Fabrizio Carpi

New York, NY | +1 (347) 248-4142 | fabrizio.carpi@nyu.edu | fabriziocarpi.github.io

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 (Matlab, Python, Tensorflow).

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).