



Idaho State
University

Mathematics
and Statistics

Undergraduate Colloquium



Neural Spectral Integral Operators

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Machine learning has become increasingly central to the development of the sciences and engineering. Learning operators between spaces of functions, a branch of deep learning called operator learning, is used to find the underlying system that determines dynamics in a variety of situations, e.g. brain dynamics and fluid dynamics, even when the equations of the system are unknown. In this talk, I will present a method for learning integral operators in the spectral domain. The resulting deep learning model is computationally efficient, very fast, and has good convergence guarantees under relatively mild assumptions. During the talk I will also introduce some basic concepts of machine learning and operator learning.

Tuesday, Feb. 13

3:00 pm

PS 307

(or) Zoom: <https://isu.zoom.us/j/83918530990>

For colloquium guests, refreshments begin at 2:30 pm