

# Behavior of solutions to systems related to Keller-Segel system

**Takasi Senba**

Fukuoka University

It is known that two dimensional Keller-Segel system has a critical number on  $L^1$ -norm of solutions. That is to say, solutions to the Keller-Segel system exist globally in time, if those  $L^1$ -norm are less than the critical number. And, there are blow-up solutions whose  $L^1$ -norm are bigger than the critical number. Some systems related to Keller-Segel system are expected to have critical numbers for any dimensional cases. In this talk, we will introduce conjectures on those critical numbers and some evidences for those conjectures.