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*Random gradient models.*

**ABSTRACT:** We consider statistical mechanics models of continuous spins in a disordered environment. These models have a natural interpretation as effective interface models. It is well known that without disorder there are no interface Gibbs measures in infinite volume in dimension  $d = 2$ , while there are gradient Gibbs measures describing an infinite-volume distribution for the increments of the field, as was shown by Funaki and Spohn. It was also shown by van Enter and Külske that adding a disorder term prohibits the existence of such gradient Gibbs measures for general interaction potentials in  $d = 2$ .

We discuss in this talk the questions of existence of surface tension and of existence and uniqueness of shift-invariant, respectively shift-covariant, gradient Gibbs measures for gradient interactions without disorder with non-convex potential and for interactions with disorder with strictly convex potential. (Based on joint works with J-D.Deuschel and C. Kuelske).