

9. Image segmentation

(a). Develop a program to implement the Roberts, Prewitt, Sobel, the Marr-Hildreth and the Canny edge detectors. Use the image 'building.tif' to test your detectors. (For technique details of Marr-Hildreth and Canny, please refer to pp.736-747 (3rd edition, Gonzalez DIP, or pp.705-725 for the electronic textbook) or MH-Canny.pdf at the same address of the slides.)

(b). Develop a program to implement the Otsu's method of thresholding segmentation, and compare the results with the global thresholding method using test image 'polymersomes.tif'. (For technique details, please refer to pp.763-770 (3rd edition, Gonzalez DIP, or pp.742-747 for the electronic textbook, or Otsu.pdf at the same ftp address of slides.)