia, D. Binkley. SCOTCH: Test-to-Code Traceability using Slicing and Conceptual Coupling. In *Proceedings of the 27th International Conference on Software Maintenance*, pages 63-72, Williamsburg, USA, 2011. IEEE Press. ISBN 978-1-45770-664-6.

C21 M. Gethers, **R. Oliveto**, D. Poshyvanyk, and A. De Lucia. On Integrating Orthogonal Information Retrieval Methods to Improve Traceability Recovery. In *Proceedings of the 27th International Conference on Software Maintenance*, pages 133-142, Williamsburg, USA, 2011. IEEE Press. ISBN 978-1-45770-664-6. Acceptance Rate: 36/127 (28%).

C22 G. Bavota*, C. Gravino, **R. Oliveto**, A. De Lucia, G. Tortora, M. Genero, and J. A. Cruz-Lemus. Identifying the Weaknesses of UML Class Diagrams during Data Model Comprehension. In *Proceedings of the 14th International Conference on Model Driven Engineering Languages and Systems*, pages 168-182, Wellington, New Zealand, 2011. LNCS Press. ISBN 978-3-642-24484-1. Acceptance Rate: 34/167 (20%).

C23 G. Bavota*, A. De Lucia, F. Fasano, **R. Oliveto**, C. Zottoli*. Teaching Software Engineering and Software Project Management: An Integrated and Practical Approach. In *Proceedings of the 34th International Conference on Software Engineering (Software Engineering Education Track)*, pages 1155-1164, Zurich, Switzerland, 2012. IEEE Press. ISBN 978-1-4673-1067-3. Acceptance Rate: 11/49 (22%).

C24 A. De Lucia, M. Di Penta, **R. Oliveto**, A. Panichella*. Estimating the Evolution Direction of Populations To Improve Genetic Algorithms. In *Proceedings of the Genetic and Evolutionary Computation Conference*, pages

617-624, Philadelphia, USA, 2012. ACM Press. ISBN 978-1-4503-1177-9.

C25 A. De Lucia, M. Di Penta, **R. Oliveto**, A. Panichella*, S. Panichella. Using IR Methods for Labeling Source Code Artifacts: Is it Worthwhile?. In *Proceedings of the 20th IEEE International Conference on Program Comprehension*, pages 193-202, Passau, Germany, 2012. IEEE Press. ISBN 978-1-4673-1216-5. Acceptance Rate: 21/51 (41%).

C26 G. Bavota*, A. Qusef*, **R. Oliveto**, A. De Lucia, D. Binkley. An Empirical Analysis of the Distribution of Unit Test Smells and Their Impact on Software Maintenance. In *Proceedings of the 28th IEEE International Conference on Software Maintenance*, pages 56-65, Lago di Garda, Italy, 2012. IEEE Press. ISBN 978-1-4673-2313-0. Acceptance Rate: 46/181 (25%).

C27 G. Bavota*, F. Carnevale*, A. De Lucia, M. Di Penta, **R. Oliveto**. Putting the Developer in-the-loop: an Interactive GA for Software Re-Modularization. In *Proceedings of the 4th Symposium on Search Based Software Engineering*, pages 75-89, Riva del Garda, Trento, Italy, 2012. LCNS Press. ISBN 978-3-642-33118-3. Acceptance Rate: 15/34 (44%).

C28 G. Bavota*, B. De Carluccio, A. De Lucia, M. Di Penta, **R. Oliveto**, O. Strollo. When does a Refactoring Induce Bugs? An Empirical Study. In *Proceedings of the 12th IEEE International Working Conference on Source Code Analysis and Manipulation*, pages 104-113, Riva del Garda, Trento, Italy, 2012. IEEE Press. ISBN 978-1-4673-2398-7. Acceptance Rate: 16/40 (40%). **Best paper award**.

C29 S. Haiduc, G. Bavota*, **R. Oliveto**, A. De Lucia, A. Marcus. Automatic Query Performance Assessment during the Retrieval of Software Artifacts. In *Proceedings of the 27th IEEE/ACM International Conference On Automated Software Engineering*, pages 90-99, Essen, Germany, 2012. IEEE Press. ISBN 978-1-4503-1204-2. Acceptance Rate: 21/138 (15%).

