Introduction

In the first part of this series, I showed how to contruct traveling waves for various types of reaction-diffusion equations. I also described the "sliding method" in the framework of ODEs. In the scond part, I will establish various formulas that characterize the unique or minimal speed (depending on the type of equations) of TW. I will also discuss systems and some related equations. In addition to basic knowledge of ordinary differential equations (ODEs), part 1 is the only prerequisite up to this point. Then, I will begin the study of the dynamical properties of reaction-diffusion equations, in particular the geometry of invasions. For this part, some basic knowledge of partial differential equations such as the maximum principle would be useful. However, I will recall in detail the results that I will use.

Plan of part 2

1.Further uniqueness and comparison properties

2.Multi-stable equations

3.Formulas for the TW speeds

4.Traveling waves for systems of reaction-diffusion equations

5.Dynamical properties of reaction-diffusion equations and propagation phenomena