Plant Leaf Meshes from RGB-D Sensors

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Abstract

1. Introduction

3D modeling of plant leaf canopy is a challenging computer vision problem [REF]. Solving this problem enables biological researchers to non-invasively phenotype plant growth and productivity [REF], which is critical to identify genes that can increase crop performance [REF]. To this end, we develop a new plant leaf mesh construction algorithm using data from RGB-D sensors. Specifically, ...

2. Related Work

3. 3D Modeling Approach

An example citation [1].

4. Mesh Initialization

5. Mesh Fitting

6. Results

7. Conclusion

References

[1] Z. Zhang. A flexible new technique for camera calibration. *Pattern Analysis and Machine Intelligence, IEEE Transactions on*, 22(11):1330–1334, Nov 2000. 1

Figure 1. Example caption of a leaf image with 3D projected points.