

# Boundedness of global solutions to degenerate Keller-Segel systems

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In this talk we deal with the following degenerate Keller-Systems of parabolic-parabolic type:

$$(KS) \quad \begin{cases} u_t = \nabla \cdot (f(u)\nabla u - g(u)\nabla v), & x \in \mathbb{R}^N, t > 0, \\ v_t = \Delta v - v + u, & x \in \mathbb{R}^N, t > 0, \\ u(x, 0) = u_0(x), v(x, 0) = v_0(x), & x \in \mathbb{R}^N, \end{cases}$$

where  $N \in \mathbb{N}$  and  $f(0) = g(0) = 0$ ,  $f, g > 0$  on  $(0, T)$ . When  $f(u) = mu^{m-1}$  and  $g(u) = u^{q-1}$  ( $m > 1$ ,  $q \geq 2$ ), Ishida-Yokota (2012) showed that (KS) has a global-in-time solution. However, their proof did not give the boundedness with respect to the time variable. So, we will discuss the boundedness of the global solution to (KS).