

## 0 Overview

String theory is an attempt to quantise gravity and unite it with the other fundamental forces of nature. It combines many interesting topics of (quantum) field theory in two and higher dimensions. This course gives an introduction to the basics of string theory.

### 0.1 Contents

1. Introduction
2. Relativistic Point Particle
3. Classical Bosonic String
4. String Quantisation
5. Compactification
6. Open Strings and D-Branes
7. Conformal Field Theory
8. String Scattering
9. String Backgrounds
10. Superstrings
11. AdS/CFT Correspondence

### 0.2 References

There are many text books and lecture notes on string theory. Here is a selection of well-known ones:

- classic: M. Green, J.H. Schwarz and E. Witten, “Superstring Theory” (2 volumes), Cambridge University Press (1988)
- alternative: D. Lüst, S. Theisen, “Lectures on String Theory”, Springer (1989).
- standard: J. Polchinski, “String Theory” (2 volumes), Cambridge University Press (1998)
- basic: B. Zwiebach, “A First Course in String Theory”, Cambridge University Press (2004/2009)
- recent: K. Becker, M. Becker, J.H. Schwatz, “String Theory and M-Theory: A Modern Introduction”, Cambridge University Press (2007)
- online: D. Tong, “String Theory”, lecture notes, <http://arxiv.org/abs/0908.0333>
- ...