

# Phi<sup>4</sup> Theory as a Neural Network Field Theory

*Tuesday, 28 May 2024 15:45 (45 minutes)*

In this talk I'll review an old result from machine learning theory that relates infinite neural networks and generalized free field theories. With that backdrop, I'll present modern developments connecting field theory and neural networks, including the origin of interactions and relation to the central limit theorem, the appearance of symmetries, and realizing phi<sup>4</sup> theory.

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**Session Classification:** Talks