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*Dynamically-consistent NSFD Schemes for Epidemic Models.*

This talk addresses the problem of designing robust numerical methods, constructed using Mickens' Non-standard finite-difference discretization, for solving nonlinear dynamical systems associated with the transmission dynamics of human diseases. The central objective is to ensure that the discrete-time models to be developed are dynamically-consistent with the corresponding continuous-time models being approximated. In particular, key qualitative properties of the continuous-time models (such as positivity, boundedness, bifurcations, asymptotic stability etc.) must be preserved. (Received September 12, 2012)