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Maximum Entropy models of populations of cells

I will recap our effort to represent populations of cells using Maximum-Entropy models defined on the space of single-cell metabolic states. At odds with more conventional optimization-based theories, these models place the emphasis on (a) cell-to-cell variability, (b) its relationship with fitness, and (c) inter-cellular interactions. Advantages, limitations and challenges will hopefully emerge. I will also discuss the problem of the physical meaning of the 'metabolic temperature' of a population, along with some new directions, mainly concerning the large-scale metabolic structuring of populations.

Role

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