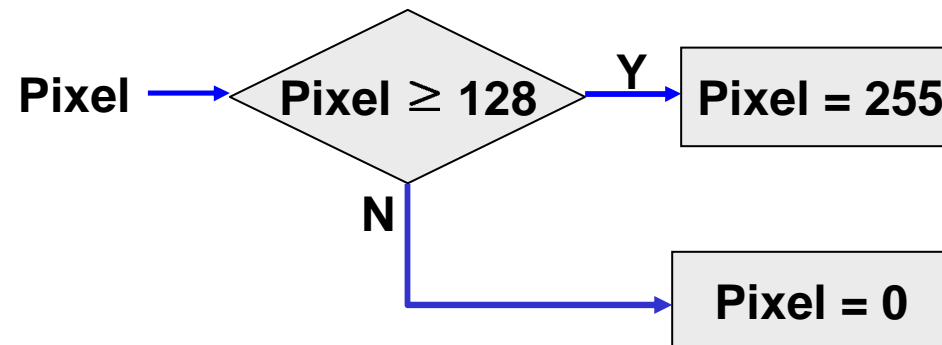
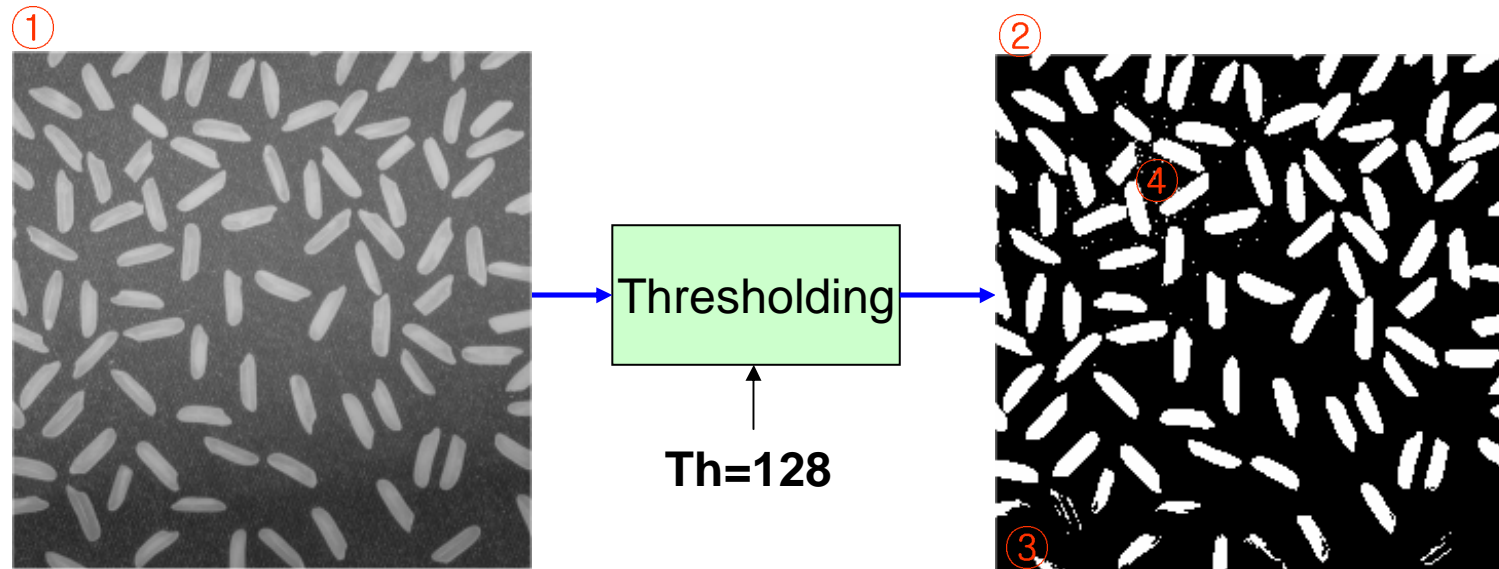


Image Segmentation (Thresholding)

