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Bacterial operon dynamics: Insight from mathematical modeling

The regulation of dynamics in several bacterial operons has been the object of intense research, and it is now clear that mathematical modeling of these systems is able to give both qualitative and quantitative insight into experimental data on these dynamics at both the single cell and population level. This talk will discuss the nature of the bistability observed in the (inducible) lac operon, and the possible occurrence of oscillatory dynamics in the trp operon.