



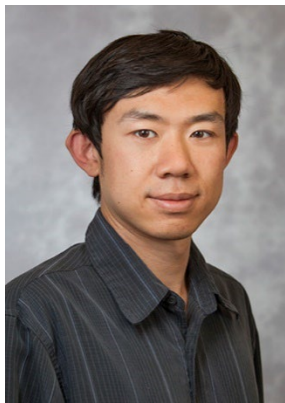
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Colloquium Series

Feature learning and training dynamics in mildly-overparametrized neural networks



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Computer Science Department
Duke University**

Date: Tuesday, Oct 17th, 2023

Time: 10am-11am

Location: Eberhart 554

Abstract:

Modern neural networks operate in overparametrized regime, where the number of neurons is larger than what is required to represent the data. However, existing analysis either falls in the neural tangent kernel (NTK) regime, which does not allow feature learning, or mean-field limit which requires exponentially many neurons. In this talk we show several cases where it is possible to analyze the training dynamics of polynomial-sized neural networks (mildly-overparametrized) that can still learn relevant features.

Biography:

Rong Ge is an associate professor at Duke University, Computer Science department. Before joining Duke, he got his PhD from Princeton University, and was a post-doc at Microsoft research New England. He is mostly interested in theoretical aspects of machine learning, especially non-convex optimization and deep learning.