

DEPARTMENT OF MATHEMATICAL SCIENCES

SIAM Faculty Talk

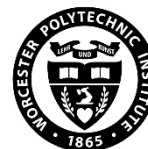
**Professor Randy
Paffenroth,
WPI**

Abstract: Neural networks (NN), ranging from Large Language Models like ChatGPT and Claude to simpler “dense” models, impact our daily lives in many ways. The underlying mathematical principles of such NNs are not universally well understood, and in this talk we will draw connections between NNs and classic mathematical ideas such as dynamical systems. NNs can be divided into two broad categories, “recurrent” and “non-recurrent” and both types of Neural Networks are popular and extensively studied. However, these two kinds of algorithms are more closely related than is often appreciated. In this talk we will focus on examples that are accessible to a wide audience, but also “dip our toes” into deeper mathematical waters.

Thursday, September 17

5:00 – 6:00 pm

Unity Hall 500



WPI