

Real Quantum Computers

In recent years the construction of quantum computers is undergoing rapid developments. Several technological companies have promised to achieve Quantum Supremacy in the coming months providing a quantum computer capable of surpassing the most powerful supercomputer. The aim of the TFM is to present an overview of these developments and its potential applications to Physics.

Interpretations of Quantum Mechanics

Quantum Mechanics has a beautiful mathematical formulation with a predictive power that has been tested in miriads of experiments. However, since the times in which it was proposed there have been different physical interpretations that coexist today. This TFM will summarize a state-of-the-art of this subject.

Machine learning

This area is a subfield of computer science that studies computer algorithms that provide knowledge and predictions learned from training data. The aim of the TFM is to present an introduction to this topic with applications to Physics.