

# A Hybrid Tone Mapping for High Dynamic Range Images

---

Dr. Areerat Pathomchaiwal  
Institute of Printing Engineering,  
Department of Printing Engineering,  
Faculty of Engineering,  
Siam University

## Abstract

In this study, low dynamic range images were produced from high dynamic range images using hybrid tone mapping. Firstly, high dynamic range images were constructed from the series of images by varying exposure through an image fusion method. Then the high dynamic range images were mapped into 8 bit images using hybrid tone mapping. Our approach is based on combination of luminance map and bilateral filter, and increasing the brightness of an image. We present results of subjective psychophysical tests that we have performed our method by compared to the other tone mapping. The results show that our method better low dynamic range images for detail, tone, and color reproductions, as well as overall quality.

**Keywords:** high Dynamic Range image, low dynamic range, tone mapping.