C30 G. Canfora, M. Di Penta, **R. Oliveto**, S. Panichella. Who is going to Mentor Newcomers in Open Source Projects? In *Proceedings of the 20th ACM SIGSOFT International Symposium On Foundations of Software Engineering*, pages 44-53, North Carolina, USA, 2012. ACM Press. ISBN 978-1-4503-1614-9. Acceptance Rate: 35/201 (17%)

C31 A. Panichella*, B. Dit, **R. Oliveto**, M. Di Penta, D. Poshynanyk, A. De Lucia. How to Effectively Use Topic Models for Software Engineering Tasks? An Approach based on Genetic Algorithms. In *Proceedings of the IEEE/ACM 35th International Conference on Software Engineering*, pages 522-531, San Francisco, California, USA, 2013. ACM Press. ISBN 978-1-4673-3076-3. Acceptance Rate: 85/461 (19%).

C32 S. Haiduc, G. Bavota*, A. Marcus, **R. Oliveto**, A. De Lucia, T. Menzies. Automatic Query Reformulations for Text Retrieval in Software Engineering. In *Proceedings of the IEEE/ACM 35th International Conference on Software Engineering*, pages 842-851, San Francisco, California, USA, 2013. ACM Press. ISBN 978-1-4673-3076-3. Acceptance Rate: 85/461 (19%).

C33 G. Bavota*, B. Dit, **R. Oliveto**, M. Di Penta, D. Poshynanyk, A. De Lucia. An Empirical Study on the Developers' Perception of Software Coupling. In *Proceedings of the IEEE/ACM 35th International Conference on Software Engineering*, pages 692-701, San Francisco, California, USA, 2013. ACM Press. ISBN 978-1-4673-3076-3. Acceptance Rate: 85/461 (19%).

C34 A. Panichella*, C. McMillan, E. Moritz, D. Palmieri*, **R. Oliveto**, D. Poshyvanyk, A. De Lucia. When and How Using Structural Information to Improve IR-based Traceability Recovery. In *Proceedings of the 17th European Conference on Software Maintenance and Reengineering*, pages 199-208, Genova, Italy, 2013. IEEE Press. ISBN 978-1-4673-5833-0. Acceptance Rate: 29/80 (36%).

C35 D. Diaz, G. Bavota*, A. Marcus, **R. Oliveto**, S. Takahashi, A. De Lucia. Using Code Ownership to Improve IR-based Traceability Link Recovery. In *Proceedings of the 21st IEEE International Conference on Program Comprehension*, pages 123-132, San Francisco, California, USA, 2013. Acceptance Rate: 19/63 (30%).

C36 G. Canfora, A. De Lucia, M. Di Penta, **R. Oliveto**, A. Panichella*, S. Panichella. Multi-Objective Cross-Project Defect Prediction. In *Proceedings of the 6th IEEE International Conference on Software Testing, Verification and Validation*, pages 252-261, Luxembourg, Luxembourg, 2013. IEEE Press. ISBN 978-1-4673-5961-0. Acceptance Rate: 28/152 (25%).

C37 F. M. Kifetew, A. Panichella*, A. De Lucia, **R. Oliveto**, P. Tonella. Orthogonal exploration of the search space in evolutionary test case generation. In *Proceedings of the International Symposium on Software Testing and Analysis*, pages 257-267, Lugano, Switzerland, 2013. ACM Press. ISBN 978-1-4503-2159-4. Acceptance Rate: 32/124 (26%).

C38 G. Bavota, G. Canfora, M. Di Penta, **R. Oliveto**, S. Panichella. An Empirical Investigation on Documentation Usage Patterns in Maintenance Tasks. In *Proceedings of the 29th IEEE International Conference on Software Maintenance*, pages 210-219, Eindhoven, the Netherlands, 2013. IEEE Press. Acceptance Rate: 36/163 (22%).

C39 G. Bavota, G. Canfora, M. Di Penta, **R. Oliveto**, S. Panichella. The Evolution of Project Inter-Dependencies in a

Software Ecosystem: the Case of Apache. In *Proceedings of the 29th IEEE International Conference on Software Maintenance*, pages 280-289, Eindhoven, the Netherlands, 2013. IEEE Press. Acceptance Rate: 36/163 (22%).

C40 M. L. Vasquez, G. Bavota, C. Bernal-Cardenas, M. Di Penta, **R. Oliveto**, D. Poshyvanyk. API change and fault proneness: a threat to the success of Android apps. In *Proceedings of the Joint Meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering*, pages 477-487, Saint Petersburg, Russian Federation, 2013. ACM Press. ISBN 978-1-4503-2237-9. Acceptance Rate: 51/251 (20%).

