

Crank-Nicholson difference scheme for the system of nonlinear parabolic equations observing epidemic models with general nonlinear incidence rate

Evren Hincal¹, Bilgen Kaymakamzade¹, and A. Ashyralyev¹

¹Near East University

April 27, 2020

Abstract

Crank-Nicholson difference scheme for the system of nonlinear parabolic equations observing epidemic models with general nonlinear incidence rate is investigated. The theorem on the existence and uniqueness of a bounded solution of Crank- Nicholson difference scheme uniformly with respect to time step is established. Applications of the theoretical results are presented for the four systems of one and multidimensio

Hosted file

ABE.pdf available at <https://authorea.com/users/315201/articles/445565-crank-nicholson-difference-scheme-for-the-system-of-nonlinear-parabolic-equations-observing-epidemic-models-with-general-nonlinear-incidence-rate>