

Kubo Theory

tutorial

December 5, 2018 | 4:00 pm
Lecture Hall MPI | B.1.11



Abstract

I give a tutorial-like introduction to linear response theory or “Kubo theory” both within classical and quantum physics. I present several examples that show how it is applied and focus on electrical and magnonic transport phenomena.

In the second part of my talk, I show how Kubo theory is used in classical spin dynamics simulations to calculate the spin conductivity and heat conductivity due to the excitations of magnetic insulators. To that end, I give an introduction to “topological magnon materials” and the anomalous Hall physics of magnons.

Speaker

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