C41 F. Palomba*, G. Bavota, M. Di Penta, **R. Oliveto**, A. De Lucia, D. Poshyvanyk. Detecting Bad Smells in Source Code Using Change History Information. In *Proceedings of the 28th IEEE/ACM International Conference on Automated Software Engineering*, pages 268-278, Palo Alto, California, USA, 2013. ACM Press. Acceptance Rate: 74/317 (23%). **ACM Distinguished Paper Award.**

C42 A. Panichella*, **R. Oliveto,** A. De Lucia. Cross-project Defect Prediction Models: L'Union fait la force. In *Proceedings of the 1st Software Evolution Week (joint meeting of the 21st International Working Conference on Reverse Engineering and the 18th European Conference on Software Maintenance and Reengineering)*, pages 164-173, Antwerp, Belgium, 2014. IEEE Press. Acceptance Rate: 27/87 (31%).

C43 G. Bavota*, **R. Oliveto**, A. De Lucia, A. Marcus, Y.-G. Guhneuc, G. Antoniol. In Medio Stat Virtus: Extract Class Refactoring through Nash Equilibria. In *Proceedings of the 1st Software Evolution Week (joint meeting of the 21st International Working Conference on Reverse Engineering and the 18th European Conference on Software Maintenance and Reengineering)*, pages 214-223, Antwerp, Belgium, 2014. IEEE Press. Acceptance Rate: 27/87 (31%).

C44 L. Ponzanelli, G. Bavota, M. Di Penta, **R. Oliveto**, M. Lanza. Mining StackOverflow to Turn the IDE into a Self-confident Programming Prompter. In *Proceedings of the 11th Working Conference on Mining Software Repositories*, pages 102-111, Hyderabad, India, 2014. ACM Press. Acceptance Rate: 29/85 (34%).

C45 M. L. Vasquez, G. Bavota, C. Bernal-Cardenas, **R. Oliveto**, M. Di Penta, D. Poshyvanyk. Mining Energy-Greedy API Usage Patterns in Android Apps: an Empirical Study. In *Proceedings of the 11th Working Conference on Mining Software Repositories*, pages 2-11, Hyderabad, India, 2014. ACM Press. Acceptance Rate: 29/85 (34%).

C46 M. L. Vasquez, G. Bavota, M. Di Penta, **R. Oliveto**, D. Poshyvanyk. How do API Changes Trigger Stack Overflow Discussions? A Study on the Android SDK. In *Proceedings of the 22nd International Conference on Program Comprehension*, pages 83-94, Hyderabad, India, 2014. IEEE Press. Acceptance Rate: 29/85 (34%).

C47 S. Panichella, G. Canfora, **R. Oliveto**, M. Di Penta. How the Evolution of Emerging Collaborations Relates to Code Changes: an Empirical Study. In *Proceedings of the 22nd International Conference on Program Comprehension*, pages 177-188, Hyderabad, India, 2014. IEEE Press. Acceptance Rate: 29/85 (34%).

C48 F. Palomba*, G. Bavota, M. Di Penta, **R. Oliveto**, A. De Lucia. Do they Really Smell Bad? A Study on Developers' Perception of Code Bad Smells. In *Proceedings of the 30th International Conference on Software Maintenance and Evolution*, Victoria, Canada. 10 Pages. IEEE Press. Acceptance Rate: 40/210 (19%).

C49 L. Moreno, G. Bavota, M. Di Penta, **R. Oliveto**, A. Marcus, and G. Canfora. Automatic Generation of Release Notes. In *Proceedings of the 22nd ACM SIGSOFT International Symposium on the Foundations of Software Engineering*, pages 484-495, Hong Kong, 2014. Acceptance Rate: 61/273 (22%).

C50 L. Moreno, G. Bavota, M. Di Penta, **R. Oliveto**, and A. Marcus. How Can I Use This Method?. In *Proceedings of the 37th International Conference on Software Engineering*, 11 pages, Florence, Italy, 2015. Acceptance Rate: 84/452 (18%).

C51 M. Tufano, F. Palomba*, G. Bavota, **R. Oliveto**, M. Di Penta, A. De Lucia, and D. Poshyvanyk. When and Why Your Code Starts to Smell Bad. In *Proceedings of the 37th International Conference on Software Engineering*, 12 pages, Florence, Italy, 2015. Acceptance Rate: 84/452 (18%). **ACM Distinguished Paper Award.**

C52 L. Moreno, G. Bavota, S. Haiduc, M. Di Penta, **R. Oliveto**, B. Russo, A. Marcus. Query-based Configuration of Text Retrieval Solutions for Software Engineering Tasks. In *Proceedings of the 10th Joint Meeting of the European Software Engineering Conference and the 23rd ACM SIGSOFT Symposium on the Foundations of Software Engineering*, 12 pages, Bergamo, Italy, 2015. Acceptance Rate: 74/291 (25.4%).

