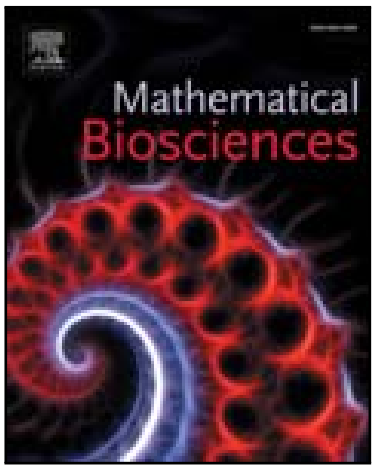

Numerical Schemes for Solving and Optimizing Multiscale Models with Age of Hepatitis C Virus Dynamics

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Highlights

- We investigate numerical solutions to the multi-scale model of hepatitis C virus dynamics
- We show that the long-term approximation is an underestimate of the PDE model solution
- The numerical solution should consider previous iterations of the associated integral in the model, making problematic the use of canned solvers Considerable gain in efficiency can be achieved by using adaptive stepsize methods
- We compare between several numerical schemes and conclude that an implicit adaptive stepsize method is both efficient and stable
- We demonstrate the use of a numerical optimization scheme for the parameter estimation performed directly from the equations