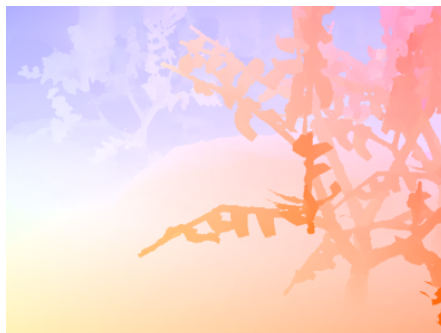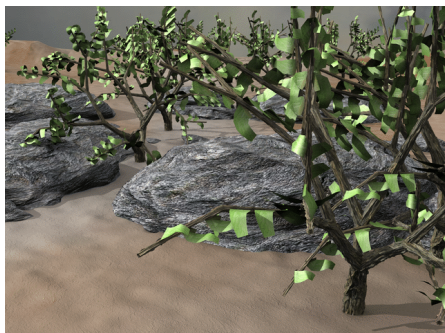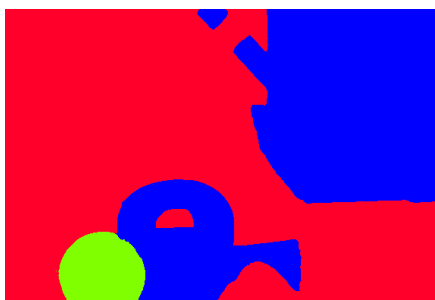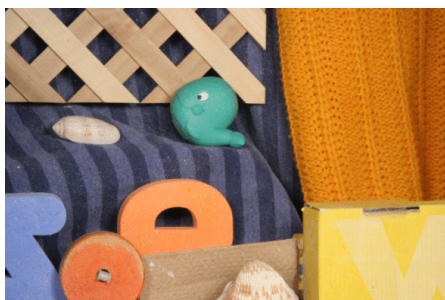# Layered Image Motion with Explicit Occlusions, Temporal Consistency, and Depth Ordering

Deqing Sun, Erik B. Sudderth, Michael J. Black

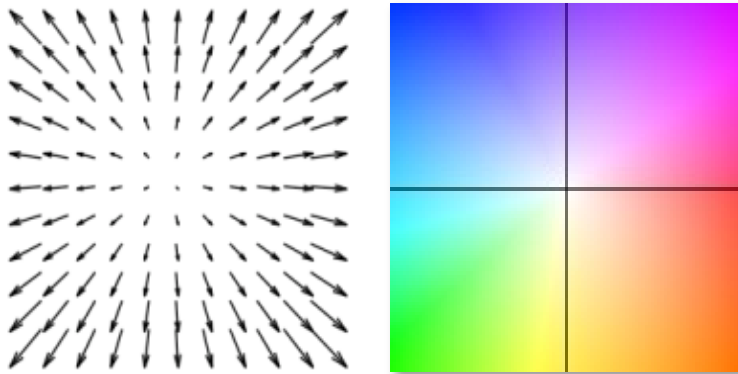*Brown University Department of Computer Science*

| *Images* | *Flow* | *Layers* | *Occlusions* |

Poster Number: M73
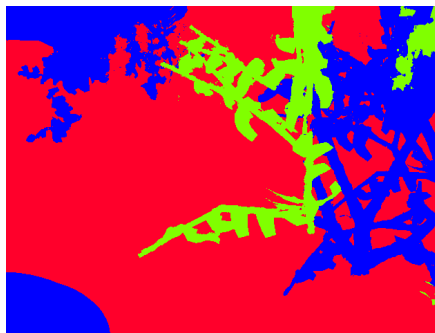
Image Motion Estimation