C53 M. Linares-Vasquez, G. Bavota, C. Bernal-Cardenas, **R. Oliveto**, M. Di Penta, D. Poshyvanyk. Optimizing Energy Consumption of GUIs in Android Apps: A Multi-objective Approach. In *Proceedings of 10th Joint Meeting of the European Software Engineering Conference and the 23rd ACM SIGSOFT Symposium on the Foundations of Software Engineering*, 12 pages, Bergamo, Italy, 2015. Acceptance Rate: 74/291 (25.4%). **ACM Distinguished Paper Award.**

C54 F. Palomba*, M. Linares Vasquez, G. Bavota, **R. Oliveto**, M. Di Penta, D. Poshyvanyk, A. De Lucia. User Reviews

Matter! Tracking Crowdsourced Reviews to Support Evolution of Successful Apps. In *Proceedings of the 31st IEEE International Conference on Software Maintenance and Evolution*, 10 pages, Bremen, Germany, 2015, 2015. Acceptance Rate: 32/148 (21.6%).

C55 D. Di Nucci, F. Palomba*, S. Siravo*, G. Bavota, **R. Oliveto**, A. De Lucia. On the Role of Developer's Scattered Changes in Bug Prediction. In *Proceedings of the 31st IEEE International Conference on Software Maintenance and Evolution*, 10 pages, Bremen, Germany, 2015. Acceptance Rate: 32/148 (21.6%).

C56 L. Villarroel, G. Bavota, B. Russo, **R. Oliveto**, M. Di Penta. Release Planning of Mobile Apps based on User Reviews. In *Proceedings of the 38th International Conference on Software Engineering*, pages 14-24, Austin, Texas, 2016. Acceptance Rate: 101/530 (19%).

C57 L. Ponzanelli, G. Bavota, A. Mocci, M. Di Penta, **R. Oliveto**, M. Hasan, B. Russo, S. Haiduc, M. Lanza. Too Long; Didn't Watch! Extracting Relevant Fragments from Software Development Video Tutorials. In *Proceedings of the 38th International Conference on Software Engineering*, pages 14-24, Austin, Texas, 2016. Acceptance Rate: 101/530 (19%).

C58 F. Palomba*, A. Panichella, A. De Lucia, **R. Oliveto**, A. Zaidman. A Textual-based Technique for Smell Detection. In *Proceedings of the 24th International Conference on Program Comprehension*, 10 pages, Austin, Texas, USA, 2016. Acceptance Rate: 20/67 (30%).

C59 S. Scalabrino*, M. Linares-Vasquez, D. Poshyvanyk, **R. Oliveto**. Improving Code Readability Models with Textual Features. In *Proceedings of the 24th International Conference on Program Comprehension*, 10 pages, Austin, Texas, USA, 2016. Acceptance Rate: 20/67 (30%). **ACM Distinguished Paper Award.**

C60 F. Palomba*, A. Panichella, A. Zaidman, **R. Oliveto**, A. De Lucia. Automatic Test Case Generation: What if Test Code Quality Matters?. In *Proceedings of the International Symposium on Software Testing and Analysis*, 12 pages, Saarbracken, Germany, 2016. Acceptance Rate: 37/147 (25%).

C61 F. Palomba*, M. Zanoni, F. Arcelli Fontana, A. De Lucia, **R. Oliveto**. Smells like Teen Spirit: Improving Bug Prediction Performance Using the Intensity of Code Smells. In *Proceedings of the International Conference on Software Maintenance and Evolution*, 12 pages, Raleight, USA, 2016. Acceptance Rate: 37/125 (29%).

C62 M. Tufano, F. Palomba*, G. Bavota, M. Di Penta, **R. Oliveto**, A. De Lucia, D. Poshyvanyk. An empirical investigation into the nature of test smells. In *Proceedings of the 31st IEEE/ACM International Conference on Automated Software Engineering*, p. 4-15, Singapore, 2016. Acceptance Rate: 57/298 (19%).

C63 S. Scalabrino*, G. Grano, D. di Nucci, **R. Oliveto**, A. De Lucia. Search-based testing of procedural programs: Iterative single-target or multi-target approach? In *Proceedings of the 8th International Symposium on Search Based Software Engineering*. p. 64-79, Austin, Texas, USA, 2016.

