**SORS: Deep Learning for the AI Industry**

**Objectives**

This seminar is free of charge but registration is compulsory. Please click here to register

**Abstract:** Deep learning is powering a transformation in computational sciences and its industry. The classic paradigm of humans programming the computational operations is challenged today by neural networks capable of self-tuning based on large amounts of sensor data or simulated actions. The outstanding results in challenges such as computer vision or natural language is expanding to multiple other fields such as genomics, autonomous driving or energy management. This seminar presents the perspective from two leading labs, Google Deepmind and Facebook Research, that represent the currently vitality of the sector and the experience of open research from industry.

**Bio speaker 1:** Yannis Kalantidis is a research scientist at Facebook Research in Menlo Park, California. He grew up in Athens, Greece and lived there till 2015, with brief breaks in Sweden, Catalonia and the United States. He got his PhD in November 2014 from the National Technical University of Athens in Greece under the supervision of Dr. Yannis Avrithis. He worked for two years at Yahoo Research in San Francisco, where he led the visual similarity search project at Flickr. He is currently conducting research and development on video and multi-modal representations, web-scale classification with noisy labels and modeling of vision and language.

**Bio speaker 2:** Oriol Vinyals is a Research Scientist at Google DeepMind, working on Deep Learning. Oriol holds a Ph.D. in EECS from University of California, Berkeley, a Masters degree from University of California, San Diego, and a double degree in Mathematics and Telecommunication Engineering from UPC, Barcelona. He is a recipient of the 2011 Microsoft Research PhD Fellowship. He was an early adopter of the new deep learning wave at Berkeley, and in his thesis he focused on non-convex optimization and recurrent neural networks. At Google DeepMind he continues working on his areas of interest, which include artificial intelligence, with particular emphasis on machine learning, language, and vision.
Why is Go hard for computers to play?

Brute force search is intractable:
1. Search space is huge
2. "Impossible" for computers to evaluate who is winning

Game tree complexity = $b^d$