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On the minimal speed of traveling waves for a nonlocal delayed reaction-diffusion equation.
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Nonlinear Oscil., N.Y. 13, No. 1, 1-9 (2010) and *Neliniñi Kolyvannya* 13, No. 1, 1-9 (2010).

Summary: In this note, we give constructive upper and lower bounds for the minimal speed of propagation of traveling waves for a nonlocal delayed reaction-diffusion equation.

MSC:

35K57 Reaction-diffusion equations

Cited in **2** Documents

Full Text: [DOI](#)

References:

- [1] S. A. Gourley, J. So, and J. Wu, "Nonlocality of reaction-diffusion equations induced by delay: biological modeling and nonlinear dynamics," *J. Math. Sci.*, 124, 5119–5153 (2004). · [Zbl 1128.35360](#) · [doi:10.1023/B:JOTH.0000047249.39572.6d](#)
- [2] W.-T. Li, S. Ruan, and Z.-C. Wang, "On the diffusive Nicholson's blowflies equation with nonlocal delay," *J. Nonlinear Sci.*, 17, No. 6, 505–525 (2007). · [Zbl 1134.35064](#) · [doi:10.1007/s00332-007-9003-9](#)
- [3] J. So, J. Wu, and X. Zou, "A reaction-diffusion model for a single species with age structure. I. Travelling wavefronts on unbounded domains," *Proc. Roy. Soc. A*, 457, 1841–1853 (2001). · [Zbl 0999.92029](#) · [doi:10.1098/rspa.2001.0789](#)
- [4] E. Trofimchuk, P. Alvarado, and S. Trofimchuk, On the Geometry of Wave Solutions of a Delayed Reaction-Diffusion Equation, e-print: [arXiv:math/0611753v2 \[math. DS\]](#) (2008).
- [5] Z.-C. Wang, W.-T. Li, and S. Ruan, "Traveling fronts in monostable equations with nonlocal delayed effects," *J. Dyn. Diff. Equat.*, 20, 573–607 (2008). · [Zbl 1141.35058](#) · [doi:10.1007/s10884-008-9103-8](#)
- [6] S. Ma, "Traveling waves for nonlocal delayed diffusion equations via auxiliary equations," *J. Different. Equat.*, 237, 259–277 (2007). · [Zbl 1114.34061](#) · [doi:10.1016/j.jde.2007.03.014](#)
- [7] K.W. Schaaf, "Asymptotic behavior and traveling wave solutions for parabolic functional differential equations," *Trans. Amer. Math. Soc.*, 302, 587–615 (1987). · [Zbl 0637.35082](#)
- [8] E. Trofimchuk and S. Trofimchuk, "Admissible wavefront speeds for a single species reaction-diffusion equation with delay," *Discr. Contin. Dyn. Syst. A*, 20, 407–423 (2008). · [Zbl 1154.34032](#) · [doi:10.3934/dcds.2008.20.407](#)
- [9] J. Wu, D. Wei, and M. Mei, "Analysis on the critical speed of traveling waves," *Appl. Math. Lett.*, 20, 712–718 (2007). · [Zbl 1113.35097](#) · [doi:10.1016/j.aml.2006.08.006](#)
- [10] M. Aguerre, S. Trofimchuk, and G. Valenzuela, "Uniqueness of fast travelling fronts in a single species reaction-diffusion equation with delay," *Proc. Roy. Soc. A*, 464 (2008). · [Zbl 1152.35403](#)

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