

abstract

GEOMETRIC PDE SEMINAR

Topic:

Speaker:

Affiliation:

Date:

Time/Room:

In this talk, I will discuss the quadruple junction solutions in the entire three dimensional space to a vector-valued Allen-Cahn equation which models multiple phase separation. The solution is the basic profile of the local structure near a quadruple junction in three dimensional crystalline material under the generalized Allen-Cahn model, and is the three dimensional counterpart of triple junction solution which is two dimensional. I will start with one dimensional heteroclinic solutions, and describe how we can construct higher dimensional solutions from the lower dimensional ones, and explain the complications and difficulties in constructing such solution in three dimensions.