P²IRC Plant Phenotyping and Imaging Research Centre

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The Plant Phenotyping and Imaging Research Centre (P²IRC) is pleased to invite you to the following seminar:

Dr. Noah Fahlgren

Director, Bioinformatics Core Facility
Donald Danforth Plant Science Center

Open-Source Tools for High-Throughput Plant Phenotyping

Systems for collecting image data in conjunction with computer vision techniques are a powerful tool for increasing the temporal resolution at which plant phenotypes can be measured non-destructively. Computational tools that are flexible and extendable are needed to address the diversity of plant phenotyping problems. To address these needs, we developed PlantCV, an open-source framework for analyzing high-throughput plant phenotyping data. The goal of the PlantCV project is to develop a set of modular, reusable, and repurposable tools for plant image analysis that are open-source and community-developed. PlantCV was originally developed to analyze data from the Bellwether Phenotyping Facility at the Donald Danforth Plant Science Center, but the set of available features has grown as the set of users and use cases have diversified. For example, in addition to overall improvements in the organization of the PlantCV project, new recent functionality includes a set of image processing and normalization tools, support for analyzing images that include multiple plants, leaf segmentation, landmark identification tools for morphometrics, and modules for machine learning. At the Danforth Center, these tools are being used for a variety of projects, particularly for research on bioenergy crops such as sorghum and camelina.

Monday, November 6, 2017
1:00 - 2:00 PM
U of S Campus, Saskatoon
NRC Building, 110 Gymnasium Place, Meeting Room 2

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