



Laboratoire LEPRINCE-RINGUET
Ecole polytechnique IN2P3/CNRS

Séminaire

Quantum Machine Learning

Quantum Machine learning is a set of techniques developed recently to execute Machine learning models on quantum computers. Since the quantum computers begin to be effective in terms of computing power and error handling, they open a wide field of promising research. The machine learning has been developed for tenths of years now and there are a lot of challenge to adapt them to this new quantum technology. Since 2018, the first learning quantum circuit has been implemented and tested extensively, based on statistical techniques called kernel methods. But more recent developments give hope to access to more complicated models, similar to deep neural networks.

This talk exposes pedagogically the different prerequisites (machine learning, qubit mechanics, quantum computers) which are necessary to understand the subject. After that introduction, an overview of the different QML techniques will be explained in details, covering theoretical aspects as well as quantum programming of QML.

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Salle de conférence
et Zoom

Lundi 14 Mars
11h00

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Responsables séminaires

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