Local weak limits of Ising and Potts measures on locally tree-like graphs

Abstract:

Consider a sequence of growing graphs converging locally weakly to an infinite (possibly random) tree. As there are uncountably many Ising and Potts Gibbs measures on the limiting tree in the low-temperature regime it is not a priori clear whether the local weak limit of such measures exists and if so, identifying the limit remains a challenge. In this talk, I will describe these limits. The talk is based on joint works with Amir Dembo and Allan Sly.