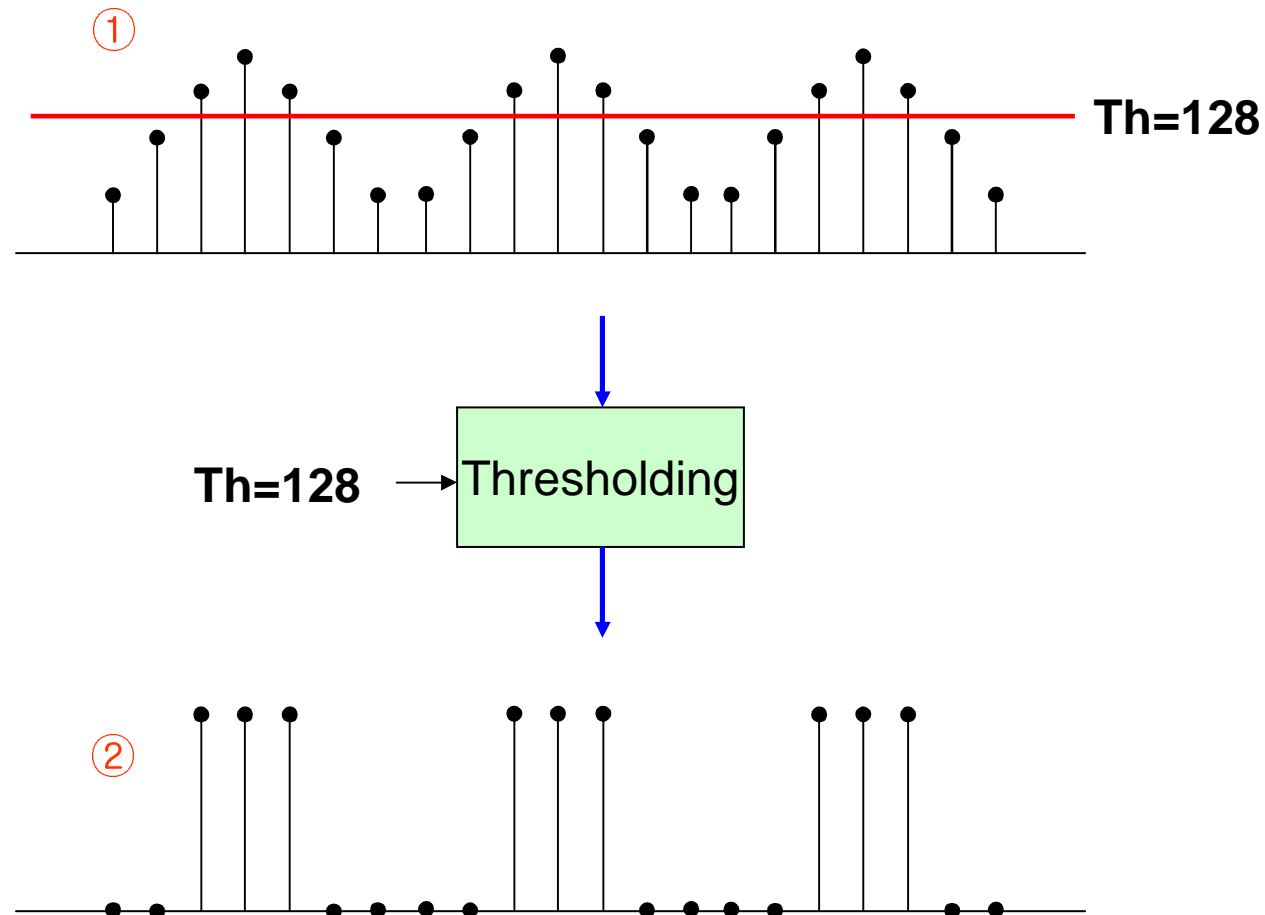
 **Hoon Yoo, Ph.D.**

What is Thresholding

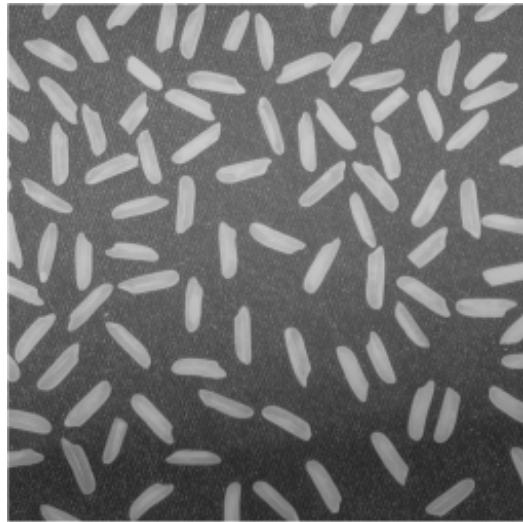
- Decide a pixel is significant or not



Thresholding for 1D-Signals



