

## Lecture 5 Report Requirement

The report should contain 3 parts:

1. For each non-optional reading, identify ONE major contribution or limitation and defend your choice. (½ page max)
2. For each non-optional reading, describe an idea of yours that extends the paper and elaborate as much as possible. (½ page max)
3. Answer the questions below.

For the first two parts, the discussion must have depth (good examples posted on piazza and baidu pan).

Send your report in PDF format to 1430090453@qq.com, named as "report5\_[first name][last name].pdf" (e.g., report5\_ZhangChen.pdf). The report is due on 10 am, China Standard Time, April 7, 2020.

### Report Questions:

#### **"When Does Computational Imaging Improve Performance?"**

1. What is Computational Imaging? Give a brief explanation.
2. What is impulse imaging?
3. What is the upper bound on the performance gain  $G$  of masking-based CI techniques? What does  $G=1$  mean?
4. What is the effect of the illuminance on CI performance?
5. What is the final rule of thumb of this paper?

#### **"Efficient Space-Time Sampling with Pixel-wise Coded Exposure for High Speed Imaging"**

6. Why can each pixel have only one continuous exposure during the integration time of one shot?
7. What problems will arise when the number of the captured image  $I$  is significantly less than the number of the space-time volume  $E$ ? How to solve it?
8. List at least three influence factors which contribute to the final performance of reconstruction.
9. Explain what is the Grid pixel-wise shutter.
10. Explain the effect of different patch sizes on the reconstruction results.