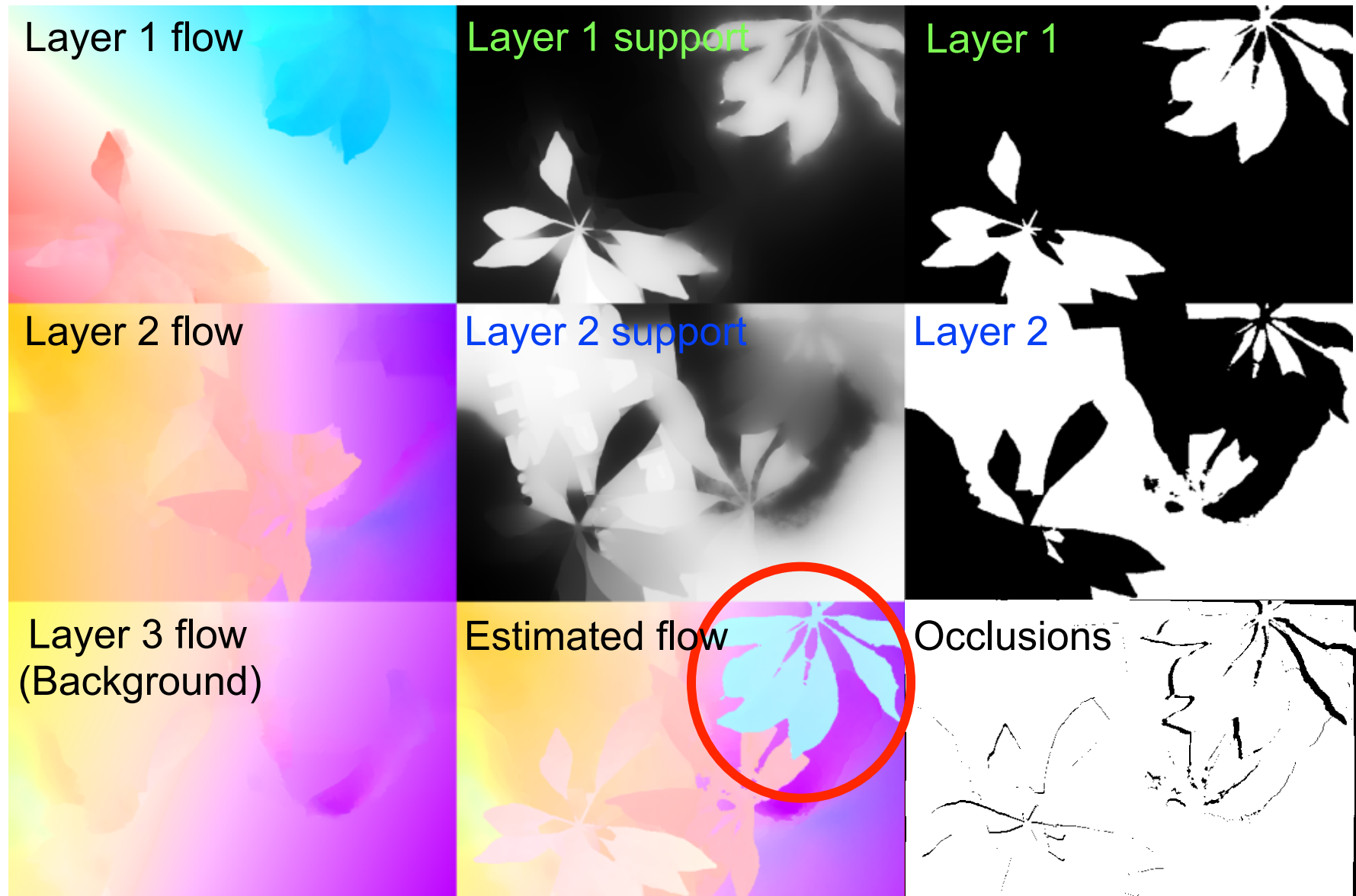Input Image Sequences

Ground Truth Flow Field

Optical Flow Color Key

State-of-the-art Robust MRF: Sun et al. 2010
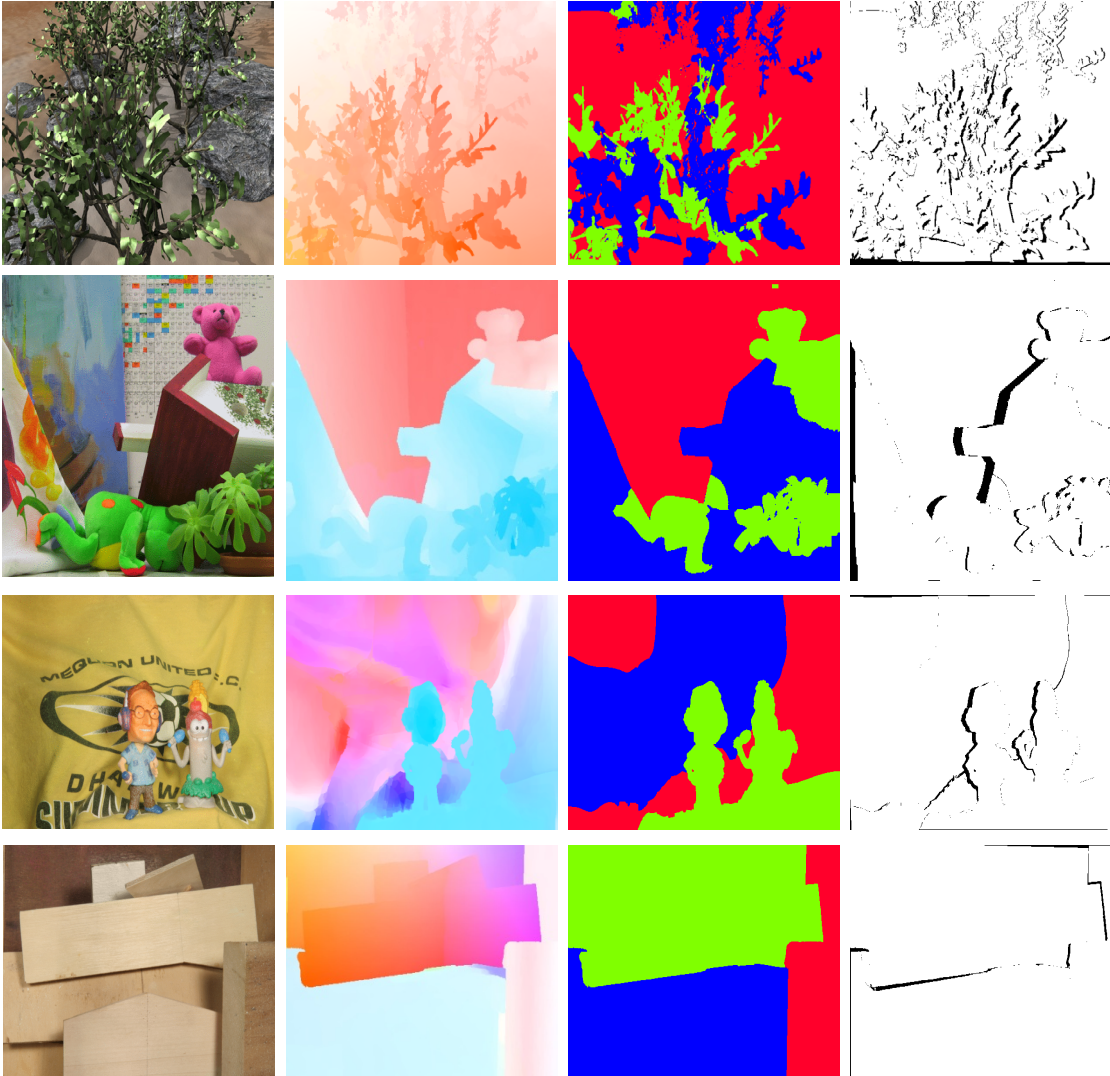
Generative Model with Layers

Contributions

Images *Flow* *Layers* *Occlusions*

- Probabilistic generative model of motion in layers

- True "layered" model of depth ordered occlusions

- Temporal consistency of layer support

- Robust flow priors allow "roughness in layers"

- Spatial layer support via an image-dependent Gaussian field prior

- Lowest average endpoint and angular error in Middlebury evaluation

Poster Number: M73