

STRING THEORY

II

Lecture I

OXFORD UNIVERSITY
MMATHPHYS TT 2020.

JAKURA SCHAFER-NAMEKI

16H LECTURES, ASSESSMENT BY COURSE WORK. (4 SHEETS)

CLASSES: WED 11am BST WEEKS 3, 5, 7, 8

TA: MARIEKE VAN BEEST & DIEGO BÉDEJA SUAREZ.

PREREQUISITES: STRINGS I, (A) QFT, SUPERSYMMETRY, GR

REFERENCES: - GREEN, SCHWARZ, WITTEN IXII (CUP).

- POLCHINSKI I & II (CUP).

- BLUMENHAGEN, LUETZ, THEISEN (SPRINGER)
(BLT)

↳ MANY CONVENTIONS OF THE COURSE.

PLAN

- ① FERMIONIC STRING: RNS (RAMOND - NEVEU - SCHWARZ)
- STRING.
↳ WORLD SHEET FERMIONS.
- ② QUANTIZATION OF THE RNS.
- ③ 10 D SUPER STRINGS: TYPE IIA, IIB, I
- ④ D-BRANES IN SUPERSTRING THEORIES
↳ ADDS A SUPER-YANG-MILLS SECTOR.
- ⑤ COMPACTIFICATIONS OF THE SUPERSTRINGS.
- ⑥ INTERACTIONS & EFFECTIVE ACTION.
- ⑦ COMPACTIFICATIONS ON CURVED BACKGROUNDS.
↳ CALABI-YAU MANIFOLDS.