## 1163-37-1286 **Razvan Teodorescu\*** (razvan@usf.edu), CMC 314, University of South Florida, 4202 E Fowler Ave, Tampa, FL 33620, and **Iuliana Teodorescu** and **Antonino Travia**. Effective dimensions of fractal dynamical systems and applications.

We consider the effective dimensions of dynamical systems of integrable type, subject to projections (and random projections) to vector subspaces. The main motivating problem has to do with the emergence of scale-free structures in effective 2D systems based on noncommutative gauge theories. In 2D, the absence of a definite lengthscale leads to conformal invariance, and therefore a rich algebraic structure for the effective theory. We explore the fundamental result and its possible applications to 2D turbulent flows. (Received September 15, 2020)