

Theoriekolloquium

Am **15. Juni 2017** um **14.15 Uhr** in **W2 1-143** hält

Herr Prof. Dr. Remi Monasson (Paris)

einen Vortrag mit dem Titel

Emergence of Compositional Representations in Restricted Boltzmann Machines

Extracting automatically the complex set of features composing real high-dimensional data is crucial for achieving high performance in machine-learning tasks. Restricted Boltzmann Machines (RBM) are empirically known to be efficient for this purpose, and to be able to generate distributed and graded representations of the data. In this talk, after a general introduction to RBM and their connection to classical models of statistical mechanics, I will characterize the structural conditions e.g. on sparsity of the weights, and the nonlinearities in the activation functions of hidden units, allowing RBM to operate in such a compositional phase. Evidence will be provided by the analysis of an adequate statistical ensemble of random RBMs and by RBM trained on the handwritten digits dataset MNIST.

Interessierte sind herzlich eingeladen.

gez. Prof. Dr. Andreas Engel