
MARTIN HAIRER, Warwick, U.K.

On random rubber bands

A rubber band constrained to remain on a manifold evolves by trying to shorten its length, eventually settling on some minimal closed geodesic, or collapsing entirely. It is natural to try to consider a noisy version of such a model where each segment of the band gets pulled in random directions. Trying to build such a model turns out to be surprisingly difficult and generates a number of nice geometric insights, as well as some beautiful algebraic and analytical objects.