

SYDE 677 Computer Vision – Assignment #5 (Edge Detection)

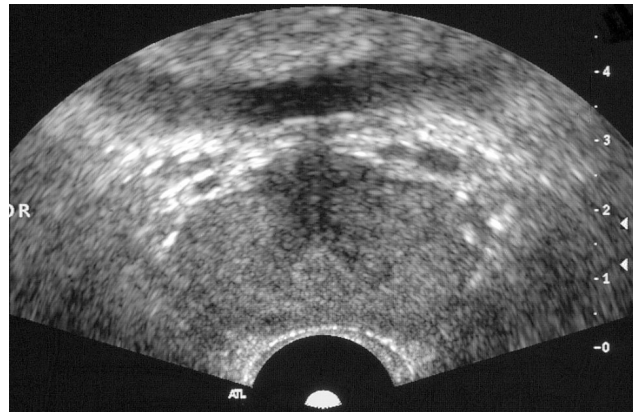
Due date: Oct 23, 2006

Instructor: Prof. H.R.Tizhoosh

1. Read test image 1 into variable I_1
(Source: <http://pami.uwaterloo.ca/tizhoosh/images.htm>)
2. Apply Roberts, Sobel, Prewitt and Canny operators on the image to extract edge maps E_{R1} , E_{S1} , E_{P1} and E_{C1} .
3. Interpret the results! (Which operator is the best? Why?)



4. Read test image 2 into variable I_2
(Source: <http://www.droid.cuhk.edu.hk/web/images/ultrasound/transrectal/transrectal1.jpg>)
5. Apply Roberts, Sobel, Prewitt and Canny operators on the image to extract edge maps E_{R2} , E_{S2} , E_{P2} and E_{C2} .
6. Interpret the results! (Which operator is the best? Why?)



7. What should be done to improve the edge map of the ultrasound image?
8. **BONUS** (10 points): Find an edge detection technique that outperforms Roberts, Sobel, Prewitt and Canny for the ultrasound image!

Deliverable: MatLab codes + image samples + result table(s) + analysis