
TYLER MEADOWS, Queen's University

Optimizing biomass production in bioreactors

A chemostat is a simple bioreactor used to study microorganisms under controlled conditions. Similar bioreactors are used to mass produce microorganisms and harvest important metabolites, such as biofuels and antibiotics. In this talk, we consider a control problem in the chemostat where the flow rate is used to maximize the amount of biomass harvested from the fermentation vessel.