

数学特別講義F

関数解析学特論(修)

解析学特殊講義H I (博)

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談話会	11月27日(月) 16 : 00～ A chemotaxis system with indirect signal production and phenotype switching The dynamics of a chemotactic model for a species featuring two phenotypes is investigated in a two-dimensional domain. Phenotypes distinguish individuals which move randomly in space, with a bias induced by an external signal (chemoattractant), and those which produce the attractant without moving. Switching phenotypes is also taken into account. Global existence and boundedness of classical solutions to this model will be discussed, after recalling its connection to the classical Keller-Segel system for chemotaxis, along with properties of the latter. Joint work with Christian Stinner (Darmstadt)
講義 期間 ・ 題目 ・ 内容	11月28日(火)～12月1日(金) 各日 15 : 00～18 : 00 Dynamics of Keller--Segel models Due to the complexity of their dynamics, the Keller-Segel chemotaxis system and its parabolic-elliptic counterpart, also known as the Smoluchowski-Poisson equation, have been the object of several studies over the last decades which are at the crossroads of nonlinear analysis, functional inequalities, and calculus of variations. In the lectures, we shall focus on local and global well-posedness and the occurrence of finite time singularities. Boundedness of solutions and their large time behaviour will also be considered, as well as some quasilinear variants.
備考	談話会は、対面(場所：川井ホール)とリアルタイム配信を実施します。講義は対面で実施します。