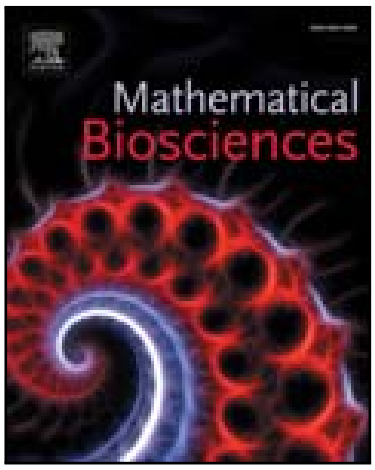

Optimal control of a malaria model with asymptomatic class and superinfection

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Highlights

- A malaria dynamical model with an asymptomatic class is introduced.
- The possibility of superinfection of asymptomatic individuals is investigated.
- The model exhibits backward bifurcation generated by two mechanisms: standard incidence and superinfection
- The optimal control strategies to reduce the total number of symptomatic and asymptomatic individuals are explored.