

# QA vs QAOA

Yo

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## 1. Introducción

Definición de algoritmos híbridos:

*“Hybrid quantum classical algorithms ... are parameterized quantum circuits that are optimized in a classical learning loop”*

Sobre el algoritmo clásico de optimización utilizado en QAOA.

*“Various types of outer learning loops have been used thus far ranging from **brute force grid search** to **gradient based methods** and recently methods inspired by **supervised machine learning** where the parameters  $\vec{\beta}$  and  $\vec{\gamma}$  were trained on random samples of combinatorial optimization problems and afterwards kept fixed to solve instances not seen during training of the same combinatorial optimization problem”*