PHYSICS & ASTRONOMY DEPARTMENT

COLLOQUIUM

Crafting Generative Models & Unraveling High Energy Physics with Parameterized Quantum Circuits

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February 23, 2024 (12:00 – 1:30 pm) via zoom

The advent of Noisy Intermediate-Scale Quantum (NISQ) computing has spotlighted the significance of parameterized quantum circuits (PQCs) as essential tools in quantum technology. Particularly in the realm of quantum generative models, PQCs have shown promise in encapsulating complex data distributions, reproducing the statistics of the training data, and detecting anomalous instances.

This talk will weave a narrative around the confluence of PQCs in both quantum machine learning and the intricate world of high energy physics. Through a fusion of case studies and in-depth discussions, I will highlight the promise and potential of PQCs, standing at the crossroads of data-driven innovation and fundamental scientific discovery.

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