

Colloquium

Some Topics in Cucker-Smale Flocking Models

主講人：梁育豪 博士

國立交通大學大數據研究中心

時間：107年2月22日(四) 15:30

地點：應用數學系多媒體教室 (理408室)

摘要：

Phenomena of collective motions such as flocking of birds and schooling of fishes are ubiquitous in the world. Several models have been established to show us insight into how the dynamical behaviors occur. Among them, the one introduced by Cucker and Smale in 2007 has gained much attention. This is due to the fact that their models can be not only used to explain the emergence of flocking dynamics but also applied to design several mobile autonomous agent systems such as UAV and robot systems.

In this talk, we will first give a brief survey on Cucker-Smale models. Then we will focus on one of the most important and non-negligible problem, collision avoidance, on the models under an asymmetric network topology. Finally, some open and important issues such as pattern formation and cluster flocking shall be addressed.

The talk is based on a paper with Prof. Jonq Juang, recently accepted by SIAP.