

Translational AI Center (TrAC) Seminar – Spring 2022

Hailiang Liu

February 4 at 12:00 noon (US Central Time)

<https://iastate.zoom.us/j/92178103551?pwd=dINCa2l0ckVBTEVyR1JEN2Y3b21XQT09>

Mathematical Problems in Deep Learning

We will present some mathematical problems encountered in deep learning models. The results include optimal control of selection dynamics in deep neural networks, and gradient methods adaptive with energy. Some of the computational questions that will be addressed have a more general interest in engineering and sciences.

Short Bio

Hailiang Liu is a Professor of Mathematics at the Iowa State University and the Holl Chair in Applied Mathematics from 2002-2012. His primary research interests include analysis of applied partial differential equations, the development of novel, high order algorithms for the approximate solution of these problems, and the interplay between analytical theory and computational aspects of such algorithms with various applications. He has published more than 150 journal articles. His current research focus is on the mathematical theory of deep learning and PDE-based data-driven modeling.