

Mathematical Sciences Colloquium

Simple ways to ruin bacteria's social life Mixing and chemotaxis



Professor

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Zoom <https://unist-kr.zoom.us/j/87540455917>



Host

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Abstract

In this talk, I will explain why “mixing” can surprise the bacteria and make them unhappy (or happy). This result is the mathematical explanation of the fact that mixing can break up the groups of bacteria and destroy their surviving strategy. How to define mixing is also an interesting and hard math problem. I will introduce an intuitive way to define mixing quantitatively by an example of playing checkerboard, as well as other examples. Mathematically, this means small scale creation could prevent the solution to a physical nonlinear partial differential equation from a pulse function.