

## Appunti di Fisica '23

**28 aprile ore 11:00**

SBA-T-1, I piano edificio SBA

### **From Physics to Geopolitics: The semiconductors industry case *Challenges & opportunities***

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Semiconductor industry is the heart of electronics and at the same time the practical application of the principles of Solid State Physics and Materials Science. From the time of its birth in the 1940s to the present, it has been capable of extraordinary technological innovations that have enabled it to grow overtime. This talk gives an overview of this industry structure and portrays a brief story of the most important stages of its evolution, both in terms of technology and economic impact. The main technological challenges faced nowadays will be examined and the main players presented. Following the unprecedented swings that the industry has experienced in recent years and the disruption induced to multiple segments it serves, semiconductors industry is now under the spotlights and is attracting more and more the attention of governments and rulers. We will examine the market dynamics underpinning the changes underway and discuss what is at stakes for most of the players, with particular attention to the European ones. Geopolitical aspects are now intertwined with the technical and economic challenges ahead of us but can also bring opportunities for the new generations. This talk aim at highlighting the positive potential for the STEM students.