Homework 11

Submission instructions.

- Submissions are due on Tuesday 11/24 at 10.00pm ET. You can submit without penalty till Tuesday 12/01 10pm ET.
- Please upload scans of your solution in GradeScope (via Canvas)

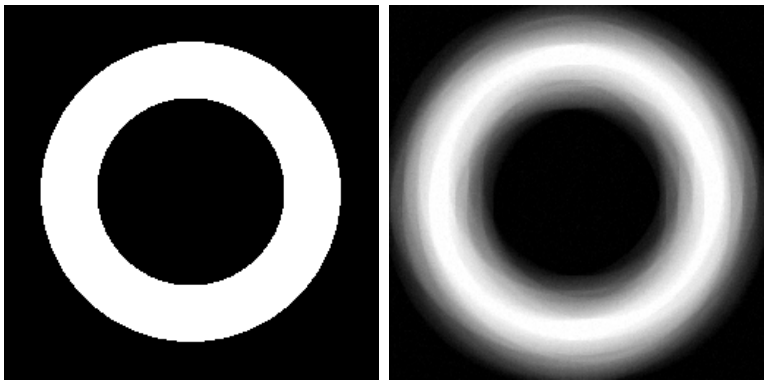
Instructions

- Please solve all non-MATLAB problems using **only** paper and pen, without resorting to a computer.

- Please show all necessary steps to get the final answer. However, there is no need to be overly elaborate. Crisp and complete answers.
- For all MATLAB problems, include all code written to generate solutions.

- Please post all questions on the discussion board on the Piazza course website.
- If you feel some information is missing, you are welcome to make reasonable assumptions and proceed. Sometimes the omissions are intentional. Needless to say, only reasonable assumptions will be accepted.

1. **Q1** [**Recovering blur kernel**] In `hw11.mat`, there are two variables: `imsharp` and `imblur`, which is a blurred version of the former. All we are given is that the size of blur kernel is 31×31. Recover the blur kernel.



(left) Sharp image. (right) blurred noisy image

Deliverables: 1) A brief discussion of the strategy for recovering blur kernel. 2) Mathematical formulation of the strategy. 3) MATLAB code. 4) Recovered blur kernel visualized using `imagesc`.

Some notes: 1) Note the sizes of `imsharp` and `imblur`. 2) Some measurement noise has been added. The added noise was Gaussian and white.