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# Dynamics of solitary wave under random forcing

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The soliton propagation under external random force is considered within the forced Korteweg-de Vries equation. In general case, the averaged one-soliton solution transforms into the Gaussian impulse with decreased amplitude and increased width. An analytical solution is obtained for the case of infinite correlation scale, and it is compared with the known Wadati's soliton solution under the Gaussian white noise. The numerical results, presented for the intermediate correlation scales, demonstrate the details of the wave process. The distribution functions of the soliton parameters are studied.