

Curriculum Vitae

VINCENZO RICCIO

Last update: August 30, 2021

MAIN RESEARCH	Software Testing: My research goal is to enhance the automation level of software testing activities in multiple domains including Automotive, Mobile and Deep Learning based systems.	
LANGUAGES	Italian Mother tongue English Proficient user	
EDUCATION	Ph.D. in Information Technology and Electrical Engineering <ul style="list-style-type: none">• Università degli Studi di Napoli Federico II, Napoli, Italy• Advisor: Prof. Anna Rita Fasolino• Thesis: <i>Enhancing automated GUI exploration techniques for Android mobile applications</i> Visiting Ph.D. Student <ul style="list-style-type: none">• University of Passau, Passau, Germany• Advisor: Prof. Gordon Fraser Master of Science (M.Sc.) in Computer Engineering <ul style="list-style-type: none">• Università degli Studi di Napoli Federico II, Napoli, Italy• Thesis: <i>A tool for analyzing test coverage of code self-generated from MATLAB/Simulink models in the automotive domain</i> Bachelor of Science (B.Sc.) in Computer Engineering <ul style="list-style-type: none">• Università degli Studi di Napoli Federico II, Napoli, Italy• Score: 106 (out of 110)• Thesis: <i>Automated Fault Injection in the Javascript code of Rich Internet Applications</i>	2015–2019 2018 2011–2015 2005–2011
RESEARCH EXPERIENCE	Postdoctoral Fellow <ul style="list-style-type: none">• Software Institute, USI, Lugano, Switzerland• Topic: Test input generation for Deep Learning based systems Internship Student <ul style="list-style-type: none">• FIAT Chrysler Automobiles, Napoli, Italy• Topic: Model Based testing of embedded automotive software	2019–ongoing 2013–2014
WORK EXPERIENCE	Teaching Assistant <ul style="list-style-type: none">• Università degli Studi di Napoli Federico II, Napoli, Italy• Topic: Software Engineering and Elements of Computer Science Teaching Assistant <ul style="list-style-type: none">• Università degli Studi di Napoli Federico II, Napoli, Italy• Topic: Mathematical Analysis and Elements of Computer Science Software Engineer <ul style="list-style-type: none">• Centro Regionale Information Communication Technology, Napoli, Italy• Topic: Test coverage of embedded automotive software in compliance with the international standard ISO 26262-6 Teacher <ul style="list-style-type: none">• Erfap UIL Campania, Napoli, Italy• Topic: Multimedial Design	2015–2019 2016–2017 2015 2015

- Unione Italiana dei Ciechi e degli Ipovedenti, Napoli, Italy
- Topic: Computer training for the visually impaired

SELECTED
PUBLICATIONS

1. **Vincenzo Riccio, Nargiz Humbatova, Gunel Jahangirova, Paolo Tonella.**
“DeepMetis: Augmenting a Deep Learning Test Set to Increase its Mutation Score”.
36th IEEE/ACM International Conference on Automated Software Engineering (ASE),
2021.
2. **Tahereh Zohdinasab, Vincenzo Riccio, Alessio Gambi, Paolo Tonella.**
“DeepHyperion: Exploring the Feature Space of DeepLearning-Based Systems through
Illumination Search”.
ACM SIGSOFT International Symposium on Software Testing and Analysis (ISSTA),
2021.
3. **Vincenzo Riccio, Paolo Tonella.**
“Model-based exploration of the frontier of behaviours for deep learning system testing”.
*28th ACM Joint Meeting on European Software Engineering Conference and Symposium
on the Foundations of Software Engineering (ESEC/FSE)*,
2020.
4. **Vincenzo Riccio, Gunel Jahangirova, Andrea Stocco, Nargiz Humbatova,
Michael Weiss, Paolo Tonella.**
“Testing Machine Learning based Systems: A Systematic Mapping”.
Empirical Software Engineering (EMSE),
2020.
5. **Nargiz Humbatova, Gunel Jahangirova, Gabriele Bavota, Vincenzo Riccio,
Andrea Stocco, Paolo Tonella.**
“Taxonomy of Real Faults in Deep Learning Systems”.
42nd International Conference on Software Engineering (ICSE),
2020.
6. **Domenico Amalfitano, Vincenzo Riccio, Nicola Amatucci,
Vincenzo De Simone, Anna Rita Fasolino.**
“Combining automated gui exploration of android apps with capture and replay
through machine learning”.
Information and Software Technology (IST),
2019.
7. **Domenico Amalfitano, Vincenzo Riccio, Ana CR Paiva, Anna Rita Fasolino.**
“Why does the orientation change mess up my Android application? From GUI failures
to code faults”.
Software Testing, Verification and Reliability (STVR),
2018.

SERVICE

Program Organizer

- DeepTest@ICSE 2020, DeepTest@ICSE 2021

Tool Competition Organizer

- SBST@ICSE 2021

Program Committee Member

- DevOps4CPS@ICST 2021

Reviewer for Journals

- TOSEM, EMSE, STVR, JSEP, and others