

# Pattern formation for differential equations with nondiffusive interactions

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I will review the asymptotic behaviour that can be exhibited by the solutions of some parabolic and kinetic models that are often used in the study of problems of mathematical biology. Some of these problems can exhibit singularity formation in finite time. Some information exists about the asymptotic behaviour of the solutions near the blow up time both at the level of asymptotic expansions and rigorous mathematical analysis. Other phenomena like the existence of instabilities for transport models arising in mathematical biology, or the asymptotics of the solutions of some integro-differential equations that appear in the study of cell motion will be also addressed.