

Properties of solutions of Volterra difference equations of nonconvolution type

Ewa Schmeidel

University of Białystok, Poland
eschmeidel@math.uwb.edu.pl

Session: 7. Difference equations and their application in the mathematical modeling

In many real-life situations, the present state and the manner in which it changes are both dependent on the past. In population dynamics, the birth-rate is clearly a function of the state of the population at some previous date, as well as its current state, because of the significance of the gestation period. In this sense, the population has a "memory".

Volterra difference equations, whose solution is defined by the whole previous history, are widely used for modeling processes in many fields.

Some properties of solutions of Volterra difference equations of nonconvolution type will be presented.