

The applications of generalized logistic map in some mathematical models

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Probably the most famous model with chaotic behaviour is the logistic map. The relative simple form of logistic map made this equation suitable for modelling in many fields, including biology, physics, stock market, cryptography, traffic, tourism models...Lately, as a need to optimize some of those models, some generalizations of logistic maps occurred, see [2, 3]. We present few of these generalizations and their implementation in some mathematical models. Finally we propose one discrete dynamical traffic flow model as a modification of model from [1] based on the flow-density-speed fundamental diagram and Pipes-Munjal model from 1967 and analyse its stability.

References

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