

# Online Seminar on Chemotaxis

Date: 11th of July 2023 10:00 – 11:00 in “Central EU” hour  
(which is 16:00 – 17:00 in “Beijing” hour and 17:00 – 18:00 in “Seoul–Tokyo” hour)

Speaker: Grzegorz Karch (University of Wrocław, Poland)

Title: Concentration phenomena in models of chemotaxis

Abstract:

I will speak about certain versions of a model of chemotaxis (also called the drift-diffusion equation) considered in the whole space with global-in-time bounded solutions. Here, as an example, we may consider the one-dimension parabolic-elliptic Keller-Segel model. In such models, although their solutions are bounded, we may still observe mass concentration phenomena. I will present a methodology which allows us to show a concentration of solutions corresponding to the equation with a small diffusion coefficient.

This talk is based on a joint work with P. Biler, A. Boritchev and Ph. Laurençot and the results were published in

“Concentration phenomena in a diffusive aggregation model” Biler, Piotr; Boritchev, Alexandre; Karch, Grzegorz; Laurençot, Philippe; *J. Differential Equations* 271 (2021), 1092–1108.

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Seminar website: <http://www.math.tohoku.ac.jp/~fujie/OSC.html>

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