



Universität Hamburg

DER FORSCHUNG | DER LEHRE | DER BILDUNG

CHAMPP

CENTER IN HAMBURG FOR
ASTRO-, MATHEMATICAL AND
PARTICLE PHYSICS

LECTURE COURSE IN THE QUANTUM UNIVERSE RESEARCH SCHOOL

Summer Term 2022

Category Theory

Birgit Richter

Course Description:

The aim of this course is to present the basics of category theory (categories, functors, natural transformations, (co)limits, adjunctions, Kan extension etc) and to connect category theory to topology. Every (small) category has a classifying space. These classifying spaces occur in many applications of category theory, for instance in homotopy theory or algebraic K-theory.

<https://www.math.uni-hamburg.de/home/richter/cat22.html>.

Prerequisites:

You should have seen examples of categories, for instance in lecture courses on algebra or algebraic topology. Background in topology is useful for the later part of the course.

Date and Place:

Wed, 12:15 – 13:45, H2, Geomatikum

Starting on:

6 April, 2022
