

ANTONIO KEN IANNILLO

PhD

INFO | *date of birth:* February 14, 1990
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EXPERIENCE | **RESEARCH FELLOW** UNIVERSITA' DEGLI STUDI DI NAPOLI FEDERICO II MAY 2018 – CURRENT

Personal Project: Automatically Feature Extraction and Analysis of Faulty Code

Description: Software faults are code imperfections that may lead to the system's eventually failing. A deep understanding of the code developers insert specific software faults into will help several tasks such as bug prevention, bug detection, and software fault injection.

Project: Fuzz Testing on Android OS

Personal Contribution: Study and research on important challenges for the robustness (security and dependability) of the Android OS. Study and research on evolutionary algorithms and search strategies. Design and development of a smart testing tool on Android.

RESEARCH CONSULTANT CRITIWARE S.R.L

NOVEMBER 2017 – APRIL 2018

Project: Python Fault Injection

Partner: Huawei Technologies Co. Lts.

Personal Contribution: Study and research on Python parsing technologies and programming language theory. Design and implementation of a DSL framework for code changes in Python code.

RESEARCH ASSISTANT NORTHEASTERN UNIVERSITY, BOSTON, US

SEPTEMBER 2016 – APRIL 2017

Project: Vendor customizations on Android system services

Tutor: prof. Cristina Nita-Rotaru

Personal Contribution: Study and research on important challenges for the robustness (security and dependability) of the Android OS. Design and development of an innovative testing tool. Robustness and security testing on physical devices.

JUNIOR RESEARCHER CONSORZIO INTERUNIVERSITARIO NAZIONALE ITALIANO (CINI)

JANUARY 2014 – OCTOBER 2014

Project: NFVI reliability

Partner: Huawei Technologies Co. Ltd.

Personal Contribution: Study and research of new approach for software reliability evaluation of virtualized environments for Network Function Virtualization (NFV). Design and implementation of a reliability evaluation tool for VMWare ESXi.

Project: PON SVEVIA

Personal Contribution: Study and research of usability for fault injection tools. Design and implementation of an integrated fault injection tool (Eclipse plug-in) for the setup, creation and result analysis of fault injection tests in Java and C/C++ software.

RESEARCH AND DEVELOPMENT LAB INTERN INFOSYS LTD

JUNE 2013 – SEPTEMBER 2013

Project: Java Fault Injection

Tutor: Dr. Santonu Sarkar

Personal Contribution: Study and research of new approaches for the injection of software defects. Design and development of a tool for fault injection into the Java Bytecode. This thesis work has been conducted in India during the preparation of my MSc. degree thesis.

EDUCATION | UNIVERSITÀ DEGLI STUDI DI NAPOLI FEDERICO II, NAPLES – ITALY

PHD IN INFORMATION TECHNOLOGIES
NOVEMBER 2014 – OCTOBER 2017
DEFENCE: 31 JANUARY 2018

Winner of the public national selection to attend the “Information Technology and Electrical Engineering” PhD program organised by “Università degli Studi di Napoli Federico II”.

Research Topic: Dependability of Mobile Computing Systems, focusing on Android.

PhD Thesis: Dependability Assessment of Android OS

Partners: Critiware s.r.l., Huawei Technologies Co. Ltd.

Highlights:

- I matured an in-depth knowledge of Android internals.
- I developed an Android Monitoring Tool, **AndroMonito**, for the analysis of field failure data from Android devices (http://www.mobilab.unina.it/android_en.html).
- I designed and implemented a fault injection tool, **FitDroid**, for Android devices. The tool is able to run on physical devices, and to inject faults in the native and HAL layers of Android.

UNIVERSITÀ DEGLI STUDI DI NAPOLI FEDERICO SECONDO, NAPLES – ITALY

MSC DEGREE IN COMPUTER ENGINEERING)
NOVEMBER 2011 – JANUARY 2014

Thesis: “A Fault Injection Tool for Java Software Applications”

Evaluation: 110/110 cum laude

UNIVERSITÀ DEGLI STUDI DI NAPOLI FEDERICO II, NAPLES – ITALY

BACHELOR DEGREE IN COMPUTER ENGINEERING)
OCTOBER 2008 – OCTOBER 2011

Thesis: “Comparison between programming models in Facebook and Google Plus”

Evaluation: 110/110 cum laude

PUBLICATIONS | A.K. Iannillo, R. Natella, D. Cotroneo, C. Nita-Rotaru: “*Chizpurfle: A Gray-Box Android Fuzzer for Vendor Service Customizations*”, Published in: Software Reliability Engineering (ISSRE), 2017 IEEE 28th International Symposium on. Date of Conference: 23-26 Oct. 2017 **Conference Best Paper Award**

D. Cotroneo, F. Fucci, A.K. Iannillo, R. Natella, R. Pietrantuono***: “*Software Aging Analysis of the Android Mobile OS*”, Published in: Software Reliability Engineering (ISSRE), 2016 IEEE 27th International Symposium on. Date of Conference: 23-27 Oct. 2016

D. Cotroneo, A.K. Iannillo, R. Natella, R. Pietrantuono, S. Russo***: “*The Software Aging and Rejuvenation Repository*”, Proc. of the 26th IEEE International Symposium on Software Reliability Engineering (ISSRE 2015), November 2-5, 2015

D. Cotroneo, L. De Simone, A.K. Iannillo, A. Lanzaro, R. Natella***: “*Dependability Evaluation and Benchmarking of Network Function Virtualization Infrastructures*”, Proc. of 1st IEEE Conference Network Softwarization (NetSoft 2015), 2015 on April 13-17, 2015 **Conference Best Paper Award**

D. Cotroneo, L. De Simone, A.K. Iannillo, A. Lanzaro, R. Natella***: “*Usability of Fault Injection*”, Proc. of the 25th IEEE International Symposium on Software Reliability Engineering (ISSRE 2014), November 3-6, 2014

D. Cotroneo, L. De Simone, A.K. Iannillo, A. Lanzaro, R. Natella***, Jiang Fan, Wang Ping: “*Network Function Virtualization: Challenges and Directions for Reliability Assurance*”, Proc. of the 25th IEEE International Symposium on Software Reliability Engineering (ISSRE 2014), November 3-6, 2014

*** international authorship order does not apply; authors are in an alphabetic order, due to internal policies applied by the authors' research group.

LANGUAGES | ITALIAN
Mother tongue

ENGLISH
Self-assessment:
Understanding: listening 9/10, reading 9/10
Speaking: spoken interaction 9/10, spoken production 9/10
Writing: 9/10

Certificate: University of Cambridge: FCE, council of Europe level B2

SPANISH
Little knowledge of the Spanish lexicon and grammar

**TECHNICAL SKILLS
AND
COMPETENCES** | IT LANGUAGES
Python, Java, Bash scripting, C/C++, XML, Java Bytecode, HTML, MySQL.

SOFTWARE AND TOOLS
IntelliJ Idea, Android Studio, Android tools, PyCharm, TexShop, VMWare ESXi and vCenter.

**OTHER SKILLS
AND
COMPETENCES** | SOCIAL
I enjoy in living and working with other people in multicultural environments, where communication and teamwork are essential.

ORGANIZATIONAL
I matured experience in coordinating small projects and administration of resources, both at work and at volunteering activities. Regional coordinator and local vice-president in youth and childish education for Gi.Fra. (Franciscan Youth) organization.

ARTISTIC
I am a hobbist dancer and former teacher of Caribbean dances, e.g. salsa, merengue, bachata. Sometimes, I perform in a community choir for charity.