



## APPLIED MATHEMATICS SEMINAR 291

### Engineering cellular response

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#### ABSTRACT

Synthetic biology is the field of engineering cellular response by modifying existing natural networks or even creating new networks de novo. This comes with its challenges given the complexity of biological systems. In this talk I discuss different approaches to eliciting desired cellular response from engineering at the genetic level to achieve a collective population response to a high-level approach that externally directs cell behavior through an input to output response mapping and control of the external environment.

#### BIO:

Marcella M. Gomez is an assistant professor at UC Santa Cruz in the department of Applied Mathematics. She received her PhD from Caltech in 2015 and a B.S. from UC Berkeley in 2009; both degrees in Mechanical Engineering. Her research interests are in synthetic and systems biology. She is also a proud Chicana, first generation Mexican-American from Riverside, CA.

