SEMINÁRIO DE SISTEMAS DINÂMICOS

30 de Junho (sexta-feira), às 10h30, sala 6.2.33

Neural Networks: recent advances - Deep learning - and some (mathematical ?) problems

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Abstract: (Deep) Neural networks seem to be achieving the targets drawn for Artificial Intelligence in the early 60's. We will present the practical accomplishments. The underlying mathematical models will be discussed: • Feed forward neural networks • Recurrent neural networks • Generative neural networks (Boltzmann Machines, Variational AutoEncoders, Generative Adversary Networks). All these models have sometimes millions of parameters that are learned (estimated) from examples (training data). The learning procedure will be discussed. Training data is always a small fraction of real data where these models are applied. To avoid overfitting the model parameters to training data, and poor generalization to large real data, regularization techniques are used.

Local: FCUL – Edf. C6 - Piso 2, 6.2.33