

MATHEMATICS COLLOQUIUM

Mathematical and Numerical Understanding of Neural Networks: From Representation to Learning Dynamics

In this talk I will present both mathematical and numerical analysis as well as experiments to study a few basic computational issues in using neural network to approximate functions: (1) the stability and accuracy, (2) the learning dynamics and computation cost, and (3) structured and balanced approximation. These issues are investigated for both approximation and optimization in asymptotic and non-asymptotic regimes.

THURSDAY

OCTOBER

24

4:30 - 5:30PM
LECONTE COLLEGE
ROOM 444



Hongkai Zhao

*Ruth F. DeVarney Professor
Department of Mathematics
Duke University*