



THE UNIVERSITY OF CHICAGO

COMPUTATIONAL AND APPLIED MATHEMATICS STUDENT SEMINAR

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Implicit Regularization in Neural Networks

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Jones 304, 5747 S. Ellis Avenue

ABSTRACT

Nowadays, many deep learning problems have more parameters than data. This leads to the fact that there are many global optimums that achieve zero training error. Clearly, many of these optimums generalize poorly. However, it is a myth in deep learning that the parameter trained by gradient based algorithms such as SGD attains zero training error but still generalizes well. One explanation to this phenomenon is that the training algorithm implicitly regularizes the problem. In this talk, I will present results in implicit regularization in recent years including the implicit regularization of linear feedforward neural networks, linear convolutional neural networks, matrix factorization and so on.

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