## Supplementary Material: Convolutional Sparse Coding for Single-shot HDR Imaging

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## A Additional results

In this document we include additional results of our technique. Each of the following figures corresponds to a different HDR scene (scenes from the HDR Photographic Survey<sup>1</sup> and the EMPA HDR Image Database<sup>2</sup>). For each scene, we show, in reading order: tone mapped versions of both the ground truth and recovered images (tonemapped using Photoshop<sup>TM</sup>'s *local adaptation*), a comparison of both HDR images in false color (scale is in stops, that is, log2(luminance)), and three different exposures of our recovered HDR image (low, middle and high, respectively).

<sup>1</sup>http://rit-mcsl.org/fairchild/HDR.html <sup>2</sup>http://www.empamedia.ethz.ch/hdrdatabase/index.php



Ground truth - tonemapped







Recovered - tonemapped



Mid exposure

Figure S.1: Bar Harbor Pre-Sunrise



Comparison - log2 luminance



High exposure



Ground truth - tonemapped



Low exposure



Recovered - tonemapped





Ground truth 6 -2 6 -4 6 -6 7 -2 6 -4 6 -6 7 -2 7 -2 7 -4 7 -2

Comparison - log2 luminance



High exposure

Figure S.2: Forth3



Ground truth - tonemapped





Low exposure



Mid exposure





Comparison - log2 luminance



High exposure



Ground truth - tonemapped



Low exposure



Recovered - tonemapped



Mid exposure



Comparison - log2 luminance



High exposure

Figure S.4: RIT Tiger



Ground truth - tonemapped



Recovered - tonemapped



Comparison - log2 luminance



Low exposure



Mid exposure





High exposure



Ground truth - tonemapped



Low exposure



Recovered - tonemapped



Mid exposure



Comparison - log2 luminance



High exposure

Figure S.6: Zürich