Exponential integrators for stochastic partial differential equations

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The aim of the presentation is to give a brief, and hopefully not too technical, overview on the numerical discretisation of various stochastic partial differential equations (SPDEs) by exponential-type integrators. We begin by introducing SPDEs and the main ideas behind exponential integrators. We next present recent results on the use of such numerical schemes for the time integration of stochastic wave equations, stochastic Schrödinger equations, and stochastic heat equations.