



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**

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Summer Term 2022

# Introduction to String Theory

Gleb Arutyunov

## Course Description:

The course covers the basic concepts of modern string theory. This includes covariant and light-cone quantisation of bosonic and fermionic strings, geometry and topology of string world-sheets, vertex operators and string scattering amplitudes, world-sheet and space-time supersymmetries, elements of conformal field theory, Green-Schwarz superstrings, strings in curved backgrounds, low-energy effective actions, D-brane physics.

## Prerequisites:

Quantum Field Theory I/Quantum Mechanics II, Special Relativity

## Date and Place:

Tue, 9:15–10:45, SemRm 4064, Bahrenfeld  
Fri, 9:15–10:45, SemRm 4064, Bahrenfeld

## Starting on:

5 April 2022

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