

## عنوان مقاله:

Numerical Solution of First-Order differential equation based Z-numbers using Neural Network

## محل انتشار:

سومین کنفرانس سیستم های تصمیم گیری هوشمند (سال: 1397)

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## خلاصه مقاله:

In this work, we have the general form of a First-Order differential equation based Z-Valuations. Then a new method for solving these equations using generalized neural networks offer. The proposed method consists of a function is based on Z-Valuations. that s mean,  $Z(t) = (AT(t), BT(t))$ , The first component,  $BT(t)$ , is a restriction (constraint) on the values which a real-valued uncertain variable,  $AT(t)$ , is allowed to take. The second component is a measure of reliability (certainty) of the first component. Since the function values and are fuzzy. We use the technique of  $\alpha$ -cutting, both the above functions will be converted to real functions. that s mean,  $Z(t) = (AT(t), BT(t))$ . Then, using the method of least squares error, we trained neural network so that the solution proposed is a convenient approximation of the exact answer. An example is shown in a proposed method, an appropriate method to approximate the original answer.

## کلمات کلیدی:

Fuzzy Numbers, Z-numbers, First-Order differential equation, Neural Network

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/855065>

