# AG2PI Field Day
# PhytoOracle: A Case Study in Automating Phenotyping



## *Transforming the Way We See Plants*

**As phenomics increasingly generates higher dimensional data-sets, an urgent need to develop and implement robust data processing pipelines is emerging.**

**The University of Arizona is home to the world's largest agricultural robot equipped with RGB, thermal, hyperspectral, and chlorophyll fluorescence cameras as well as a laser line scanner. We developed PhytoOracle to address two key challenges encountered by phenomics research: (1) efficient, large-scale image stitching algorithm for high fidelity downstream analysis; (2) accelerating analyses by leveraging distributed computing resources. PhytoOracle's modularity handles increasing volumes and modalities of data making it easily customizable and scalable. As a result, PhytoOracle efficiently processes data to extract morphological and physiological parameters over a growing season.**

**This presentation will focus on applications in plant research but will also include parallels to livestock research.**

Presenters:
Emmanuel Gonzalez, Ariyan Zarei, Travis Simmons, Michele Cosi

## December 16, 2020

10:30 AM - 12:00 PM
(US Central Time)

## Purpose

This team will detail the technologies and challenges of collecting and processing large phenotypic data sets and review the data pipeline, from collection to transfer to processing.

## Register for this Zoom virtual meeting:

https://tinyurl.com/AG2PI-FD3

Upon registration, you will receive a confirmation email with information about joining the meeting.

A recording will be available at ag2pi.org/ at a later date.