



## BiophysTO Lunchtime Seminar Series

### Date

Monday, April 30, 2018  
11:00 am

### Location

McLennan Labs Rm 606,  
60 St George street

**Pizza & refreshments  
provided**

# Prof. Ned Wingreen

## Princeton University

# Magic numbers in protein phase transitions

Biologists have recently come to appreciate that eukaryotic cells are home to a multiplicity of non-membrane bound compartments, many of which form and dissolve as needed for the cell to function. These dynamical “condensates” enable many central cellular functions – from ribosome assembly, to RNA regulation and storage, to signaling and metabolism. While it is clear that these compartments represent a type of separated phase, what controls their formation, how specific biological components are included or excluded, and how these structures influence physiological and biochemical processes remain largely mysterious. I will discuss recent experiments on phase separated condensates both in vitro and in vivo, and will present theoretical results that highlight a novel “magic number” effect relevant to the formation and control of two-component phase separated condensates.

Please note: Non standard time.

**Host: Dr. Sid Goyal**



### UTM

Chemical and Physical Sciences  
VP Research Vice-Dean Graduate

### UTSG

Biochemistry IBBME Medical Biophysics  
Physics Chemistry