

Supplementary Material

Fast Locally Consistent Dense Stereo on Multicore

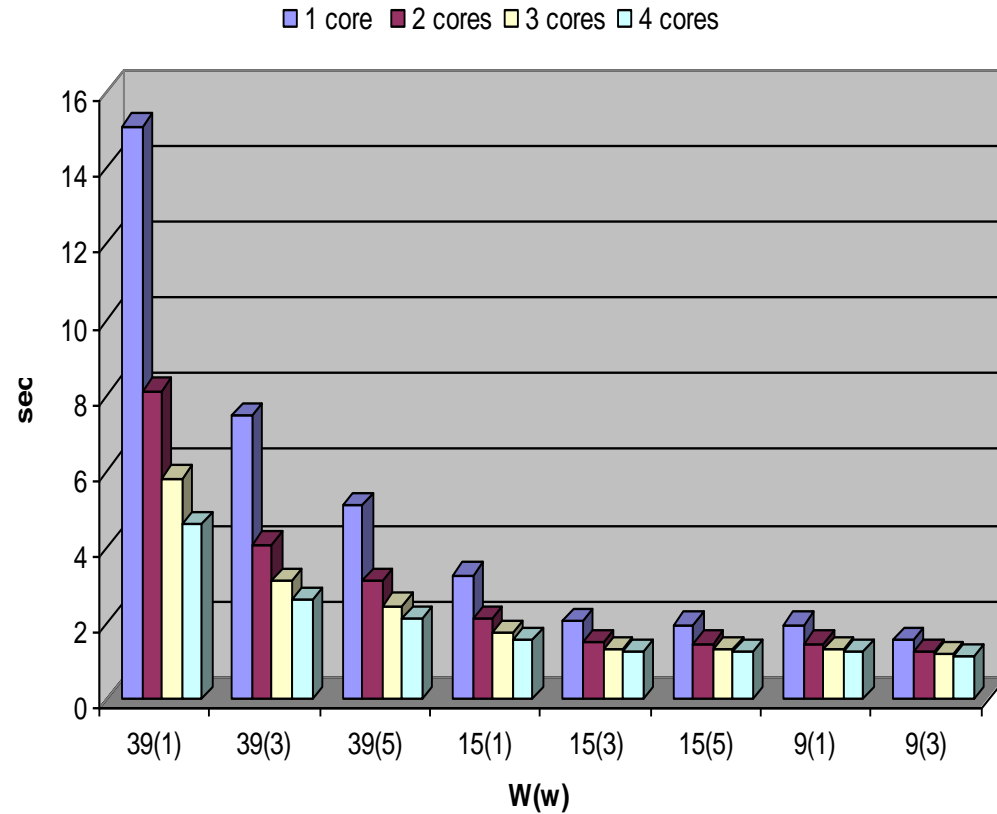
Stefano Mattoccia

www.vision.deis.unibo.it/smatt

Additional experimental results:

www.vision.deis.unibo.it/smatt/RLC_stereo.htm

Performance evaluation: Core2 Quad



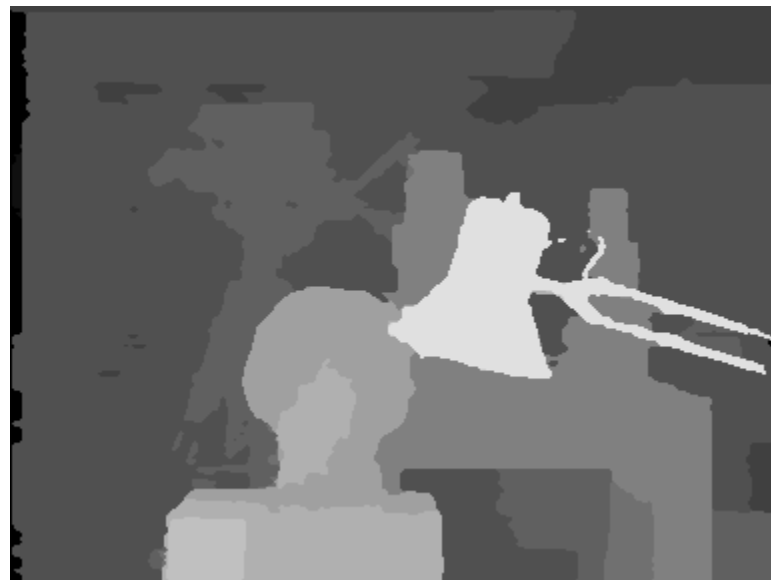
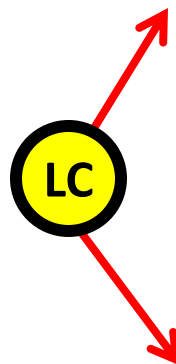
Experimental results concerned with the Teddy stereo pair (see [16])

