ERRATUM TO "ON AN EXISTENCE AND UNIQUENESS THEORY FOR NONLINEAR DIFFERENTIAL- ALGEBRAIC EQUATIONS"¹

*Sebastian Reich*²

On page 355 the definition of the derivative arrays has been stated incorrectly. The paragraph including equation (6) should be replaced by:

Let a DAE of type (3) be given. Then, for any nonnegative integer m , we consider, as long as the mappings involved are defined and differentiable, the nonlinear system of equations

$$G_m(t, x, p) = 0, \quad (6)$$

where the mappings $G_m: J \times U \times \mathbb{R}^n \rightarrow \mathbb{R}^l$, $l = 2^m n$, are defined by the following recursion:

$$\begin{aligned} G_0(t, x, p) &:= F(t, x, p), \\ G_{i+1}(t, x, p) &:= \begin{pmatrix} G_i(t, x, p) \\ \hat{G}_i(t, x, p) \end{pmatrix} \end{aligned}$$

with

$$\hat{G}_i(t, x, p) := Q_i(t, x, p)[D_1 G_i(t, x, p) + D_2 G_i(t, x, p)p],$$

where $Q_i(t, x, p)$ is a projection along $\text{im}[D_3 G_i(t, x, p)]$. We call the mapping G_m in (6) the *derivative array* of order m .

All the other formulations and conclusions of Section 5 remain valid without further modifications.

¹ *Circuits Systems Signal Process.*, Vol. 10, No. 3, pp. 343–359, 1991.

² Karl-Weierstrasse-Institute of Mathematics, Mohrenstrasse 39, 1086 Berlin, Federal Republic of Germany.