Introduction

Differentiable rendering-based method [1]

Conventional structured light (SL) [2]

Structured light supervision

Combining SL and DR-based method

- SL supervision can provide important cues to reduce the geometrical ambiguity.
- Incomplete part for SL pattern can be optimized through photometric supervision.

Photometric supervision

As the correspondences extracted using SL patterns are usually noisy and incomplete, we propose to consider rendered image consistency using the captured images w/o pattern.

Experimental Results

Quantitative evaluation with fixed ground truth camera poses

Evaluation on real-world dataset

Comparison of camera poses between initial and optimized values

Reference
