

SEASEN Session 1 (Biomath & Healthcare) Speaker 1

Quorum sensing and bistability

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Quorum sensing is an important mechanism in modulating bacterial populations response to their environment. I will present a structured model of quorum sensing in Gram-negative bacteria and will show that the interpretation of bistability in this model is surprisingly different from that in lumped models. The structured model takes the form of a linear transport equation coupled to a integro-differential equation.

This is joint work with Jozsef Farkas (U. Stirling) and Nigel Mottram (U. Glasgow).