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Periodic and almost periodic solutions for semilinear stochastic equations. (English)

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Stochastic Anal. Appl. 13, No. 1, 13-33 (1995).

The problem of the existence of periodic and almost periodic solutions in distribution of semilinear stochastic equations is analyzed. Under a dissipativity condition on the linear part the periodic and almost periodic solutions are obtained. For the affine case it is the mean square stability of linear part which ensures the periodicity on almost periodicity properties. There are proved five theorems, and an example with a parabolic linear part fulfilling the various hypotheses completes the analysis.

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MSC:

60H25 Random operators and equations (aspects of stochastic analysis)

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Keywords:

existence of periodic and almost periodic solutions; semilinear stochastic equations; mean square stability; almost periodicity

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