

Machine learning phase transitions in a scalable manner on classical and quantum processors

Monday 27 September 2021 15:00 (50 minutes)

As the applications of machine learning in lattice gauge theories are moving beyond the toy models, the parallelization of learning algorithms and alternative approaches to their efficient implementation gains in importance. In this talk, I will present two possible avenues to speed up the methods with applications to phase transitions classifications. After the discussion of the support vector machine learning model with a focus on its efficient parallelization, we will move the SVM to a quantum circuit and benchmark it using the Ising model in two dimensions.

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Session Classification: Session 2