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## Stochastic wave equation model for heat-flow in non-equilibrium statistical mechanics

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We consider a one-dimensional non-linear stochastic wave equation system modeling heat flow between thermal reservoirs at different temperatures. The problem of solving these equations in Sobolev spaces of low regularity will be reviewed. The system with ultraviolet cutoffs has, for each cutoff, a unique invariant measure exhibiting steady-state heat flow. Estimates uniform in the cutoffs will be provided on the covariances of the stationary fields corresponding to these invariant measures. The question of field regularity will also be discussed.

*The work was developed in collaboration with Luc Rey-Bellet and Yao Wang.*

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