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Alex David Rodriguez* (arodr1128@fiu.edu), 11201 SW 50th terrace, Miami, FL 33165.

Solutions to the 1D focusing stochastic NLS equation with spatially correlated noise.

We study the focusing stochastic nonlinear Schroedinger equation in one spatial dimension with multiplicative noise, driven by a Wiener process in the L^2 -critical and supercritical cases. We investigate how the energy is affected by spatially correlated random perturbations, the influence of the noise on the global dynamics measuring the probability of blow-up versus scattering behavior, and the effect of the spatially correlated noise on the blow-up behavior. We conclude that such random perturbations do not influence the blow-up dynamics, except for shifting of the blow-up center location. Based on joint work with A. Millet, S. Roudenko and K. Yang. (Received September 21, 2021)