ICM 1998, Berlin, Aug. 18–27

Abstracts of Short Communications and Posters

Section:

9. Ordinary Differential Equations and Dynamical Systems

1991 MS Classification: 34

Bantsur, Nataliya, Institute of Mathematics of the National Academy of Sciences, Ukraine:

Existence and stability of the periodic and almost periodic solutions of differential equations with maxima

Problems of the existence and stability of periodic (almost periodic) solution to scalar differential equations of the form $x'(t) = -\delta x(t) + p \max\limits_{u \in [t-h;t]} x(u) + f(t)$ is investigated. Here $f(t)$ is a periodic (almost periodic) forcing term, $\delta, p \in R$. We give conditions of global exponential stability for such solution. The uniqueness results for menofold problem are also proved. Part of these results is joint work with E. Trofimchuk.

Reference: N. R. Bantsur, E. P. Trofimchuk Existence and stability of the periodic and almost periodic solutions of quasilinear systems with maxima (to appear).