



Society of Physics Students presents:



PHYSICS ALUMNI SERIES SEMINAR



Machine Learning from the Perspective of Physics

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Artificial Intelligence (AI) and its applications have taken the world by storm over the past few years. Brought to light by this year's Nobel Prizes, the physical and mathematical sciences have played a large role in the development of this technology. In this talk, I will first discuss this connection to AI from the perspective of physics and show how modern approaches in statistical mechanics can be used to strengthen this bridge. The latter portion of the talk will focus on Reinforcement Learning (RL), an exciting branch of AI used to tackle sequential decision-making tasks, with applications in chess, video games, robotics, quantum control, and drug dosing. I will share recent insights developed by my research group at UMass Boston, in collaboration with SJSU and IAIFI, highlighting how a physics perspective enriches our understanding and application of RL. This discussion will reflect my journey, shaped by a foundation in physics.

Tuesday, November 26th, 2024

11:30 am in SR 151

Pizza and Refreshments Provided