Generalized ODEs: an overview and recent results

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Abstract

In 1957, Jaroslav Kurzweil introduced in the literature a class of integral equations called *generalized ordinary differential equations* (GODEs, for short). His initial motivation was to use them to investigate results concerning continuous dependence of solutions with respect to parameters. However, these equations have been shown to be a powerful tool to investigate other types of equations, such as impulsive equations, dynamic equations on time scales, measure differential equations, functional dynamic equations on time scales, measure neutral functional differential equations, neutral functional dynamic equations on time scales, among others.

In this talk, we provide a basic overview of generalized differential equations and summarize the recent results in this area.

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