

## Werk

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$$\begin{aligned}
+ \sum_{j=1}^m \|I - U(t_j, t_{j-1})\| &\leq \sum_{j=1}^m (1 + K \operatorname{var}_a^{t_j - 1} U(t_{j-1}, \cdot)) \left\| \int_{t_{j-1}}^{t_j} [dA(\sigma)] U(\sigma, t_{j-1}) \right\| \leq \\
&\leq (1 + K^2) K(\operatorname{var}_a^b A) < \infty.
\end{aligned}$$

This completes the proof.

Remark 4. Let us assume

$$\det [I + \Delta^+ A(t)] \neq 0 \quad \text{for all } t \in [a, b]$$

instead of (4). Then the assertion of Proposition 2 has to be modified as follows.

Given an arbitrary  $n$ -vector  $c$  there exists at least one solution  $\tilde{x}$  of (1) on  $[a, b]$  such that  $x(b) = c$ . If  $t_0 \in [a, b]$  and  $x$  is an arbitrary solution of (1) on  $[t_0, b]$  which is bounded on  $[t_0, b]$ , then  $x(t) \equiv \tilde{x}(t)$  on  $[t_0, b]$ .

The formulation and the proof of the statements analogous to Theorems 1 and 2 and Proposition 3 is evident. (The corresponding fundamental matrix solution  $V(t, s)$  is defined for  $a \leq t \leq s \leq b$  and fulfils the relation

$$V(t, s) = I - \int_t^s [dA(\sigma)] V(\sigma, s) .)$$

#### References

- [1] Hildebrandt T. H., Introduction to the Theory of Integration, Academic Press, New York and London, 1963.
- [2] Hildebrandt T. H., On systems of linear differentio-Stieltjes-integral equations, Illinois J. Math. 3, 1959, 352–373.
- [3] Kurzweil J., Generalized ordinary differential equations and continuous dependence on a parameter, Czech. Math. J. 7 (82), 1957, 418–449.
- [4] Kurzweil J., Generalized ordinary differential equations, Czech. Math. J. 8 (83), 1958, 360–389.
- [5] Kurzweil J., Unicity of solutions of generalized differential equations, Czech. Math. J. 8 (83), 1958, 508–509.
- [6] Schwabik Št., Stetige Abhängigkeit von einem Parameter und invariante für verallgemeinerte Differentialgleichungen, Czech. Math. J. 19 (94), 1969, 398–427.
- [7] Schwabik Št., Verallgemeinerte gewöhnliche Differentialgleichungen; Systeme mit Impulsen auf Flächen, Czech. Math. J. 20 (95), 1970, 468–490 and 21 (96), 1971, 198–212.
- [8] Schwabik Št., Bemerkungen zu Stabilitätsfragen für verallgemeinerte Differentialgleichungen, Čas. pěst. mat. 96, 1971, 57–66.
- [9] Schwabik Št., Verallgemeinerte lineare Differentialgleichungssysteme, Čas. pěst. mat. 96, 1971, 183–211.
- [10] Schwabik Št., On the relation between Young's and Kurzweil's concepts of Stieltjes integral, Čas. pěst. mat., to appear.
- [11] Vrkoč I., Note to the unicity of generalized differential equations, Czech. Math. J. 8 (83), 1958, 510–511.

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