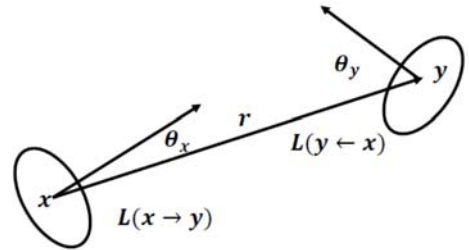


CS580 HW1

Instructor: Sung-eui Yoon

Due day: 10:30am, Mar-26 (Tue.); Submit your answer paper at the class

1. Prove invariance of radiance, $L(x \rightarrow y) = L(y \leftarrow x)$
(Hint: refer to the radiometry chapter of the book)



2. Consider a square area light source with a surface area measuring $10 \times 10 \text{ cm}^2$. Each point on the light source emits radiance according to the following function over its hemisphere:

$$L(x \rightarrow \Theta) = 1000 \cos\theta \text{ (W/sr}\cdot\text{m}^2)$$

- a) Compute radiosity for each point in the light source
- b) Compute the power for the entire light source.