

We discuss asymptotic properties of solutions of two component parabolic drift-diffusion systems coupled through an elliptic equation in two space dimensions. In particular, conditions for finite time blowup versus existence of forward self-similar solutions are studied for the systems

$$\frac{\partial}{\partial t} u_1 = \nabla \cdot (\nabla u_1 + t_1 u_1 \nabla v), \quad (1)$$

$$\frac{\partial}{\partial t} u_2 = \nabla \cdot (\nabla u_2 + t_2 u_2 \nabla v), \quad (2)$$

$$-\Delta v = g_1 u_1 + g_2 u_2, \quad (3)$$

where $u_1, u_2 \geq 0$ are densities of two species, masses (or charges) are $\int_{\mathbb{R}^2} u_i dx = M_i, i = 1, 2$.