UNIVERSITÀ DEGLI STUDI DI NAPOLI FEDERICO II

itee PhD information technology electrical engineering

DIETI UNINA

PhD Student

Networking and IT in modern enterprises

Tutor: Prof. Giorgio Ventre

co-Tutor: Prof. Alessio Botta

Cycle: XXXV

Year: 2019-2020

itee PhD information technology electrical engineering

My background

- MSc degree in Automation Engineering
- PhD start date: 1/11/2019
- Scholarship type: no scholarship

Research field of interest

- The main topic of my research activity is the **study and optimization of networking and IT in modern enterprises**.
- IT infrastracture is a strategical asset for all kind of companies
- Being the **network** the backbone of the IT infrastructure, the problem of measuring its **performance** is a topic of great interest

Summary of study activities

- Ad hoc PhD courses / schools
  - Machine Learning
  - Innovation management, entrepreneurship and intellectual property
- Courses attended borrowed from MSc curricula
  - Computer Networks
  - Big Data Analytics and Business Intelligence
- Seminars
  - Planning 5G under EMF constraints: challenges and opportunities
  - CVPL Cv & ML online seminar series: Bias from the wild
  - Adversarial attacks on image classifiers
  - IEEE Xplore Webinar: How to publish Open Access with IEEE to increase the exposure and impact of your research
  - …

Research activity: Overview

- Problem: Network performance measurement
  - *Case of Available Bandwidth: many tools have already been proposed in literature, but*
    - *Their performance heavily depends on the setup and on the status of the net*
    - *Entreprises have changed along with the networks they rely on, with new trends like Software Defined Networks, Internet of Things, and cluod or hybrid IT infrastracture.* ***In these conditions the traditional methods are poor performing***

Research activity: Overview

- My research activities so far
  - Have focused on the application of machine learning techniques to dynamically select the most fitting measurement tool according to varying network condition
- Intended contribution (in perspective)
  - development of novel techniques to measure network performance more accurately and efficiently on the newest kind of networks

Products

[P1]	*In preparation: Alessio Botta, Gennaro Esposito Mocerino, Stefano Cilio, Giorgio Ventre, A Machine Learning approach for dynamic selection of available bandwidth measurement tools according to varying network condition.*