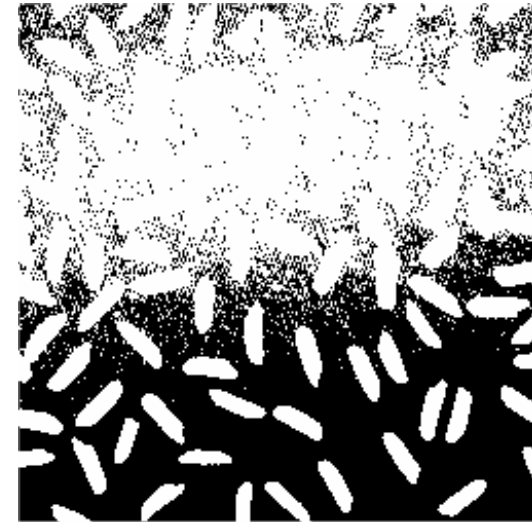
Thresholding with various values



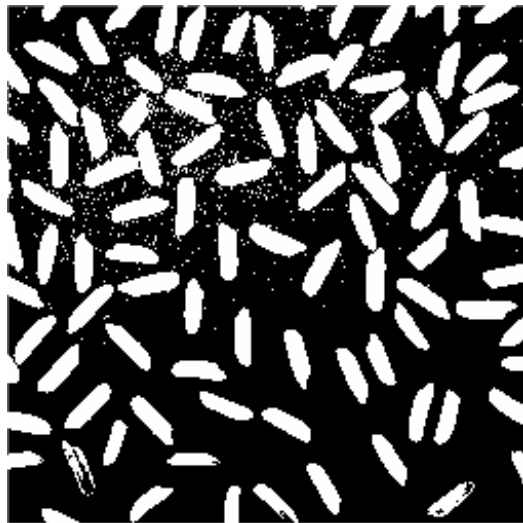
① original



② Th = 80



③ Th = 100



④ Th = 120

