MULTI-DIMENSIONAL TRAVELING FRONTS IN BISTABLE REACTION-DIFFUSION EQUATIONS

MASAHARU TANIGUCHI
Department of Mathematical and Computing Sciences
Tokyo Institute of Technology, Japan
masaharu.taniguchi@is.titech.ac.jp

Abstract

In this lecture I will study
(1) two-dimensional traveling V-form fronts
(2) pyramidal traveling fronts
in the Alle-Cahn equations or the Nagumo equations.

One-dimensional traveling fronts have been studied by Aronson-Weinberger (1975,1981), Fife-McLeod (1977) and Xinfu Chen (1997) and many other works. Two-dimensional traveling fronts are studied by Ninomiya and myself (2005,2006) and Hamel, Monneau and Roquejoffre (2005,2006). Three-dimensional pyramidal traveling fronts are studied by myself (2007) and Kurokawa and myself (2011).