

Acta Universitatis Palackianae Olomucensis. Facultas Rerum Naturalium. Mathematica

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Acta Universitatis Palackianae Olomucensis. Facultas Rerum Naturalium. Mathematica, Vol. 28 (1989), No. 1, 61--63

Persistent URL: <http://dml.cz/dmlcz/120223>

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ACTA UNIVERSITATIS PALACKIANAE OLOMUCENSIS
FACULTAS RERUM NATURALIUM

1989

MATHEMATICA XXVIII

VOL. 94

Katedra matematické analýzy a numerické matematiky
přírodovědecké fakulty Univerzity Palackého v Olomouci
Vedoucí katedry: Doc.RNDr. Jindřich Palát, CSc.

ERRATUM TO MY PAPER:
ON THE „POINCARÉ–LYAPUNOV”–LIKE SYSTEMS
OF THREE DIFFERENTIAL EQUATIONS

JAN ANDRES

(Received January 15, 1988)

In the paper [1] the following statement has been given under some natural restrictions (smoothness, θ -periodicity in t , etc.) for system of the form

$$\begin{aligned}x' &= f(x) + p(t, x, y, z) \\y' &= F(x) + G(y) + Cz + q(t) \\z' &= h(x) + g(y) + cz + r(t, x, y, z),\end{aligned}\tag{1}$$

where the functions $p, q, r, q'(t), F'(x), G'(x)$ are bounded ($|G'(x)| \leq 2\pi/\theta$) with $q(t)$, $q'(t)$ having a zero mean value over the period θ .

Theorem. System (1) admits a θ -periodic solution, provided $C \neq 0$ and

$$1) \liminf_{|x| \rightarrow \infty} f(x) \operatorname{sgn} x > P \quad (:= \sup_{t \in [0, \theta]} |p(t, x(t), y(t), z(t))|)$$

or $\limsup_{|x| \rightarrow \infty} f(x) \operatorname{sgn} x < -P$,

2) $\lim_{|y| \rightarrow \infty} |cBy + cG(y) - Cg(y)| = \infty$,

3) $|c + G'(y)| \geq \delta > 0$ for all $y \in \mathbb{R}^1$.

However, an evidently incorrect condition 2) should read

2) $\lim_{|y| \rightarrow \infty} [cG(y) - Cg(y)] \operatorname{sgn} y = \pm \infty$ for all $y \in (0, 1)$.

Moreover, an information of several further papers dealing with similar "Poincaré-Lyapunov" - like systems has appeared to my knowledge since the time of submitting the paper [1] for the publication (see [2] - [6]).

Souhrn

OPRAVA K MÉMU ČLÁNKU: O SYSTÉMECH TŘÍ DIFERENCIÁLNÍCH ROVNIC "POINCARÉ - LJAPUNOVova" TYPU

Je opravena jedna ze tří postačujících podmínek existence θ -periodického řešení systému (1). Přehled literatury z [1] o systémech daného typu je doplněn pěti dalšími tituly.

Резюме

ИСПРАВЛЕНИЕ К МОЕЙ СТАТЬИ: О СИСТЕМАХ ТРЕХ ДИФЕРЕНЦИАЛЬНЫХ УРАВНЕНИЙ ТИПА "ПУАНКАРЕ - ЛЯПУНОВА"

Исправлено одно из трех достаточных условий существования

θ - периодического решения системы (1). Одновременно дополнен список литературы из [1] пятью работами, которые касаются вышеупомянутых систем.

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