

# Science Colloquia

## Sala Conferenze, DFA 12/11/2024 h 14:45

The mathematician Marc Kac once asked “Can one hear the shape of a drum?” In the quantum era of the 21st century I am asking “Can one see the tunneling of electric charges?” It turns out that the answer not only touches deep questions of quantum physics but also combines two previously basically distinct fields, namely, quantum optics and mesoscopic physics - the first dealing with light and atoms in cavities, the second dealing with the flow of charge carriers. I will discuss recent experimental and theoretical developments and prospects.

I Science Colloquia del DFA “Ettore Majorana”, sono appuntamenti con la scienza dedicati a Ricercatrici e Ricercatori, Studentesse e Studenti (della Laurea Magistrale in Physics, del terzo anno della Laurea Triennale in Fisica, e dei Dottorati al DFA) interessati a condividere argomenti ed esperienze di ricerca. I Science Colloquia, coordinati dai Proff. Giuseppe Falci e Livio Lamia, si tengono con cadenza mensile.

## *Can we see the quantum tunneling of electric charges?*

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