## Lecture 5 Hough Transform

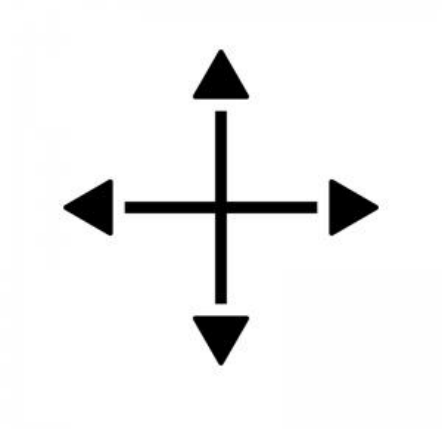
Image segmentation is a method of extracting and representing information from an image in order to group pixels into similar regions. Pixels are grouped together based on the rate of change in intensity over a region or the rate of change in depth in the image, corresponding to pixels on the same surface such as a plane, cylinder, sphere, and so on.

**Exercise Goal:**
Understand and apply the Hough transformation.

- **Task:**
  - Detect the lines in "test 05.jpg" using Hough Transformation, and then display the lines you found on the image.
    **Note**:
    You can convert the image to Hough Space and search for peaks.
    You can directly generate lines using the function *houghlines* and then draw the lines.
    https://au.mathworks.com/help/images/ref/hough.html
    https://au.mathworks.com/help/images/ref/houghlines.html

  - Determine the threshold value for an example image using the basic global thresholding algorithm.

  - Try Otsu's method using an example image
    https://au.mathworks.com/help/images/ref/otsuthresh.html



test05.jpg