

Title: Boundary behavior at classical and quantum phase transitions

Abstract: There has been a lot of recent interest in the boundary behavior of materials. This interest is driven in part by the field of topological states of quantum matter, where exotic protected boundary states are ubiquitous. In this talk, I'll ask: what happens at a boundary of a system, when the bulk goes through a phase transition. While this question was studied in the context of classical statistical mechanics in the 70s and 80s, basic aspects of the boundary phase diagram for the simplest classical phase transitions have been missed until recently. I'll describe progress in this field, as well as some extensions to quantum phase transitions.