

962-35-804

Kbenesh W. Blayneh* (kblayneh@cis.famu.edu), Florida A&M University, Department of Mathematics, Jackson Davis 316, Tallahassee, FL 32307. *Asymptotic Dynamics of the Density of Hierarchical Size-Structured Population.*

A hierarchical size-structured population model is considered in which the birth, death and growth rates are functions of certain weighted integrals of population density. This model is reduced to a coupled pair of ordinary and partial differential equations for the total population size and for a weighted integral of the density function, respectively. This pair of equations, uncoupled from the density function, is used to study the asymptotic dynamics of the density function and the total population size. (Received September 26, 2000)