**Experimental results deploying the initial
disparity hypotheses of C-Semiglobal [8]**

Tsukuba stereo pair (see [16])



C-Semiglobal [8]

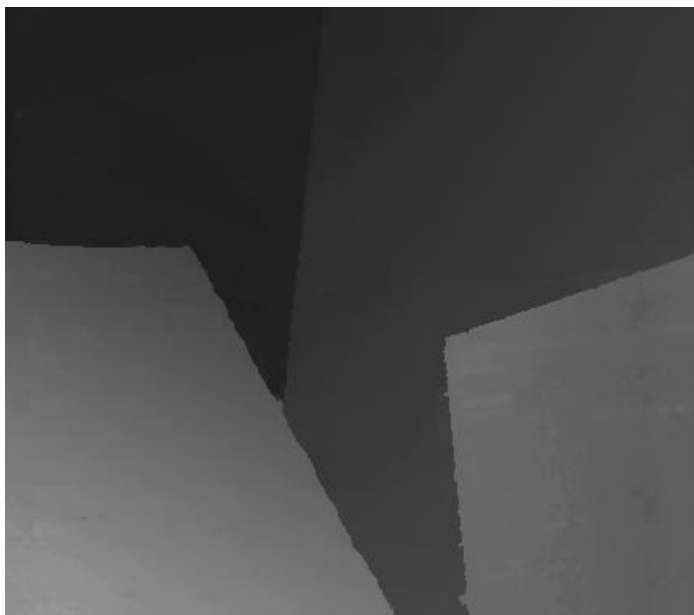


LC(C-Semiglobal) $W=39, w=1$ [13]

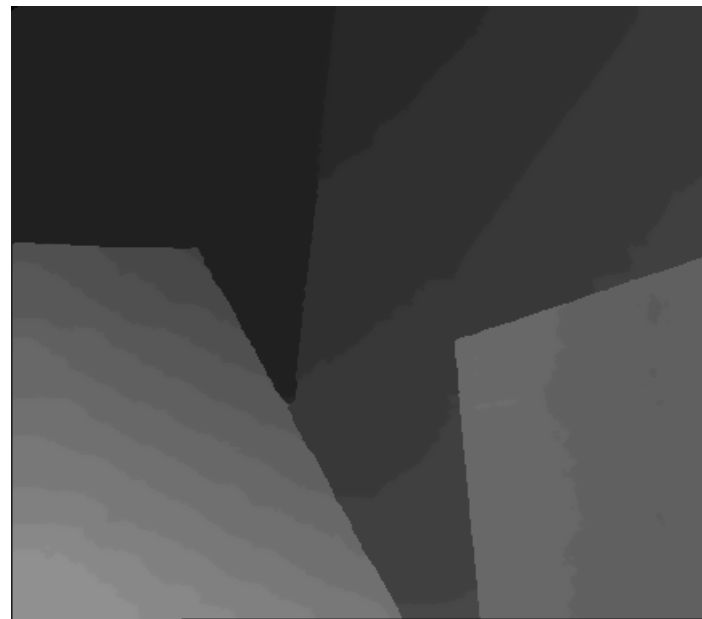
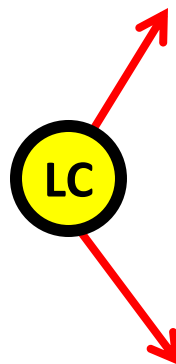


