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臺灣大學應用力學研究所  
演 講 公 告

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主 講 人：Hungtang Ko (柯鴻堂)

PhD Candidate, Georgia Institute of Technology

講 題：Collective behaviors of fire ant rafts (紅火蟻筏) and black soldier  
fly larvae (黑水虻) in dynamic fluid environments

主 持 人：周逸儒教授

時 間： 110年12月28日 (星期二) 上午10時開始

地 點： 臺灣大學應用力學研究所 400 會議室

☆☆ 歡迎聽講，敬請張貼 ☆☆

# **Collective behaviors of fire ant rafts (紅火蟻筏) and black soldier fly larvae (黑水虻) in dynamic fluid environments**

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演講摘要：

Animal collectives must adapt to changing environments in order to survive. In this talk, I will present two systems for probing the collective behavior under external fluid flows. Fire ant rafts elongate and deform in water currents. Collectives of black soldier fly larvae loosen and become more porous as they are subjected to the airflow in fluidized beds. In both cases, we find that the behaviors of these collectives are strikingly different from traditional soft materials placed under the same conditions. We present experiments and simulations of these active materials and conclude that the active movement of the constituents is crucial to the response of the collectives.