

On the existence of quasi periodic and almost periodic solutions of neutral functional differential equations

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Abstract: This paper is concerned with the existence of almost periodic solutions of neutral functional differential equations of the form $d/dt Dx_t = Lx_t + f(t)$, where D, L are bounded linear operators from $C := C([-r, 0], \mathbb{R}^n)$ to $\mathbb{R}^n$, f is an almost (quasi) periodic function. We prove that if the set of imaginary solutions of the characteristic equations is bounded and the equation has a bounded, uniformly continuous solution, then it has an almost (quasi) periodic solution with the same set of Fourier exponents as f .

Author Keywords: Almost periodic solution; Neutral functional differential equation; Quasi periodic solution

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