

Fabrizio Carpi

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Education

New York University – Tandon School of Engineering

Brooklyn, NY

PHD IN ELECTRICAL ENGINEERING

09/2019 - Present

- Relevant Courses: Machine Learning, Information Theory, Statistical Learning Theory, Information Theory, Digital Signal Processing.

University of Parma

Parma, Italy

MS IN COMMUNICATION ENGINEERING

10/2015 - 10/2018

- Graduated *summa cum laude*. Thesis: “Exploring Machine Learning Algorithms for Decoding Linear Block Codes.”
- Relevant Courses: Detection and Estimation, Digital Communications, Wireless Communications, Internet of Things, Optical Communications.

BS IN INFORMATION ENGINEERING

10/2012 - 12/2015

- Thesis: “Experimental Study of SDN Architectures.”

Experience

New York University – Tandon School of Engineering

Brooklyn, NY

GRADUATE RESEARCH ASSISTANT

09/2019 - Present

- Member of the *CommIT* research group (advisor: Prof. Elza Erkip), and the *EnSuRe* research group (advisor: Prof. Siddharth Garg).
- Working on projects at the intersection between machine learning and communications within the *NYU WIRELESS* research center.
- Conduct research about classification and compression in networks with hardware- and privacy-constrained nodes.

TEACHING ASSISTANT – ECE/MA 2233, INTRODUCTION TO PROBABILITY

Fall 2020

- Lead exercise sessions, hold office hours, and prepare video tutorials for students.

University of Parma – Internet of Things (IoT) Lab

Parma, Italy

RESEARCH ASSOCIATE

11/2018 - 08/2019

- Developed methods to improve localization of mobile devices (WiFi/4G) in indoor and outdoor settings (PI: Prof. Gianluigi Ferrari).

Duke University – Information Initiative at Duke (IID)

Durham, NC

VISITING STUDENT FOR MS THESIS

03/2018 - 08/2018

- Investigated reinforcement learning solutions and machine learning optimizations in the field of channel coding (host: Prof. Henry Pfister).

Publications

- **F. Carpi**, C. Häger, M. Martalò, R. Raheli, H. Pfister, “Reinforcement Learning for Channel Coding: Learned Bit-Flipping Decoding,” [ALLERTON-19].
- M. Lian, **F. Carpi**, C. Häger, H. D. Pfister, “Learned Belief-Propagation Decoding with Simple Scaling and SNR Adaptation,” [ISIT-19].
- **F. Carpi**, L. Davoli, M. Martalò, A. Cilfone, Y. Yu, Y. Wang, G. Ferrari, “RSSI-based Methods for LOS/NLOS Channel Identification in Indoor Scenarios,” [ISWCS-19].

Leadership

NYU Tandon Graduate Admissions

Brooklyn, NY

UNIBUDDY AMBASSADOR

02/2020 - Present

- Represent NYU Tandon graduate programs through the Unibuddy platform by responding to inquiries from prospective MS/PhD students.

LeadTheFuture

Italy

MENTEE

09/2020 - Present

- Mentorship program offered by LeadTheFuture, a leading non-profit organization for people in STEM (acceptance rate below 20%).

Languages

- Italian (native), English (fluent), Portuguese (fluent).