

## Greatest and least solutions of measure differential equations

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Our aim is to discuss the existence of greatest and least solutions of the so-called measure differential equations, i.e., integral equations of the form

$$y(t) = y_0 + \int_a^t f(y(s), s) dg(s),$$

where the integral on the right-hand side is the Kurzweil-Stieltjes integral, and  $g$  is a nondecreasing function. Our approach to extremal solutions does not rely on iterative techniques or on lower/upper solutions. We also prove a fairly general local existence theorem and an analogue of Peano's uniqueness theorem for measure differential equations.

This is a joint work with A. Slavík.

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