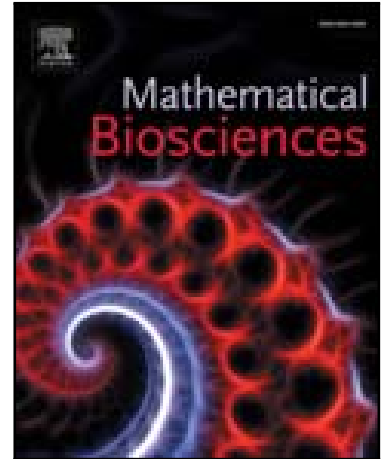


Accepted Manuscript

Mathematical analysis of a power-law form time dependent vector-borne disease transmission model

Tridip Sardar, Bapi Saha

PII: S0025-5564(16)30243-7
DOI: [10.1016/j.mbs.2017.03.004](https://doi.org/10.1016/j.mbs.2017.03.004)
Reference: MBS 7923



To appear in: *Mathematical Biosciences*

Received date: 14 October 2016
Revised date: 28 January 2017
Accepted date: 1 March 2017

Please cite this article as: Tridip Sardar, Bapi Saha, Mathematical analysis of a power-law form time dependent vector-borne disease transmission model, *Mathematical Biosciences* (2017), doi: [10.1016/j.mbs.2017.03.004](https://doi.org/10.1016/j.mbs.2017.03.004)

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

1 Highlights

- 2 • Using theory of a stochastic process, a general time dependent single strain vector borne
3 disease model is derived.
- 4 • Under certain choice of time dependent transmission kernel the proposed model can be con-
5 verted to a classical integer order system.
- 6 • For a power-law form time dependent kernel the proposed model is converted to a fractional
7 order system.
- 8 • Mathematical properties of the proposed model are explored.
- 9 • Model is fitted to the weekly dengue incidence data of San Juan, Puerto Rico.
- 10 • Several important parameters of the newly proposed model are estimated from data.

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات