



— Cours thématiques du CPHT —

# An Introduction to Conformal Field Theory in 2 + 1 Dimensions

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**April 7 & 11, 2025 from 11:00 to 13:00**

## Abstract

In this series of lectures, I will explore conformal field theories (CFTs) in 2 + 1 dimensions and the renormalisation group flows connecting them. I will begin by examining scalar CFTs, which correspond to Wilson-Fisher fixed points in  $4 - \varepsilon$  dimensions, focusing on their stability properties from a modern perspective. Following this, I will discuss 2 + 1 dimensional gauge theories with bosonic or fermionic matter. If time permits, I will also discuss the connections between these CFTs and quantum/statistical phase transitions.

**Organisers:** A. Fiorucci, P. M. Petropoulos, M. Sanchez

