DL School 2020

FRIDAY, JULY 17th

9:30	**Opening**	
10:00	**Applications: an industrial take**	Vito Paolo Pastore

Industrial research can diverge from academic research in different ways. It can be strongly application-driven, and it is generally but not always product-oriented. This talk will go through the main processes that should happen to transform an idea into a valuable product, with a specific focus on industrial business value. The described concepts will be explained in practice with a case study regarding an application involving using plankton as biosensor to monitor the aquatic environment.

10:40	**Starting with your own data: a case study**	Gaurvi Goyal

Learning Deep Learning methods is the first step. The second is to know how to use them. This talk will give a glimpse into how to design a Deep Learning pipeline: starting from practical data, we will discuss dealing with their limitations as well as limitations of computational resources and how to work towards making specific design choices in terms of models for targeted custom applications. To conclude we will delve into a case study for an action recognition system.

	Break	
11:30	**Visual perception for autonomous agents**	Issa Mouawad

Deep learning has enabled the development of many applications that were once considered science fiction (like self driving cars). In this talk we will formulate fundamental problems in computer vision that need to be addressed in order to allow autonomous navigation. In addition, well established deep learning approaches from the literature will be presented highlighting use cases in works conducted by our group.

12:10	**Human Motion Understanding in the Rehab Field**	Matteo Moro

The quantitative characterization of human motion is a crucial task in the rehabilitation field to plan timely and appropriate rehabilitative interventions. Recently, much effort has been dedicated in developing video-based marker-less techniques targeting unobtrusive and reliable motion analysis.
In this talk some applications of video-based human motion analysis in rehabilitation engineering will be presented in order to underline how deep learning algorithms can be helpful in this field.