Efficient Large-Scale Stereo Matching

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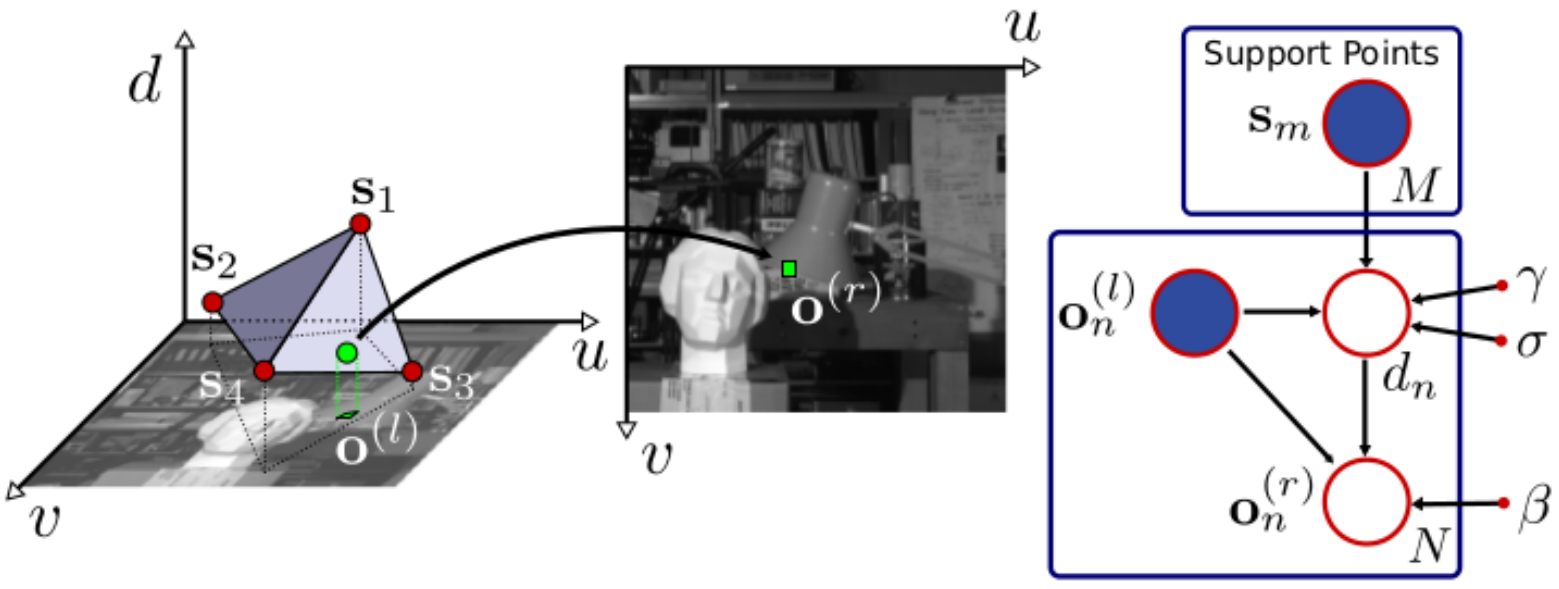

- Fast stereo matching for high-resolution images
- Efficient, parallel algorithm in a reduced search space
- Building a prior on the disparities
  - Robustly matched points used to form a triangulation (support points)
  - Reducing the matching ambiguities of the remaining points
  - Piecewise linear: robust to poorly-textured and slanted surfaces
- Automatic detection of disparity range
- Significantly lower matching entropy compared to using a uniform prior
- 1 sec for a 1 Megapixel image pair on a single CPU
- State-of-the-art with significant speed-ups on large-scale Middlebury benchmark