

Fal'ko, N. S.

Almost periodic Hill equations with bounded solutions. (Russian) Zbl 0825.34004

[Mat. Issled.](#) 112, 174-179 (1990).

It is shown that in the case, when $p \in C^2(\mathbb{R}, \mathbb{R})$ is almost periodic and for any $\bar{p} \in \bar{\Sigma}_p$ all the solutions of the equation $\ddot{x} = \bar{p}(t)x$ are bounded, there exists for any $\varepsilon > 0$ such $p_\varepsilon \in C(\mathbb{R}, \mathbb{R})$ that $\sup_t \|p(t) - p_\varepsilon(t)\| < \varepsilon$; p_ε is almost periodic, the condition of inclusion of the Fourier moduli is fulfilled $M_{p_\varepsilon} \subset M_p$, and all solutions of the equation $\ddot{x} = p_\varepsilon(t)x$ are almost periodic.

MSC:

34A30 Linear ordinary differential equations and systems, general

34C27 Almost and pseudo-almost periodic solutions to ordinary differential equations

34D99 Stability theory for ordinary differential equations

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