RLC(C-Semiglobal) $W=9, w=3$ [proposed]

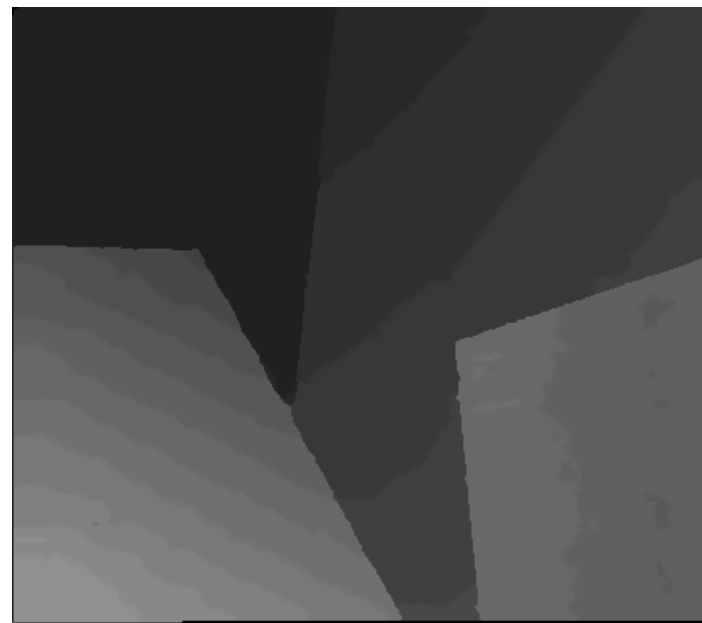
Venus stereo pair (see [16])



C-Semiglobal [8]



LC(C-Semiglobal) $W=39, w=1$ [13]



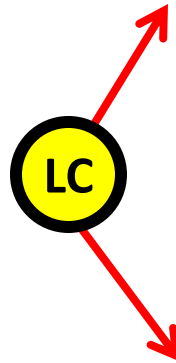
RLC(C-Semiglobal) $W=9, w=3$ [proposed]

Experimental results deploying the initial disparity hypotheses of RTGPU[23]

Tsukuba stereo pair (see [16])



RTGPU [23]

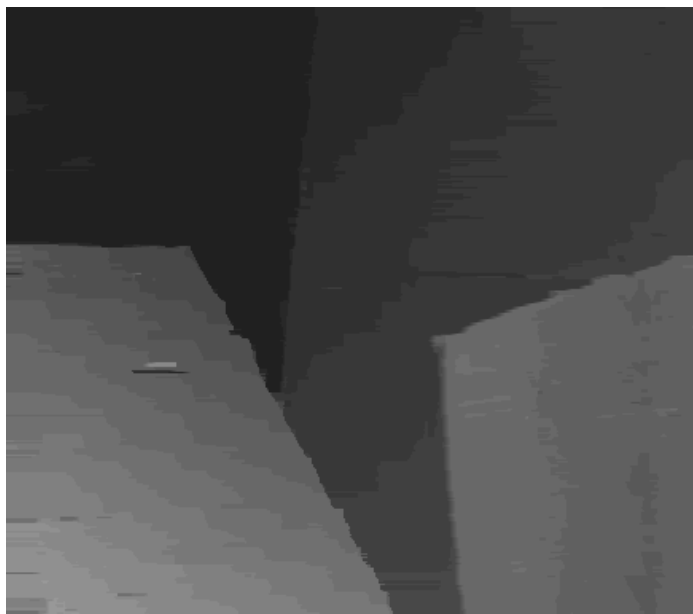


LC(RTGPU) $W=39, w=1$ [13]

