Mathematical Sciences Colloquium Series

Spring 2023

UTEP

Dr. Tony Chiang

Pacific Northwest National Laboratory

📍 **In person at Bell Hall 130 and online via Zoom**

Click on this announcement to access the Zoom link

📅 **Wednesday, January 25** 🕐 **3pm**

Note the unusual day

Deep Nets Realized as Linear Models

Abstract

We present empirical evidence that Deep Classification Neural Networks can be approximated as linear models via the local linearization of the weight space. We show this phenomenon for a wide range of classification networks on different training dataset. This allows data scientists to study Deep Nets with classical data science tools for interpreting the neural networks and explaining the outputs.

Bio: Senior Data Scientist at PNNL. Computational Systems Immunologist at Allen Institute for Immunology. Postdoc at UW in Environmental Oceanography and Phytoplankton Ecology. PhD at Cambridge University in Statistical Computing and Cancer Biology. Bachelors in Pure Mathematics at MIT.

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