

Fisher-Kolmogorov equation with a non-Lipschitzian reaction term

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SUMMARY

We consider the semilinear Fisher-Kolmogorov-Petrovski-Piscounov equation for the advance of an advantageous gene in biology. Its nonsmooth reaction function $f(u)$ allows for the introduction of travelling waves with a new profile. We study existence, uniqueness, and long-time asymptotic behavior of the solutions of the initial value problem to a travelling wave. For the details, see [1, 2].

Keywords: Fisher-Kolmogorov equation, nonsmooth reaction function, travelling waves, long-time behavior

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References

- [1] P. DRÁBEK AND P. TAKÁČ. New patterns of travelling waves in the generalized Fisher-Kolmogorov equation. *Nonlinear Differ. Equ. Appl. (NoDEA)* **23**(2), Article 7, 2016.
- [2] P. DRÁBEK AND P. TAKÁČ. Convergence to travelling waves in the Fisher-Kolmogorov equation with a non-Lipschitzian reaction term. *arXiv:1605.05506v1 [math.AP]*

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