
Shigui Ruan - Publications

PUBLICATIONS

1. Q. Huang, X. Huo, D. Miller and S. Ruan, [Modeling the seasonality of Methicillin-resistant *Staphylococcus aureus* infections in hospitals with environmental contamination](#), *Journal of Biological Dynamics* (accepted)
2. J. Chen, J. C. Beier, R. S. Cantrell, C. Cosner, D. O. Fuller, Y. Guan, G. Zhang and S. Ruan (2018), [Modeling the importation and local transmission of vector-borne diseases in Florida: The case of Zika outbreak in 2016](#), *Journal of Theoretical Biology* 455, 342-356.
3. L. Zou, J. Chen, X. Feng and S. Ruan, [Analysis of a dengue model with vertical transmission and application to the 2014 dengue outbreak in Guangdong Province, China](#), *Bulletin of Mathematical Biology* (in press)
4. B. Tang, X. Huo, Y. Xiao, S. Ruan and J. Wu, A conceptual model for optimizing vaccine coverage to reduce vector-borne infections in the presence of antibody-dependent enhancement, *Theoretical Biology and Medical Modelling* (accepted)
5. C. Tian and S. Ruan, [On an advection-reaction-diffusion competition system with double free boundaries modeling invasion and competition of *Aedes Albopictus* and *Aedes Aegypti* mosquitoes](#), *Journal of Differential Equations* (in press).
6. G. Zhao and S. Ruan (2018), [Spatial and temporal dynamics of a nonlocal viral infection model](#), *SIAM Journal on Applied Mathematics* 78, 1954-1980.
7. W.-J. Bo, G. Lin and S. Ruan (2018), [Traveling wave solutions for the periodic reaction-diffusion systems](#), *Discrete and Continuous Dynamical Systems* 38, 4329-4351.
8. Z. Liu, J. Chen, J. Pang, P. Bi and S. Ruan, [Modelling and analysis of a nonlinear age-structured model for tumor cell populations with quiescence](#), *Journal of Nonlinear Science* (accepted).
9. J. Pang, J. Chen, Z. Liu, P. Bi and S. Ruan, [Local and global stabilities of a viral dynamics model with infection-age and immune response](#), *Journal of Dynamics and Differential Equations* (in press)
10. J. Huang, S. Liu, S. Ruan and D. Xiao (2018), [Bifurcations in a discrete predator-prey model with nonmonotonic functional response](#), *Journal of Mathematical Analysis and Applications* 264, 201-230.
11. L. Zhao, Z.-C. Wang and S. Ruan, [Traveling wave solutions in a two-group SIR epidemic model with constant recruitment](#), *Journal of Mathematical Biology* (online).
12. W.-B. Xu, W.-T. Li and S. Ruan (2018), [Fast propagation for reaction-diffusion cooperative systems](#), *Journal of Differential Equations* 265, 645-670.
13. X. Zhang, L. Zou, J. Chen, Y. Fang, J. Huang, J. Zhang, S. Liu, G. Feng, C. Yang and S. Ruan (2017), [Avian influenza A H7N9 virus has been established in China](#), *Journal of Biological Systems* 25(4), 605-623.

14. S. Ruan, J. Wei and D. Xiao (2017), [On the distribution of zeros of a third-degree exponential polynomial with applications to delayed biological systems](#), *Journal of Nanjing University of Information Science and Technology* 9(4), 381-390.
15. S. Ruan (2017), [Spatiotemporal epidemic models for rabies among animals](#), *Infectious Disease Modelling* 2, 277-287.
16. L.-M. Cai, X.-Z. Li, B. Fang and S. Ruan (2017), [Global properties of vector-host disease models with time delays](#), *Journal of Mathematical Biology* 74, 1397-1423.
17. L. Zou, J. Chen and S. Ruan (2017), [Modeling and analyzing the transmission dynamics of visceral leishmaniasis](#), *Mathematical Biosciences and Engineering* 14, 1586-1604.
18. L. Wang and S. Ruan (2017), [Modeling nosocomial infections of Methicillin-Resistant *Staphylococcus aureus* with environment contamination](#), *Scientific Reports* 7, 580. doi:10.1038/s41598-017-00261-1.
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20. S. Ruan (2017), [Modeling the transmission dynamics and control of rabies in China](#), *Mathematical Biosciences* 286, 65-93.
21. C. Tian and S. Ruan (2017), [A free boundary problem for *Aedes aegypti* mosquito invasion](#), *Applied Mathematical Modelling* 46, 203-217.
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