C64 A. Panichella, B. Dit, **R. Oliveto**, M. Di Penta, D. Poshyvanyk, A. De Lucia. Parameterizing and Assembling IR-Based Solutions for SE Tasks Using Genetic Algorithms. In *Proceedings of the 23rd International Conference on Software Analysis, Evolution, and Reengineering*, pp. 314-325, Osaka, Japan, 2016. Acceptance Rate: 52/140 (37%).

C65 F. Palomba*, **R. Oliveto**, A. De Lucia. Investigating code smell co-occurrences using association rule learning: A replicated study. In *Proceedings of the IEEE Workshop on Machine Learning Techniques for Software Quality Evaluation*, pp. 8-13. Klagenfurt, Austria, 2017.

C66 B. Lin, S. Scalabrino*, A. Mocci, **R. Oliveto**, G. Bavota, M. Lanza. Investigating the Use of Code Analysis and NLP to Promote a Consistent Usage of Identifiers. In *Proceedings of the IEEE 17th International Working Conference on Source Code Analysis and Manipulation*, 10 pages, Shanghai, China, 2017. Acceptance Rate: 14/31 (45%).

C67 F. Zampetti, S. Scalabrino*, **R. Oliveto**, M. Di Penta, G. Canfora. How Open Source Projects use Static Code Analysis Tools in Continuous Integration Pipelines. In *Proceedings of the 14th International Conference on Mining Software Repositories*, pp. 334-344, Buenos Aires, Argentina, 2017. Acceptance Rate: 37/121 (31%).

C68 S. Scalabrino*, G. Bavota, C. Vendome, M. Linares-Vasquez, D. Poshyvanyk, **R. Oliveto**. Automatically Assessing Code Understandability: How Far Are We?. In *Proceedings of the 32nd IEEE/ACM International Conference on Automated Software Engineering*, 10 pages, Urbana Champaign, Illinois, USA, 2017.

C69 F. Palomba*, A. Zaidman, **R. Oliveto**, A. De Lucia. An Exploratory Study on the Relationship between Changes and Refactoring. In *Proceedings of the 25th International Conference on Program Comprehension*, pp. 176-185, Buenos Aires, Argentina, 2017.

C70 L. Ponzanelli, S. Scalabrino*, G. Bavota, A. Mocci, **R. Oliveto**, M. Di Penta, M. Lanza. Supporting Software Developers with a Holistic Recommender System. In *Proceedings of the 39th International Conference on Software Engineering*, pp. 94-105, Buenos Aires, Argentina, 2017. Acceptance Rate: 68/398 (17%).

C71 B. Lin, F. Zampetti, G. Bavota, M. Di Penta, M. Lanza, **R. Oliveto**. Sentiment analysis for software engineering:

how far can we go? In *Proceedings of the 40th International Conference on Software Engineering*, pp. 94-104, Gothenburg, Sweden, 2018.

C72 S. Geremia, G. Bavota, **R. Oliveto**, M. Lanza, M. Di Penta. Characterizing Leveraged Stack Overflow Posts. In *Proceedings of the 19th International Working Conference on Source Code Analysis and Manipulation*, pp. 141-151, Cleveland, OH, USA, 2019. Acceptance Rate: 21/53 (40%).

C73 S. Scalabrino*, G. Bavota, M. Linares-Vsquez, M. Lanza, **R. Oliveto**. Data-driven solutions to detect API compatibility issues in Android: an empirical study. In *Proceedings of the 16th International Conference on Mining Software Repositories*, pp. 288-298, Montreal, Canada, 2019. Acceptance Rate: 6/144 (25%).

C74 E. Balestrieri, F. Boldi, A. R. Colavita, L. De Vito, G. Laudato, **R. Oliveto**, F. Picariello, S. Rivaldi, S. Scalabrino, P. Torchitti, I. Tudosa. The architecture of an innovative smart T-shirt based on the Internet of Medical Things paradigm. In *Proceedings of the IEEE International Symposium on Medical Measurements and Applications*, pp. 1-6, Istanbul, Turkey, 2019.

C75 V. Piantadosi*, S. Scalabrino, **R. Oliveto**. Fixing of Security Vulnerabilities in Open Source Projects: A Case Study of Apache HTTP Server and Apache Tomcat. In *Proceedings of the 12th IEEE Conference on Software Testing, Validation and Verification*, pp. 68-78, Xian, China, 2019. Acceptance Rate: 31/110 (28%).

3.2 Short Papers

S1 **R. Oliveto**, M. Gethers, D. Poshyvanyk, A. De Lucia. On the Equivalence of Information Retrieval Methods for Automated Traceability Link Recovery. In *Proceedings of the 18th International Conference on Program Comprehension*, pages 68-71, Braga, Portugal, 2010. IEEE Press. ISBN 978-0-7695-4113-6. Acceptance Rate: 15+10/76 (20+13%).

