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Type: **Parallel Talk**

From Theory to Practice: Applying Neural Networks to Simulate Real Systems with Sign Problem

Thursday, 3 August 2023 16:20 (20 minutes)

The numerical sign problem poses a seemingly insurmountable barrier to the simulation of many fascinating systems.

We apply a neural networks to deform the region of integration, mitigating the sign problem of systems with strongly correlated electrons.

In this talk we present our latest architectural developments as applied to contour deformation.

We also demonstrate its applicability to real systems, namely perylene for organic solar cells.

Topical area

Algorithms and Artificial Intelligence

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