



COLLOQUIA DI DOTTORATO, A.A. 2023/2024

Dipartimento di Fisica, Aula 102
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Do-it-yourself quantum mechanics

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Leo Esaki was awarded the Nobel prize in physics in 1973 for his pioneering studies on electron tunnelling: he coined the term “do-it-yourself quantum mechanics” a couple of decades after that. Since then, our toolkit for implementing this concept has expanded exponentially, advancing our ability to fabricate physical objects embodying virtually any Hamiltonian. Today we term all this quantum technology.

In this conversation I shall discuss some of the trends within the solid-state realm. I aim to highlight that all this has been driven by the continuous development of few basic concepts and how this is still hindered by the lingering classical mindset and language being used.