S2 G. Bavota*, **R. Oliveto**, A. De Lucia, G. Antoniol, Y-G. Guhneuc. Playing with Refactoring: Identifying Extract Class Opportunities through Game Theory. In *Proceedings of the 26th IEEE International Conference on Software Maintenance - ERA Track*, Timisoara, Romania, 2010. IEEE Press. (4 pages). Acceptance Rate: 18/43 (41%).

S3 V. Arnaoudova, L. Eshkevari, **R. Oliveto**, Y.-G. Guhneuc, G. Antoniol. Physical and Conceptual Identifier Dispersion: Measures and Relation to Fault Proneness. In *Proceedings of the 26th IEEE International Conference on Software Maintenance - ERA Track*, Timisoara, Romania, 2010. IEEE Press. (4 pages). Acceptance Rate: 18/43 (41%). **Best paper award**.

S4 G. Bavota*, A. De Lucia, A. Marcus, and **R. Oliveto**. A Two-Step Technique for Extract Class Refactoring. In *Proceedings of the 25th IEEE/ACM International Conference on Automated Software Engineering*, pages 151-154, Antwerp, Belgium, 2010. ACM Press. ISBN 978-1-4503-0116-9. Acceptance Rate: 31+34/191 (16+18%).

S5 F. Ferrucci, C. Gravino, E. Mendes, **R. Oliveto**, and F. Sarro. Investigating Tabu Search for Web Effort Estimation. In *Proceedings of the 36th EUROMICRO Conference on Software Engineering and Advanced Applications*, pages 350-357, Lille, France, 2010. IEEE Press.

S6 **R. Oliveto**, M. Gethers, G. Bavota*, D. Poshyvanyk, and A. De Lucia. Identifying Method Friendships to Remove the Feature Envy Bad Smell. In *Proceedings of the 33rd IEEE/ACM International Conference on Software Engineering - NIER Track*, pages 820-823, Hawaii, USA, 2011. ACM Press. ISBN 978-1-4503-0445-0. Acceptance Rate: 46/198 (23%).

S7 **R. Oliveto**, F. Khomh, G. Antoniol, and Y-G. Guhneuc. Numerical Signatures of Antipatterns: An Approach based on B-Splines. *Proceedings of the 14th European Conference on Software Maintenance and Reengineering*, pages 257-260, Madrid, Spain, 2010. IEEE Press. Acceptance Rate: 21+11/80 (26+14%).

S8 S. Haiduc, G. Bavota*, **R. Oliveto**, A. Marcus, A. De Lucia. Evaluating the Specificity of Text Retrieval Queries to Support Software Engineering Tasks. In *Proceedings of the 34th International Conference on Software Engineering - NIER Track*, pages 1273-1276, Zurich, Switzerland, 2012. IEEE Press. ISBN 978-1-4673-1067-3. Acceptance Rate: 26/147 (17%).

S9 G. Bavota, S. Panichella, N. Tsantalis, M. Di Penta, **R. Oliveto**, and G. Canfora. Recommending Refactorings based on Team Co-Maintenance Patterns. In *Proceedings of the 29th IEEE/ACM International Conference on Automated Software Engineering*, 6 pages, Vasteras, Sweden, 2014. Acceptance Rate: 82/337 (24%).

S10 F. Palomba*, D. Di Nucci, M. Tufano, G. Bavota, **R. Oliveto**, D. Poshyvanyk, and A. De Lucia. Landfill: an Open Dataset of Code Smells with Public Evaluation. In *Proceedings of the 12th Working Conference on Mining Software Repositories*, 4 pages, Florence, Italy, 2015. Acceptance Rate: 17/25 (68%).

S11 G. Grano, S. Scalabrino*, H. C. Gall, **R. Oliveto**. An empirical investigation on the readability of manual and generated test cases. In *Proceedings of the 26th Conference on Program Comprehension*, pp. 348-351, Gothenburg,

Sweden, 2018.

4 Tool Demo Papers

T1 A. De Lucia, F. Fasano, **R. Oliveto**, and G. Tortora. ADAMS: ADvanced Artefact Management System. In *Proceedings of 10th European Conference on Software Maintenance and Reengineering*, pages 349-350, Bari, Italy, 2005. IEEE Computer Society Press. ISBN 0-7695-2536-9.

