

Colloquium

Analysis of a mathematical model arising from Barnacle-Algae-Mussel

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時 間：107 年 12 月 5 日(三) 14 : 30

地 點：應用數學系多媒體教室(理 408 室)

摘 要：

In this talk we focus on a patch occupancy 4-dimensional model of barnacle-algae-mussel interactions with external periodic forcing proposed by Beninc et . In order to understand the mechanism of the species fluctuation sustained by a cyclic succession at the edge of chaos, we investigate the corresponding autonomous system.

When the mussel is absent, we completely classify the global asymptotic behavior of the solutions. If the mussel is presented, we provide a necessary and sufficient condition for the uniform persistence for the system.