“Functional roles for noisy and dynamic gene expression”

Gene expression in individual cells can be heterogeneous and dynamic. This variability occurs even in an isogenic population under uniform environmental conditions. Recently, it has become clear that this noisy gene expression can be functional. One example of the functionality of this variability is that by ensuring that cells do not all exist in the same transcriptional state, the colony can ‘bet hedge’ against future environmental changes. However, it remains unclear what the range and benefits of these dynamics are. In this talk I will discuss my lab’s attempts to understand the mechanism and function of noisy and dynamic gene expression in microbial systems, using a combination of single cell time-lapse microscopy, mathematical modelling, and synthetic biology approaches.

Date: Monday, October 22\textsuperscript{nd}, 2016
Time: 16:00
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