T2 A. De Lucia, M. Di Penta, **R. Oliveto**, and F. Zurolo*. COCONUT: COde COmprehension Nurtrant Using Traceability. In *Proceedings of 22nd IEEE International Conference on Software Maintenance*, pages 274-275, Sheraton Society Hill, Philadelphia, Pennsylvania, USA, 2006. IEEE Computer Society Press. ISBN 0-7695-2354-4.

T3 A. De Lucia, **R. Oliveto**, and G. Tortora. ADAMS Re-Trace: Traceability Link Recovery via Latent Semantic Indexing. In *Proceedings of 30th International Conference on Software Engineering*, pages 839-842, Leipzig, Germany, 2008. ACM Press. ISBN 978-1-60558-079-1. Acceptance rate: 18/88 (11%)

T4 M. Gethers, T. Savage, M. Di Penta, **R. Oliveto**, D. Poshyvanyk, and A. De Lucia. CodeTopics: Which Topic Am I Coding Now? In *Proceedings of the 33rd IEEE/ACM International Conference on Software Engineering*, pages 1034-1036, Hawaii, USA, 2011. ACM Press. ISBN 978-1-4503-0445-0. Acceptance Rate: 22/60 (37%).

T5 A. Qusef*, G. Bavota*, **R. Oliveto**, A. De Lucia, D. Binkley. SCOTCH: Slicing and Coupling based Test to Code trace Hunter. In *Proceedings of the 18th Working Conference on Reverse Engineering*, pages 443-444, Limerick, Ireland, 2011. IEEE Press. ISBN 978-1-4577-1948-6. Acceptance Rate: 36/127 (28%).

T6 G. Bavota*, A. De Lucia, A. Marcus, **R. Oliveto**, F. Palomba*. Supporting Extract Class Refactoring in Eclipse: The ARIES Project. In *Proceedings of the 34th International Conference on Software Engineering*, pages 1419-1422, Zurich, Switzerland, 2012. IEEE Press. ISBN 978-1-4673-1067-3. Acceptance Rate: 16/52 (30%).

T7 G. Bavota, L. Colangelo, A. De Lucia, S. Fusco, **R. Oliveto**, A. Panichella*. TraceME: Traceability Management in Eclipse. In *Proceedings of the 28th IEEE International Conference on Software Maintenance*, pages 642-645, Lago di Garda, Italy, 2012. IEEE Press. ISBN 978-1-4673-2313-0. Acceptance Rate: 9/12 (75%).

T8 G. Canfora, M. Di Penta, S. Giannantonio*, **R. Oliveto**, S. Panichella. YODA: Young and newcOmer Developer Assistant. In *Proceedings of the IEEE/ACM 35th International Conference on Software Engineering*, pages 1331-1334, San Francisco, California, USA, 2013. ACM Press. ISBN 978-1-4673-3076-3. Acceptance Rate: 16/52 (31%).

T9 S. Haiduc, G. De Rosa, G. Bavota*, **R. Oliveto**, A. De Lucia, A. Marcus. Query Quality Prediction and Reformulation for Source Code Search: the Refoqus Tool. In *Proceedings of the IEEE/ACM 35th International Conference on Software Engineering*, pages 1307-1310, San Francisco, California, USA, 2013. ACM Press. ISBN 978-1-4673-3076-3. Acceptance Rate: 16/52 (31%).

T10 L. Ponzanelli, G. Bavota, M. Di Penta, **R. Oliveto**, M. Lanza. Prompter: A Self-confident Recommender System. In *Proceedings of the 30th International Conference on Software Maintenance and Evolution*, Victoria, Canada. 4 Pages. IEEE Press. Acceptance Rate: 14/27 (52%).

T11 F. Palomba, M. Tufano, G. Bavota, **R. Oliveto**, A. Marcus, D. Poshyvanyk, and A. De Lucia. Extract Package Refactoring in ARIES. In *Proceedings of the 37th International Conference on Software Engineering*, 4 pages, Florence, Italy, 2015. Acceptance Rate: 25/42 (59%)

T12 L. Ponzanelli, G. Bavota, A. Mocci, M. Di Penta, **R. Oliveto**, B. Russo, S. Haiduc, M. Lanza. CodeTube: extracting relevant fragments from software development video tutorials. In *Proceedings of the 38th International Conference on Software Engineering*, pages 645-648, Austin, Texas, 2016. Acceptance Rate: 18/56 (32%).

T13 M. Linares-Vasquez, C. Bernal-Cardenas, G. Bavota, **R. Oliveto**, M. Di Penta, D. Poshyvanyk. GEMMA: Multi-objective Optimization of Energy Consumption of GUIs in Android Apps. In *Proceedings of the 39th International Conference on Software Engineering*, pp. 11-14, Buenos Aires, Argentina, 2017. Acceptance Rate: 18/57 (32%).

