

Creighton University Department of Mathematics Invites You To Attend

Department of Mathematics Colloquium

Friday, November 30, 2018 | 3:30 p.m. | HLSB 522

“Using Optimal Control Theory to Model Resource Allocation in Annual Plants”



Presented by David McMorris,
Ph.D. Candidate, Mathematics
University of Nebraska-Lincoln
Join us in HLSB 503 at 3:00
p.m. for a reception before the
talk.

The fitness of an annual plant can be thought of as how much fruit is produced by the end of its growing season. Under the assumption that annual plants grow to maximize fitness, we can use techniques from optimal control theory to understand this process. In this talk we will discuss some introductory optimal control theory as well as two different models for resource allocation to roots, shoots, and fruits in annual plants. In each model we will examine how optimal control theory can be applied to determine the optimal resource allocation strategy for the plant throughout its growing season.