11) Elisa Ricci
Deep Learning

Abstract: Over the past few years deep learning has become the go-to solution for a broad range of applications in many fields such as computer vision, speech analysis, natural language processing and robotics. This talk will provide an introduction to deep learning, showing some applications where deep architectures have been successfully used for designing intelligent systems that learn from large scale datasets. I will also provide an overview of different neural-based models, ranging from basic feed-forward neural networks to convolutional neural networks and recurrent neural networks. Furthermore, I will show how these models can be trained, discussing traditional algorithms for optimization (e.g., backpropagation) as well as more recent technical innovations (e.g., ReLu activation functions, dropout). The lecture will be complemented by a hands-on session using the open-source software library Tensorflow.