

Online Seminar on Chemotaxis

Date: 25th of July 2022 17:00 – 18:00 in “Seoul–Tokyo” hour
(which is 10:00 – 11:00 in “Central EU” hour and 16:00 – 17:00 in “Beijing” hour)

Speaker: Tetsuya Yamada (National Institute of Technology, Fukui College)

Title: Global existence and boundedness of solutions to a two dimensional attraction–repulsion Keller–Segel model in the repulsive dominant case

Abstract:

We consider the Cauchy problem for a fully parabolic attraction-repulsion chemotaxis system in two dimensions including the chemotactic coefficient of the attractant β_1 and that of the repellent β_2 . As reported by previous results, the sign of $\beta_1 - \beta_2$ is crucial for the global in time solvability of our problem. Actually, in the attractive dominant case $\beta_1 > \beta_2$ or the balance case $\beta_1 = \beta_2$, the global boundedness of nonnegative solutions has been guaranteed under suitable conditions. In this talk, we will show the global existence and boundedness of nonnegative solutions to our problem in the repulsive dominant case $\beta_1 < \beta_2$.

Organizers: Jie Jiang (jiang@apm.ac.cn) and Kentaro Fujie (fujie@tohoku.ac.jp)