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 $C^{(n)}$ -Almost Automorphic Solutions of Some Nonautonomous Differential Equations.

We are concerned with the existence of $C^{(n)}$ -almost automorphic solutions of the equation $x'(t) = A(t)x(t) + f(t)$ where $A(t)$ is a τ -periodic operator and $f(t)$ is $C^{(n)}$ -almost automorphic. We prove a Massera-type result for the nonautonomous case in C^k . We also show that every bounded mild solution is $C^{(n)}$ -almost automorphic when $A(t) = A$ generates a quasi-compact semigroup of operators. (Received September 12, 2008)