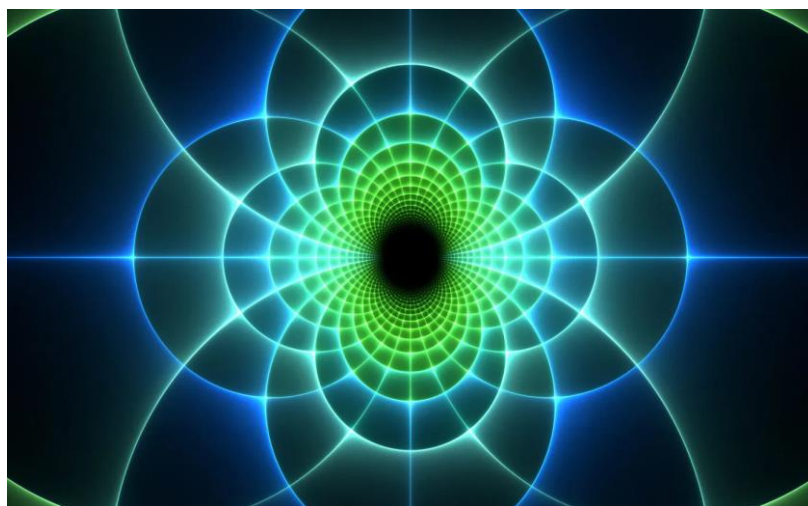


IMPRS UFAST Focus Course Group Theory

Melanie Schnell

Abstract:

Group theory is the mathematical application of symmetry to an object to obtain knowledge of its physical properties. It provides the framework for the study of molecular symmetry based on the classification of molecules according to their symmetry. Symmetry is a fundamental concept, as it can be used to predict or explain many physical properties, such as dipole moments and allowed spectroscopic transitions. This is based on a classification of the states of the molecule using the irreducible representations from the character table of the symmetry group of the molecule. In this lecture, we will first cover basic aspects of group theory. Then, upon discussion with the participants, different applications of group theory, for example for the characterization of molecular transitions and selection rules but also to solids, will be tackled.



14th September 2021

17th September 2021

1st October 2021

8th Oktober 2021

10:00h – 12:00h (online)

10:00h – 12:00h (online)

10:00h – 12:00h (online)

10:00h – 12:00h (online)

Register on Geventis I-UF FC5