

Analysing complex decision-making by regulatory and signalling networks

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I will consider how transcriptional, regulatory and signalling systems mediate complex regulatory and decision-making processes in cells. I will primarily discuss experimental and theoretical results about clocks and the NF-kappaB signalling system but will also consider complex transcriptional processes. In some cases dealing with complexity requires a complex system or network, while in others it can be achieved by a simple system that produces complex temporal behaviour. I will discuss how modelling and model-driven data analysis can aid understanding of this.