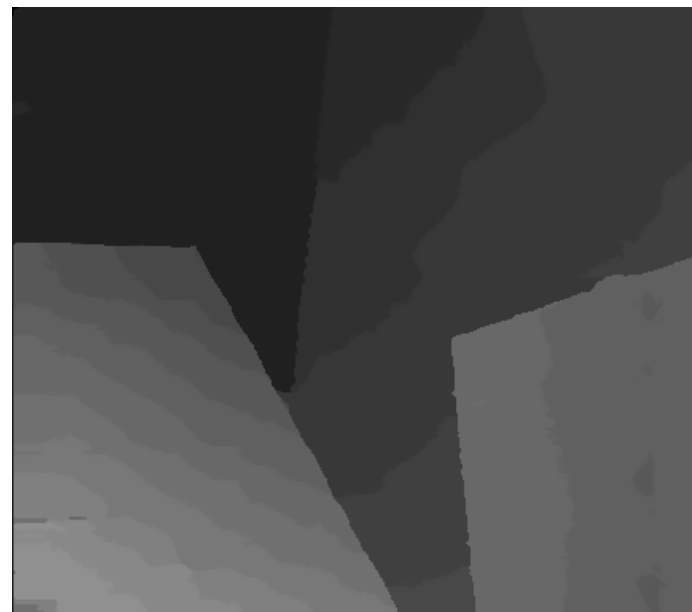
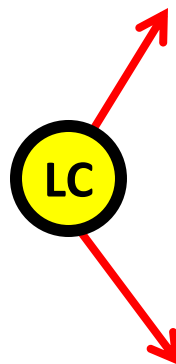


RLC(RTGPU) $W=35, w=5$ [proposed]

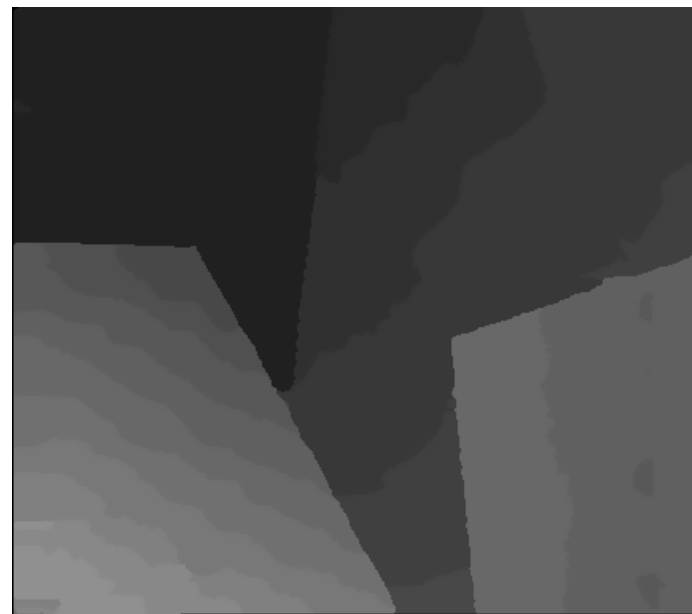
Venus stereo pair (see [16])



RTGPU [23]



LC(RTGPU) $W=39, w=1$ [13]



RLC(RTGPU) $W=5, w=5$ [proposed]

References

- [8] H. Hirschmuller. Stereo processing by semi-global matching and mutual information. *IEEE Trans. on PAMI*, 2(30):328–341, 2008.
- [13] S. Mattoccia. Improving the accuracy of fast dense stereo correspondence algorithms by enforcing local consistency of disparity fields. In *3DPVT2010, Paris, France, 2010*.
- [16] D. Scharstein and R. Szeliski. Middlebury stereo vision. <http://vision.middlebury.edu/stereo/>.
- [23] L. Wang, M. Liao, M. Gong, R. Yang, and D. Nister. Highqualityreal-time stereo using adaptive cost aggregation and dynamic programming. In *3DPVT '06, pages 798–805, 2006*.