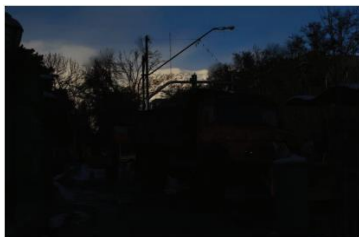


# Problem & Solution

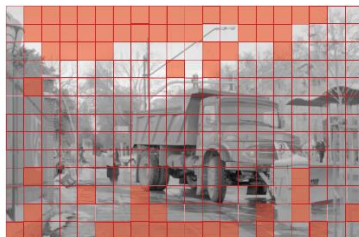
- **HDR image tone mapping**: non-linearly map the gray levels in HDR image to **satisfy the gray scale limitation of display screen** and **preserve more details** in the generated low dynamic range (LDR) image.
- The **performance** of HDR image tone mapping is influenced by the **gray scale of display screen**.

**How to increase the gray scale of display screen for displaying HDR images?**

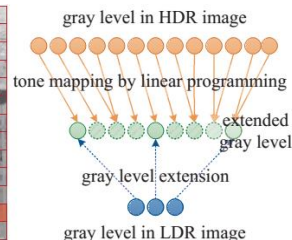
- **Basic idea**: sacrifice the high resolution to increase gray scale of display screen by **edge preserved dithering**.
- **Overview**



HDR image



patch generation  
and selection on  $L^*$



tone mapping



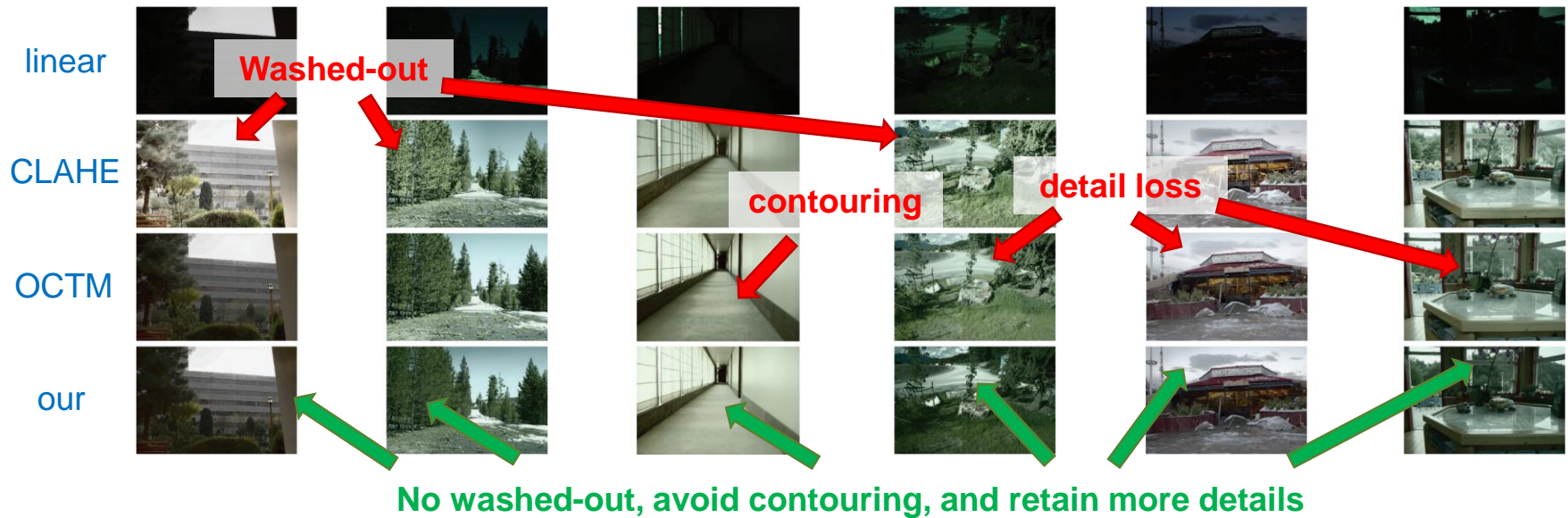
tone mapped  $L^*$



LDR image

# Experiment

- Dataset:** Funt et al HDR Dataset (107 images) and HDRSID Dataset (232 images)



- User study:** 15 participants

OCTM	Funt	HDRSID
Better	58	93
Similar	36	105
Worse	13	34

- Failure**

