

# **The role of topology in nature – From the standard model to condensed matter physics**

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In these lectures we will discuss the role of topology in physics. The first lecture will focus on the mathematical aspects of topology where we will introduce key concepts and ideas, with a bit of history also thrown into the mix. In the second lecture we will look at a number of examples from physics where topology has provided a deeper understanding of the properties of quantum materials. We will in particular look at examples from condensed matter physics, photonics, and the standard model where field theories play a prominent role.