### **Seminários de Física** CFUM, LIP-Minho, DF

# Can we simulate hadrons on a quantum

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## computer?

Anfiteatro Dep. Física Campus de Gualtar Braga

#### Summary:

\_In light of what is known today about the nature of matter, to understand the origin of the visible mass of our Universe it is necessary to unravel the physics of hadrons, states of quarks and gluons bound together by the strong interaction. In this seminar, we will discuss some of its most intriguing features, and focus on the simplest quark-antiquark system existent in nature: the meson.

\_In parallel, we will highlight some of the latest achievements of Quantum Computation, with respect to the simulation of quantum systems. In fact, quantum computers have just started solving realistic problems in quantum chemistry and nuclear physics, which lead us to the following question: Can we also simulate hadrons on a quantum computer?



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