1146-35-280

Lianzhang Bao* (lianzhang.bao@gmail.com), No. 2699 Qianjin street, Changchun, Jilin 130012, Peoples Rep of China, and Wenxian Shen (wenxish@auburn.edu). Asymptotic dynamics in logistic type chemotaxis models with a free boundary.

This talk is mainly concerned the dynamics in the logistic type chemotaxis with a free boundary. Such a model with a free boundary describes the spreading of a new or invasive species subject to the influence of some chemical substances in an environment with a free boundary representing the spreading front. The derivation, global bounded solution of the free boundary problem will be investigated first and its asymptotic dynamics of spreading-vanishing dichotomy will be established later. Some numerical simulation results and open problems will also be presented. (Received January 24, 2019)