State selection in driven out of equilibrium systems – noisy stabilized Kuramoto-Sivashinsky equation

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This talk discusses the problem of pattern selection in driven out of equilibrium systems by stochastic noise by two methods: (i) Computer simulation of Langevin equation and (ii) construction of a potential and minimizing this. Both methods work for a test case – a stabilized Kuramoto-Sivashinsky equation with additive stochastic noise which is essential for selecting a unique stationary state at late time. The second method is mainly analytic and the state minimizing the potential agrees with the numerical result.