

## **Hessian spectrum at the global minimum of elastic manifold**

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The model of elastic manifold was considered for disorder systems by Fisher (1986), Mezard and Parisi (1990s) among many others. Using Parisi's award winning replica trick, Fyodorov and Le Doussal predicted the high dimensional limit of the Hessian spectrum at the global minimum of elastic manifold, and discovered phase transitions according to different levels of replica symmetry breaking. In this talk, I will present a solution to their conjecture in the so called replica symmetric regime. Our method is based on landscape complexity, or counting the number of critical points of the Hamiltonian.

报告人简介：曾强，本科和研究生分别就读于北京师范大学和北京大学，在伊利诺伊大学香槟分校获得博士学位，其后于哈佛大学、MSRI 和西北大学做博士后，在纽约城市大学皇后学院任助理教授，现为中国科学院数学与系统科学研究院副研究员。研究领域是自旋玻璃和非交换概率，在副本对称破缺、景观复杂性、非交换鞅理论、集中和泛函不等式等方向做了一些工作。