DEPARTMENT OF PHYSICS AND ASTRONOMY

COLLOQUIUM IN-PERSON ONLY EVENT

Confusing Neural Networks in Simulational Physics

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With the increasing pace of AI developments in corporate labs, questions about the future of academic groups in this field become louder. The most striking example in recent years might be AlphaFold, a machine-learning model that predicts the 3D protein structure from its amino-acid sequence and largely outperforms decade-long research in academia. This has led people to ask questions like “Are we (computational physicists) out of a job now?” Although understandable, I think this sentiment is too pessimistic. In this talk I will present two of our recent, student-led research projects where we use machine-learning tools and methods to analyze and inform conventional, statistical computer simulations. One of them is based on us purposely confusing neural networks, the other uses a quite confusing architecture.

Thursday, February 27, at 3:55 PM

IN-PERSON EVENT ROOM 202

CSP WORKSHOP INVITED TALK/ COLLOQUIUM

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