WINDMILL- Integrating wireless communication engineering and machine learning

With their evolution towards 5G and beyond, wireless communication networks are entering an era of massive connectivity, massive data, and extreme service demands. A promising approach to successfully handle such a magnitude of complexity and data volume is to develop new network management and optimization tools based on machine learning. This is a major shift in the way wireless networks are designed and operated, posing demands for a new type of expertise that requires the combination of engineering, mathematics and computer science disciplines. The ITN project WindMill addresses this need by providing Early Stage Researchers (ESRs) with an expertise integrating wireless communications and machine learning. The project will train 15 ESRs within a consortium of leading international research institutes and companies comprising experts in wireless communications and machine learning. This a very timely project, providing relevant inter-disciplinary training in an area where machine learning represents a meaningful extension of the current methodology used in wireless communication systems. Accordingly, the project will produce a new generation of experts, extremely competitive on the job market, considering the scale by which machine learning will impact the future and empower the individuals that are versed in it. The project will also nurture the sense of responsibility of the ESRs and the other participants through personal engagement in the training program and by promoting teamwork through collaborative joint projects.

UNIPD Team Leader: Andrea Zanella

Department: Information Engineering

Coordinator: Aalborg Universitet- AAU (Denmark)

Other Participants:

Eurecom (France)

Centre Tecnològic de Telecomunicacions de Catalunya- CTTC (Spain)

University of Padova (Italy)

Aalto Korkeakoulusaatio sr- AALTO (Finland)

Ericsson AB- EAB (Sweden)

Nokia Bell Labs France- NBLF (France)

Worldsensing sl- WSE (Spain)

Eidgenössische Technische Hochschule Zürich (Switzerland)

Robert Bosch GMBH- BOSCH (Germany)

University of Padova (Italy)

Total EU Contribution: Euro 4.072.823,64

Call ID: H2020-MSCA-ITN-2018

Project Duration in months: 48

Start Date: 01/01/2019

End Date: 31/12/2022

Find out more: https://cordis.europa.eu/project/rcn/218060_en.html