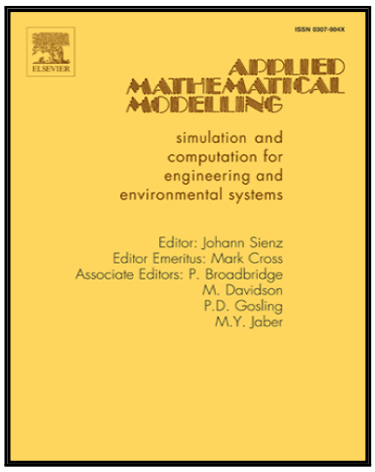

Adaptive dispersal effect on the spread of a disease in a patchy environment

Chang-Yuan Cheng

PII: S0307-904X(17)30153-1
DOI: 10.1016/j.apm.2017.03.004
Reference: APM 11645

To appear in: *Applied Mathematical Modelling*

Received date: 19 August 2014
Revised date: 30 September 2016
Accepted date: 6 March 2017

Please cite this article as: Chang-Yuan Cheng, Adaptive dispersal effect on the spread of a disease in a patchy environment, *Applied Mathematical Modelling* (2017), doi: 10.1016/j.apm.2017.03.004

Highlight

- A multipatch model with disease transmission is developed.
- The effect of media induced adaptive dispersal is investigated.
- The basic reproduction number depends on the intensity of media coverage.
- Global dynamics is confirmed in both disease-free and pandemic cases.