T13 S. Scalabrino*, G. Grano, D. Di Nucci, M. Guerra, A. De Lucia, H. C. Gall, **R. Oliveto**. OCELOT: a search-based test-data generation tool for C. In *Proceedings of the 33rd ACM/IEEE International Conference on Automated Software Engineering*, pp. 868-871, Montpellier, France, 2018. Acceptance Rate: 16/44 (36%).

5 Refereed Workshop Publications

W1 A. De Lucia, F. Fasano, F. Francese, and **R. Oliveto**. Recovering Traceability Links between Requirement Artefacts: a Case Study. In *Proceedings of the 16th International Conference of Software Engineering and Knowl-*

edge Engineering – Workshop on Knowledge Oriented Maintenance, pages 453-466, Banff, Alberta, Canada, 2004. Knowledge Systems Institute Press. ISBN 1-891706-14-4.

W2 A. De Lucia, F. Fasano, F. Francese, and **R. Oliveto**. Traceability Management in ADAMS. In *Proceedings of 1st International Workshop on Distributed Software Development*, pages 135-149, Paris, France, 2005. Austrian Computer Society Press. ISBN 3-85403-193-9.

W3 A. De Lucia, F. Fasano, **R. Oliveto**, and D. Santonicola*. Improving Context Awareness in Subversion through Fine-Grained Versioning of Java Code. In *Proceedings of International Workshop on Principles of Software Evolution*, pages 110-114, Dubrovnik, Croatia, 2007. ACM Press. ISBN 978-1-59593-811-4.

W4 S. Di Martino, F. Ferrucci, **R. Oliveto**, G. Tortora, and G. Vitiello. On the Usability of Reverse Engineering Tools. *Proceedings of 15th International Workshop on Visual Languages and Computing*, Redwood City, San Francisco Bay, USA, 2009.

W5 A. De Lucia, M. Di Penta, **R. Oliveto**, A. Panichella*. On the Role of Diversity Measures for Multi-Objective Test Case Selection. In *Proceedings of the 7th International Workshop on Automation of Software Test*, pages 145-151, Philadelphia, USA, 2012. ACM Press. ISBN 978-1-4673-1821-1. Acceptance Rate: 22/33 (67%).

W6 G. Bavota*, A. De Lucia, **R. Oliveto**, A. Panichella*, F. Ricci*, G. Tortora. The Role of Artefact Corpus in LSI-based Traceability Recovery. In *Proceedings of the 7th International Workshop on Traceability in Emerging Forms of Software Engineering*, pages 83 - 89, San Francisco, California, USA, 2013. ACM Press. Acceptance Rate: 15/25 (60%).

W7 B. Dit, A. Panichella*, E. Moritz, **R. Oliveto**, M. Di Penta, D. Poshyvanyk, A. De Lucia. Configuring Topic Models for Software Engineering Tasks in TraceLab. In *Proceedings of the 7th International Workshop on Traceability in Emerging Forms of Software Engineering - Challenge track*, pages 105 - 109, San Francisco, California, USA, 2013. ACM Press. Acceptance Rate: 15/25 (60%).

W8 F. Palomba*, D. Di Nucci, A. Panichella, **R. Oliveto**, A. De Lucia. On the Diffusion of Test Smells in Automatically Generated Test Code: An Empirical Study. In *Proceedings of the 9th International Workshop on Search-based Software Testing*, 10 pages, Austin, Texas, USA, 2016. Acceptance Rate: 11/15 (73%).

W9 F. Palomba*, **R. Oliveto**, Andrea De Lucia. Investigating code smell co-occurrences using association rule learning: A replicated study. In *Proceedings of the Workshop on Machine Learning Techniques for Software Quality Evaluation*, pp. 8-13, Klagenfurt, Austria, 2017.

6 Tutorials

I1 A. De Lucia, F. Fasano, **R. Oliveto**. Traceability Management for Impact Analysis. *Proceedings of Frontiers of Software Maintenance*, mini-tutorial of 24th International Conference on Software Maintenance, pages 21-30, Beijing, China, 2008. IEEE Press. ISBN 978-1-4244-2654-6.

7 Dissertations

D1 **R. Oliveto**. Traceability Management meets Information Retrieval Methods: Strengths and Limitations. In *Proceedings of 12th European Conference on Software Maintenance and Reengineering*, pages 302-305, Athens, Greece, 2008. IEEE Press. ISBN 978-1-4244-2157-2.