Dear Faculty, IGERT Fellows, IGERT Associates and Students,

You are cordially invited to attend a Seminar presented by Nolan Ung. Please plan to attend.

Nolan Ung

IGERT Fellow
Botany & Plant Sciences

Date: Friday, October 25, 2013
Location: Bourns A265
Time: 11:00am

Quantifying Endomembrane Dynamics Using Chemical Genomics and Image Informatics

Abstract:
Chemical Biology in the context of Plant systems provides exciting new frontiers in biological discovery that have been untouched by classical genetic approaches. Using small molecules to dissect dynamic cellular networks, Plant Chemical biology will add an essential missing chapter to the story of plant biology. To realize the full potential of chemical biology to discover new pathways and regulatory networks, current shortcomings need to be addressed including automation of image acquisition and phenotyping at the cellular level. At present, large-scale small molecule screens at the cellular level are not practical given their laborious and time-consuming nature. My current work addresses the challenge of automation by applying computer vision techniques to automatically find specific regions of interest and image each individual. Similarly, I apply image processing and analysis to automatically phenotype seedlings at the cellular level. These advances will expedite biological discovery and quantitatively describe dynamic phenomena that will ultimately lead to a more robust understanding of cellular dynamics.

Attached is a reference paper.

Thank you,