Different approaches for controlling Boolean networks

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Résumé

Different strategies for controlling boolean networks

Boolean networks are discrete dynamical systems involving interacting elements whose Boolean state is influenced by the state of other elements of the network.
Boolean networks are used in Biology to model the intracellular dynamics of molecular networks. In this context, the Boolean variables of the network represent diverse molecules that can be either ON (active) or OFF (inactive) and the global state of the network is interpreted as the behavior of the cell. One important task in systems biology is to propose algorithms and tools for the design of control strategies of such networks in order to reprogram cellular behavior.
In this poster we will compare recently published approaches on a toy example of Boolean network and summarize their main characteristics.

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