



# Chemical Engineering

## Spring 2024 Seminar Series

### Towards DNA-Free Synthetic Biology: Protein Circuits and RNA Sensors



**Xiaojing Gao**

**Stanford University**

**May 3, 2024**

**66-110**

**3:00-4:00pm**

**2:45pm Reception**

Abstract/bio:

Dr. Xiaojing Gao is an Assistant Professor of Chemical Engineering from Stanford University. He received a B.S. in Biology from Peking University and a Ph.D. in Biology from Stanford University. He received his postdoctoral training from Biology and Biological Engineering at Caltech. His lab is building the biomolecular infrastructure so that one day we can use mRNA vectors to deliver “smart medicine”: sense disease states, process information, and actuate therapeutic outcomes all inside living cells. In this talk he will share their progress on engineering plug-and-play protein circuits to regulate intercellular communications, as well as programmable RNA-editing-based sensor for intracellular states and extracellular cues. Some of his recent recognitions include NIH’s New Innovator Award (DP2) and BMES CMBE’s Rising Star Award.

<http://cheme.mit.edu/seminar-series/>