Large scale geometry of two dimensional KPZ models

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Many two dimensional random growth models such as first or last passage percolation are predicted to belong to the KPZ universality class under mild assumptions on the underlying noise. A few exactly solvable models for which these predictions can rigorously be verified have been extensively studied in recent years, where a wide variety of methods including asymptotic analysis of exact formulae, Gibbsian line ensemble techniques, coupling techniques and comparisons with stationary models have been employed to obtain detailed information about these models. We shall discuss a line of work where one-point estimates obtained from such techniques are used together with various probabilistic arguments to understand aspects of large scale geometry of such models. We shall primarily focus on the zero temperature setting, and also mention some recent progress in the positive temperature set-up.