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*Existence results for initial value problems of first-order systems of Stieltjes differential equations*

We present the basic theory of existence and uniqueness of solutions for systems of differential equations with the usual derivative replaced by a Stieltjes derivative. This derivative, called  $g$ -derivative, was introduced by Lopez Pouso and Rodriguez. The problems that we consider contain as particular cases dynamic equations on time scales and impulsive ordinary differential equations. Our results were obtained in collaboration with Lopez Pouso.