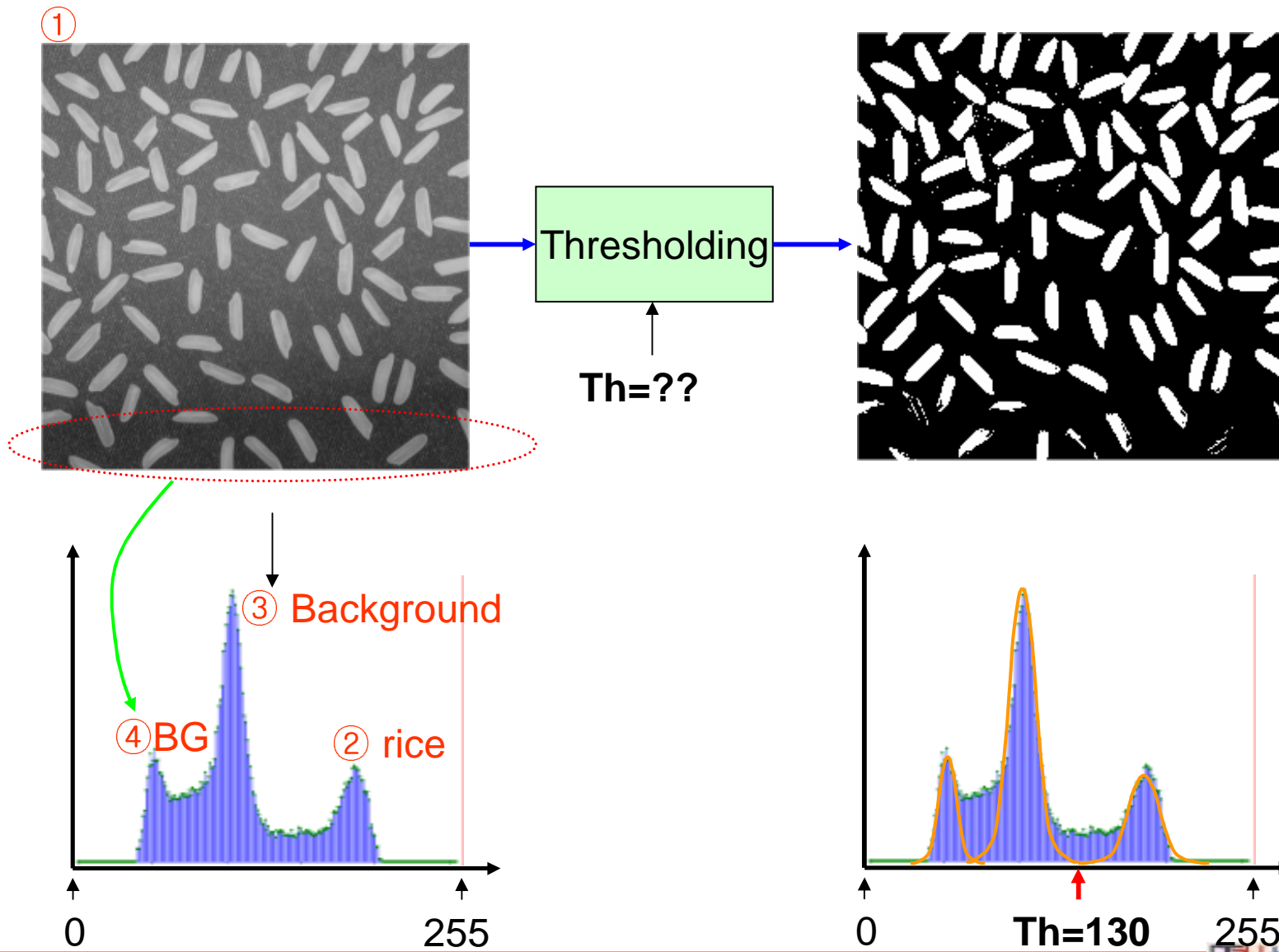


⑤ Th = 140

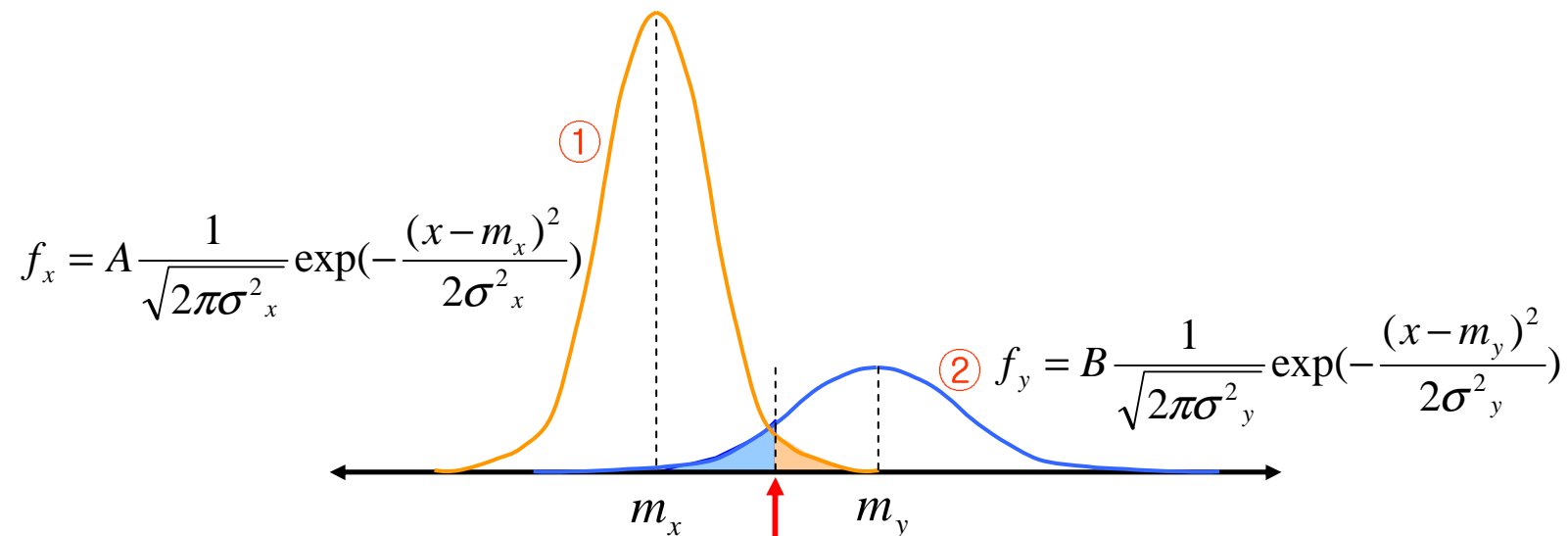


⑥ Th = 180

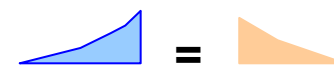
How to find a threshold



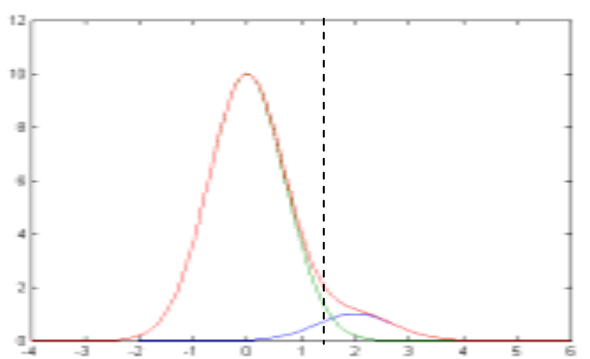
