

# Poisson Image Deblurring

Sek Cheong, Das Deepan

University of Wisconsin, Madison

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# Introduction

Some introuction text

### Principles of K-SVD

- Want to construct the composite image,  $I(x, y)$ , which should agree with  $T(x, y)$  and look like  $S(x, y)$
- $I(x, y)$  should exactly agree with  $T(x, y)$
- $I(x, y)$  “look like”  $S(x, y)$  inside  $\Omega$
- If we place directly  $S$  over  $T$  and smooth over the edges, the result maybe unacceptable, due to color mismatch

# Review K-SVD

## Mathematical Background

K-SVD Mathematical background

A fundamental equation of **Calculus of Variations** states that, if  $J$  is defined by an integral of the form:

$$J = \int F(x, f, f_x) dx$$

Then  $J$  has a stationary value if the following differential equation is satisfied:

$$\frac{\partial F}{\partial f} - \frac{d}{dx} \frac{\partial F}{\partial f_x} = 0$$

# Proposed Model

Mathematical model details

# Experiment Results

some experiment results

Conclusion