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Kenneth Njengele Dukuza*, University of Pretoria, Department of Mathematics, P/bag x 20, Pretoria, South Africa. *Nonstandard Finite Difference (NSFD) methods for some continuous models of ordinary differential equations with a local bifurcation.*

We propose some procedures for the nonstandard discretization of some models of ordinary differential equations that have different bifurcation properties at certain parameter values. The main objective is to ensure that, under the same conditions, the constructed NSFD schemes capture the bifurcation properties of the continuous models. (Received September 12, 2020)