

# Ferromagnetic Ising measures on large locally tree-like graphs

*Amir Dembo*  
*Stanford University*

Consider the ferromagnetic Ising measure on sparse finite graphs converging locally to limiting tree  $T$ . In case  $T$  is  $d$ -regular, it was recently shown by Montanari, Mossel and Sly that these Ising measures converge locally to symmetric mixture of plus and minus (boundary conditions) Ising measures on  $T$ , and for expander graphs, conditioned on positive magnetization these measures converge to plus-boundary condition Ising measure on  $T$ .

In this talk, based on a joint work with Anirban Basak, I will review this result and explain what happens for more general, random limiting tree  $T$ .