Universität Hamburg
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CHAMPP
CENTER IN HAMBURG FOR ASTRO-, MATHEMATICAL AND PARTICLE PHYSICS

LECTURE COURSE IN THE QUANTUM UNIVERSE RESEARCH SCHOOL

Summer Term 2021

Algebraic Topology

Tobias Dyckerhoff

Course Description:

This course will be an introduction to algebraic topology.

- Simplicial, singular and cellular homology
- Cohomology and the cup product
- Oriented manifolds and Poincaré duality
- ...

Prerequisites:

Familiarity with basic notions of the theory of topological spaces such as the fundamental group (as covered in Chapter I of Hatcher's book).

Literature:

- A. Hatcher: *Algebraic Topology*, Cambridge University Press, 2002
- G. Bredon, *Topology and Geometry*, Springer, 2010
- R. Stöcker, H. Zieschang, *Algebraische Topologie*, Teubner 1994

Date and Place:	Wed 12:15–13:45, Fri 12:15–13:45, BigBlueButton
Problem Classes:	Mon, 14:15–15:45, BigBlueButton
Starting on:	7 April 2021