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Stability of random Perturbed Logistic Model.

We are going to study a model that represents the rate of changes of the population with a limited environmental resources described by, p'(t)=p(a-b.p)+g(t,p) where a measures the growth rate in the absence of the restriction force and a/b represents the carrying capacity of the environment and b represent restricted factor b. The random perturbation g(t, p) is generated by random changes in the environment. The behavior of the solution of this model for continuous and discrete case when g(t,p)=r.p with a random change factor r will be studied. The stability and the behavior of the equilibrium point will also be investigated. A computational approach to simulate the solution of this random differential equation and also a regression method will be developed. (Received September 17, 2019)