



Special Track: **Data Gathering, Curation, and Generation for Computer Vision and Robotics in Precision Agriculture**

18th International Symposium on Visual Computing

Lake Tahoe, NV, USA

October 16-18, 2023

<https://www.isvc.net/>

Scope

The cyclical and time-sensitive nature of Agriculture poses certain limitations to the data-gathering capabilities of academic and industrial groups researching solutions to Precision Agriculture problems. Time constraints along with the wide range of targeted applications, different environments, and access to commonly calibrated equipment create a research environment with two kinds of datasets:

- Publicly available datasets with limited variability targeting academic research
- Private datasets collected by institutions for the development of IP-protected applications

The lack of commonly available datasets hinders the replication and verification of methods and obscures a clear view of their comparative performance. This poses constraints to data availability in the Precision Ag community with significant implications for the progress of the domain. On the other hand, the significant cost of data gathering and curation is understandably an obstacle for for-profit organizations to publicly release their data.

This special track aims to address these limitations by bringing together researchers, practitioners, and industry experts to discuss and share their experiences and the latest research findings in data collection, curation, and generation in Precision Agriculture. Of particular interest are techniques that deal with efficient data annotation and curation, synthetic data generation and photorealism, and

general data handling and preparation before reaching the model training and inferencing cycle. We are striving to provide visibility into good practices and the low-cost generation of datasets for the benefit of the Precision Agriculture community.

Topics

Topics of interest include but are not limited to:

- Sensor selection, placement, and calibration in Precision Agriculture
- Data annotation, cleaning, and integration techniques
- Synthetic data generation techniques and their applications in Precision Agriculture
- Big Agriculture data quality control and curation
- Real-time data collection and processing for Precision Agriculture applications
- Privacy and security concerns in Precision Agriculture data collection and sharing
- Challenges and opportunities for collaboration between academia and industry in Precision Agriculture data gathering and curation

Organizers

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Important Dates

Same as ISVC deadlines, see <http://www.isvc.net/>

Paper Submission Instructions

Same as ISVC paper submission instructions, see <http://www.isvc.net/index.php/paper-submission/>