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## Deforming complex-valued distributions via machine learning

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Sign problems in lattice QCD prevent us from non-perturbatively calculating many important properties of dense nuclear matter both in and out of equilibrium. In this talk, I will discuss recent developments in numerical methods for alleviating sign problems in lattice field theories. In these methods, the distribution function in the path integral is modified via machine learning such that the sign problem is tamed. I will demonstrate these methods in the  $\phi^4$  scalar field theory and the Thirring model in 1+1-dimensions.

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