



INSTITUTE OF PHYSICS IPHYS

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## High Energy Theoretical Physics Seminar

Lundi 1<sup>er</sup> juillet 2019 à 14h00

Salle BSP 727, (Cubotron) EPFL

**Apratim Kaviraj**

*(ENS, Paris)*

***“Supersymmetry and dimensional reduction in  
random field models”***

Abstract:

In this talk I will discuss an ongoing work on random field models. I will begin by reviewing a conjecture by Parisi and Sourlas that the infrared fixed point of certain disordered theories should be described by a supersymmetric conformal field theory (CFT). From this it can be argued that the disordered CFT admits a description in terms of a CFT in two less spacetime dimensions but without the disorder. I will explain how the dimensional reduction is realized. Finally I will discuss when and how the RG flow of the random field theory reaches the SUSY fixed point.