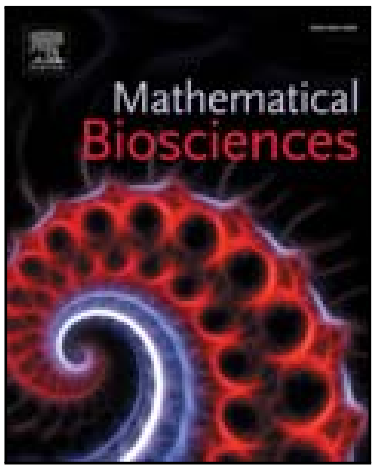

A generic model for a single strain mosquito-transmitted disease with memory on the host and the vector

Tridip Sardar, Sourav Rana, Sabyasachi Bhattacharya,
Kamel Al-Khaled, Joydev Chattopadhyay

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Highlights

- Fractional differential equation is used to study memory in host & vector
- Models are fitted to published monthly dengue incidence data from Venezuela
- Reproduction numbers and their upper bounds are analytically derived
- Model selection criterion is used to derive the best model among proposed models
- To control epidemics, memory of the host and the vector play a crucial role