

Curved traveling fronts on a lattice

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We study dynamical systems posed on planar lattices. Throughout the talk we will explore the impact that the spatial topology of the lattice has on the dynamical behaviour of solutions. More specifically, we are interested in the behavior of deformed planar waves which arise as solutions to the Nagumo LDE. In contrast to previous work, the initial perturbation from the flat planar wave need only be bounded. We will make a connection between the evolution of the interface region and the solution of a discrete mean curvature flow with a drift term.

References

- [1] H. Matano and M. Nara, Large time behavior of disturbed planar fronts in the Allen–Cahn equation, *Journal of Differential Equations* 251 (2011), pp. 3522-3557
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