



## Life Engineering Symposium

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### ***Sensors and Circuits***

#### *Engineering RNA Genetic Switches for Synthetic Biology*

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#### ***Abstract:***

Engineered regulation of gene expression constitutes the core technology for synthetic biology. While initial work in the field exploited natural gene regulatory elements such as transcription factors with little or no modifications, the demand for highly engineered regulatory elements that are effective and functionally orthogonal to the endogenous elements is increasing. Directed evolution should be a powerful tool for developing synthetic gene regulatory elements, and a recent development of a dual selection system and its application to engineered riboswitches will be described.