# Dimensional fragility of the Kardar-Parisi-Zhang universality class

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**Abstract-**

**We assess the dependence on substrate dimensionality of the asymptotic scaling behavior of a whole family of equations that feature the basic symmetries of the Kardar-Parisi-Zhang (KPZ) equation. Even for cases in which, as expected from universality arguments, these models display KPZ values for the critical exponents and limit distributions, their behavior deviates from KPZ scaling for increasing system dimensions. Such a fragility of KPZ universality contradicts naive expectations, and questions straightforward application of universality principles for the continuum description of experimental systems.**

**Index Terms- kinetic growth processes (theory), self-affine roughness (theory), kinetic roughening (theory)**

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