MPIDS Colloquium

MAX-PLANCK-GESELLSCHAFT

Information processing, individuality and self-organization in migrating groups of bacteria

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Cells live in communities where they interact with each other and their environment. By coordinating individuals, such interactions often result in collective behavior that emerge on scales larger than the individuals that are beneficial to the population. At the same time, populations of individuals, even isogenic ones, display phenotypic heterogeneity, which diversifies individual behavior and enhances the resilience of the population in unexpected situations. This raises a dilemma: although individuality provides advantages, it also tends to reduce coordination. I will report on our experimental and theoretical efforts that use bacterial chemotaxis as a model system to quantify information processing and navigational performance in individual cells, and to understand how populations of cells reconciliate individuality with group behavior.

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Wednesday, Dec 16th, 2020 at 2:15 pm

MPIDS, video conference at www.zoom.us
Meeting ID: 959 2774 3389
Passcode: 651129, direct link

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