Benjamin AUBIN 🇫🇷

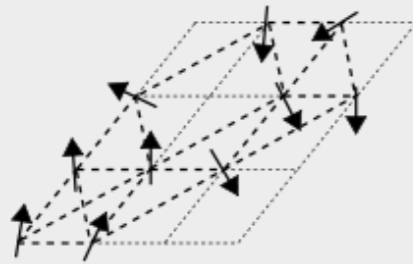*aubin.benjamin@gmail.com*
benjaminaubin.github.io

PhD student (starting 2nd year)

Lenka Zdeborovà (IPhT)
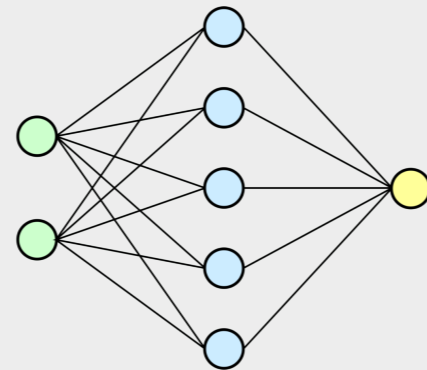Florent Krzakala (ENS-LPS)

Statistical physics of multi-layer neural networks

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Theory for understanding generalization abilities of neural networks

Tools from statistical physics of disordered systems:
replicas, cavity, AMP algorithm,...

Multi-layer neural networks:
empirical and numerical field

Recent works:

1. *Storage capacity* of random patterns in symmetric binary perceptron
   (Paper pending - https://krzakala.github.io/cargese.io/poster_Aubin.pdf)

2. *The committee machine:* Computational to statistical gaps in learning a two-layers neural network
   (NIPS 2018 - https://arxiv.org/abs/1806.05451)