Institut Henri Poincaré

11 rue Pierre et Marie Curie, 75231 Paris cedex 05

String Theory in Greater Paris

Rencontres Théoriciennes

“Supergravité, théorie des cordes et théorie M”

Jeudi 10 Novembre 2022, 11:45

Hector Parra De Freitas

IPHT Saclay

New supersymmetric string vacua in d geq 7

String theories with 16 supercharges are constrained enough to make their study particularly tractable, and were thought to be completely classified in seven and higher dimensions. In this talk I will show how a careful treatment of M-Theory on a K3 surface with possible frozen ADE singularities naturally generates alternative versions for three of the moduli spaces of string vacua in seven dimensions, one of which can be argued to uplift to nine dimensions. I will then explain how the associated vacua are described by new string theories obtained from known ones by turning on a discrete theta angle. These theories differ from their known siblings at the level of massive states, and exhibit the special property of being the only ones with 16 supercharges having an incomplete spectrum of BPS strings.

Institut Henri Poincaré, salle 314, 3ème étage