

1116-34-366

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Remarks on Almost Periodic Differential Equations. Preliminary report.

In a number of papers on almost periodic differential equations the restrictive requirement of continuity with respect to time is made. A theory of generalized almost periodic functions is applied to avoid such a requirement. Non-autonomous dynamical systems are obtained for such equations. A mathematical meaning for almost periodic discontinuous functions is given. The behavior of solutions near critical points and periodic orbits are studied by methods of topological dynamics. (Received August 28, 2015)