# giovannigrano

ph.d. student@uzh



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## languages

italian mother tongue fluent english

## programming

Java, Python Swift, Bash R, LaTEX COBOL

## other skills

OO Programming Project Management iOS Development UML

## about

I was born in Campobasso (Italy) on April, 24th, 1990. I received (cum laude) the Bachelor's Degree in Computer Science from the University of Molise (Italy) in 2013, advised by Prof. Rocco Oliveto. Afterwards I moved to the University of Salerno, where in 2015 I received my Master's Degree (cum laude) in Computer Science, advised by Prof. Andrea De Lucia, defending a thesis on Search Based Software Testing.

Just after my M.Sc. I worked for one year as IT Analyst and Developer at Cedacri S.p.A., as a developer for the banking sector. In November 2016 I started my Ph.D., joining the s.e.a.l. group at the University of Zurich.

My main research interests include Search-Based Software Engineering (SBSE), with a main focus on Search-Based Software Testing (SBST), Software maintenance and evolution and Empirical Software Engineering.

## education

2016 - now **Ph.D. Student** in Informatics University of Zurich, Switzerland Research Assistant in Software Evolution and Architecture Lab (s.e.a.l.) of the

Prof. Harald Gall

2013 - 2015 Master's Degree (cum laude) in Computer Science University of Salerno, Italy

Thesis: Implementation and comparison of novel techniques for automated search based test data generation

Advisor Prof. Andrea De Lucia

2009 - 2013 Bachelor's Degree (cum laude) in Computer Science University of Molise, Italy

Thesis: Un portale web per la pubblicazione delle attività di docenti universitari

Advisor: Prof. Rocco Oliveto

# **experience**

02-03 2018 Research stay TU Delft, the Netherlands

Work on performance aware test case generation

10/15 - 9/16 IT Analyst and Developer Cedacri S.p.A., Italy

Cedacri is the most important Italian company specialized in outsourcing services for the banking sector. I worked as an IT Analyst and Software Developer,

mainly developing in COBOL, JS and C#

3/15 - 9/15 **Temporary Research Fellow** University of Salerno, Italy

My work consisted on support the design of test environments with integration of methodologies for test scenarios generation. I collaborated to the design and implementation of OCELOT, a tool for search-based automated test case generation for C language

## awards

Mar 2018 SANER 2018 Campobasso, Italy

Best Tool Paper Demo Award

Sep 2017 HackZurich 2017 Zurich, Switzerland

1st Place Esri Award @ HackZurich 2017

May 2015 ICSE 2015 SCORE-IT Award Florence, Italy

Finalist of SCORE-IT context during ICSE 2015

# personal projects

May 2016 MyUnimol@iOS MyUnimol on App Store

MyUnimol @ iOS is a native mobile app which allows the students of UNIMOL to smartly consult the details of their university career, such as exam degrees, available and enrolled exams, news, taxes and a lot more!

May 2015 Speed It App SCORE-IT contest

Speed It App is a system developed by a team of master student from University of Salerno, to participate at 2015 edition of ScorelT context, during ICSE 2015. It is designed to speed up queues using a code QR in order to identify people before that their turn to be served arrive. With this project, *Team Molise* achieved

final phase of SCORE-IT context which took place during ICSE 2015 edition

Oct 2014 My Unimol Web App MyUnimol Web App

MyUnimol is a WebApp that fetches data from University of Molise's official students' portal (Esse3 system). Everything in this app is mobile optimized. I worked with a team composed of 4 people managing a

distributed team of 12 developers, successfully managing and integrating the project

Jun 2014 Repominer Evo Repominer Evo Repominer Evo

Repominer Evo is a tool developed for the course of Software Engineer II at University of Salerno. It calculate a series of metrics useful for defect prediction based on entropy level in software packages

## certifications

Jan 2016 Machine Learning Coursera certificate

Machine Learning by Stanford University

Nov 2016 Data Visualization Coursera certificate

Data Visualization by University of Illinois at Urbana-Champaign

Dec 2016 Machine Learning: Classification Coursera certificate

Machine Learning: Classification by University of Washington

# **publications**

## journals

[JSEP 19] Branch Coverage Prediction in Automated Testing

Giovanni Grano, Timofey V. Titov, Sebastiano Panichella, and Harald C. Gall *Journal of Software: Evolution and Process (2019). 2019* 

## conferences and workshops

[ASE 18] OCELOT: A Search-Based Test Data Generation Tool for C

Simone Scalabrino, Giovanni Grano, Dario Di Nucci, Michele Guerra, Andrea De Lucia, Harald C Gall, and Rocco Oliveto Proceedings of the 33rd IEEE/ACM International Conference on Automated Software Engineering (ASE) 2018, 2018, Montpellier, France

#### [ICPC 18] An Empirical Investigation on the Readability of Manual and Generated Test Cases

Giovanni Grano, Simone Scalabrino, Rocco Oliveto, and Harald Gall

Proceedings of the 26th International Conference on Program Comprehension, ICPC, Gothenburg, Sweden, 2018

#### [SANER 18] Exploring the Integration of User Feedback in Automated Testing of Android Applications

Giovanni Grano, Adelina Ciurumelea, Sebastiano Panichella, Fabio Palomba, and Harald Gall

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

#### [SANER 18] BECLoMA: Augmenting Stack Traces with User Review Information

Lucas Pelloni, Giovanni Grano, Adelina Ciurumelea, Sebastiano Panichella, Fabio Palomba, and Harald Gall IEEE 25th International Conference on Software Analysis, Evolution and Reengineering, SANER 2018, Campobasso, Italy, 2018

#### [MaLTeSQuE 18] How High Will It Be? Using Machine Learning Models to Predict Branch Coverage in Automated Testing

Giovanni Grano, Timofey Titov, Sebastiano Panichella, and Harald Gall

MaLTeSQuE (Workshop on Machine Learning Techniques for Software Quality Evaluation), Campobasso, Italy, 2018

#### [WAMA 17] Android Apps and User Feedback: A Dataset for Software Evolution and Quality Improvement

Giovanni Grano, Andrea Di Sorbo, Francesco Mercaldo, Corrado A. Visaggio, Gerardo Canfora, and Sebastiano Panichella Proceedings of the 2Nd ACM SIGSOFT International Workshop on App Market Analytics, 2017, Paderborn, Germany

#### [SSBSE 16] Search-Based Testing of Procedural Programs: Iterative Single-Target or Multi-target Approach?

Simone Scalabrino, Giovanni Grano, Dario Di Nucci, Rocco Oliveto, and Andrea De Lucia

Search Based Software Engineering - 8th International Symposium, SSBSE 2016, Raleigh, NC, USA, October 8-10, 2016, Proceedings, 2016

# teaching

## supervised students

2017 Lucas Pelloni Bachelor Student, University of Zurich

GUI usability and testing of mobile applications

#### assistant

Fall 2017 Assistant for Informatik 1 (Fall Semester) - University of Zurich

Assistant for Software Maintenance and Evolution (Fall Semester) - University of Zurich

Spring 2017 Teaching Assistant for Software Praktikum (Spring Semester) - University of Zurich

## professional services

#### co-reviewer

2018 Mining Software Repositories (MSR)

International Conference on Software Analytics, Evolution and Reengineering (SANER)

2017 Automated Software Engineering (ASE)

Seminar Series on Advanced Techniques & Tools for Software Evolution (SATTOSE)

## grants

Feb 2018 CH00SE Grant 500 CHF

Grant to present a research paper at SANER 2018

Dec 2017 GRC Travel Grant 1,200 CHF

Grant for a research stay of 1 month in Delft University of Technology, the Netherlands