Michele Polese

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Date of birth: 22/02/1992 Nationality: Italian Mother tongue: Italian

EDUCATION

Ph.D. in Information Engineering — Start(2016, 10) – current

University of Padova

Project Title: Protocols and architectures for a consistent end to end user experience in mmWave 5G networks

Supervisor: Prof. Michele Zorzi

MSc Student in Telecommunication Engineering — Start(2014, 10) – End(2016, 07)

University of Padova

Final Grade: 110 (over 110) summa cum laude

Final Degree Project: Performance Comparison of Dual Connectivity and Hard Handover for LTE-5G Tight Integration in mmWave Cellular Networks

Final Degree Project Brief Description:
The aim of the project is to compare the performance of two different architectures for LTE and 5G tight integration: classic handover and dual connectivity. In particular, the LTE procedures are adapted to the 5G stack, and the mmWave ns-3 simulation framework is extended to account for these use cases, in order to thoroughly evaluate the main pros and cons of each architecture according to different metrics (throughput, latency, robustness). This project is developed in collaboration with New York University and Ericsson.

Supervisor: Prof. Michele Zorzi

Grade Point Average: 30 (over 30)

First level degree in Information Engineering — Start (2011, 10) – End (2014, 07)

University of Padova

Final Grade: 110 (over 110) summa cum laude

Final Degree Project: Allocazione delle Risorse in Reti 4G Eterogenee con Femtocelle valutate tramite simulazione di rete

Supervisor: Prof. Leonardo Badia

Grade Point Average: 29.86 (over 30)

High School Diploma — Start (2006, 09) – End (2011, 07)

Liceo Scientifico Brandolini Rota, Oderzo

Final Grade: 100 (over 100) with honors

RELEVANT PROFESSIONAL EXPERIENCES

Teaching Assistant for Telecommunication Networks 16/17 classes

Start (2016, 09) - End (2017, 02)

Final projects definition and evaluation, mentoring students in research projects, frontal lessons on LTE networks and with exercises (classes are taught in English).

Tutor Junior for Telecommunication Networks 15/16 classes

Start (2015, 09) - End (2016, 02)

University of Padova

Homework assignment and evaluation, frontal lessons with exercises (classes are taught in English).

Collaborator

Start (2013, 09) – End (2015, 05)

LiveRobotics

Responsible for the implementation of a video streaming platform for 3G connected drones, project selected for the **European Maker Faire** in Rome (October 2014). Webmaster for the website liverobotics.it.

PERSONAL SKILLS

English

UNDERSTANDING		SPEAKING		WRITING
Listening	Reading	Spoken interaction	Spoken production	
C1	C1	C1	C1	C1

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

Certified by Cambridge ESOL Certificate in Advanced English (CAE)

Computer skills

Advanced:

- computer programming with different languages (C/C++/Java);
- scripting and data analysis with MATLAB, Perl;
- knowledge and understanding of discrete events simulators (ns-3, Omnet);
- scripting and automation with Bash;
- LaTeX;

Intermediate:

- data visualization with gnuplot;
- scripting and data analysis with Python;
- Git, SVN, Mercurial versioning systems;
- MS Office suite;

Basic:

- performance oriented programming.

Other skills

Experience with microcontrollers based on Arduino, video streaming systems (as ffmpeg), acquired during the period with LiveRobotics.it

ADDITIONAL INFORMATION

Other

Musician (guitar, ukulele, banjo), experience with music recordings, mixing and mastering. Member of the Board, paymaster and webmaster for a local non-profit association.

ACCEPTED PUBLICATIONS

International Conferences

M. Polese, M. Centenaro, M. Zanella and M. Zorzi, "M2M Massive Access in LTE: RACH Performance Evaluation in a Smart City Scenario", in Proceedings of the IEEE International Conference on Communications (ICC), pg. 4613-4618, May 2016.

M. Polese, M. Mezzavilla and M. Zorzi, "Performance Comparison of Dual Connectivity and Hard Handover for LTE-5G Tight Integration", accepted at Simutools 2016, August 2016.

F. Chiariotti, D. Del Testa, M. Polese, A. Zanella, G. M. Di Nunzio, and M. Zorzi, "Learning methods for long-term channel gain prediction in wireless networks", 2017 International Conference on Computing, Networking and Communications (ICNC).

E. Lovisotto, E. Vianello, D. Cazzaro, M. Polese, F. Chiariotti, D. Zucchetto, A. Zanella and M. Zorzi, "Cell Traffic Prediction Using Joint Spatio-Temporal Information", 6th International Conference on Circuits and Systems Technologies (MOCAST), Thessaloniki, Greece, 2017.