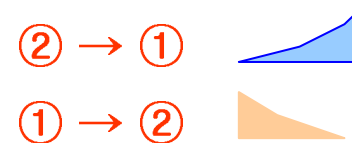
Finding a threshold using Histogram



Threshold



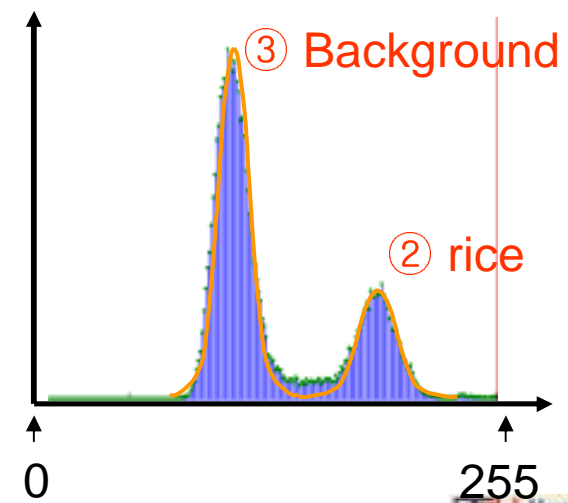
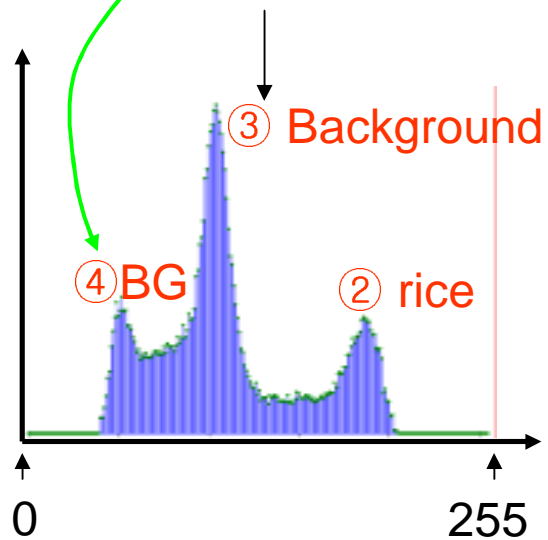
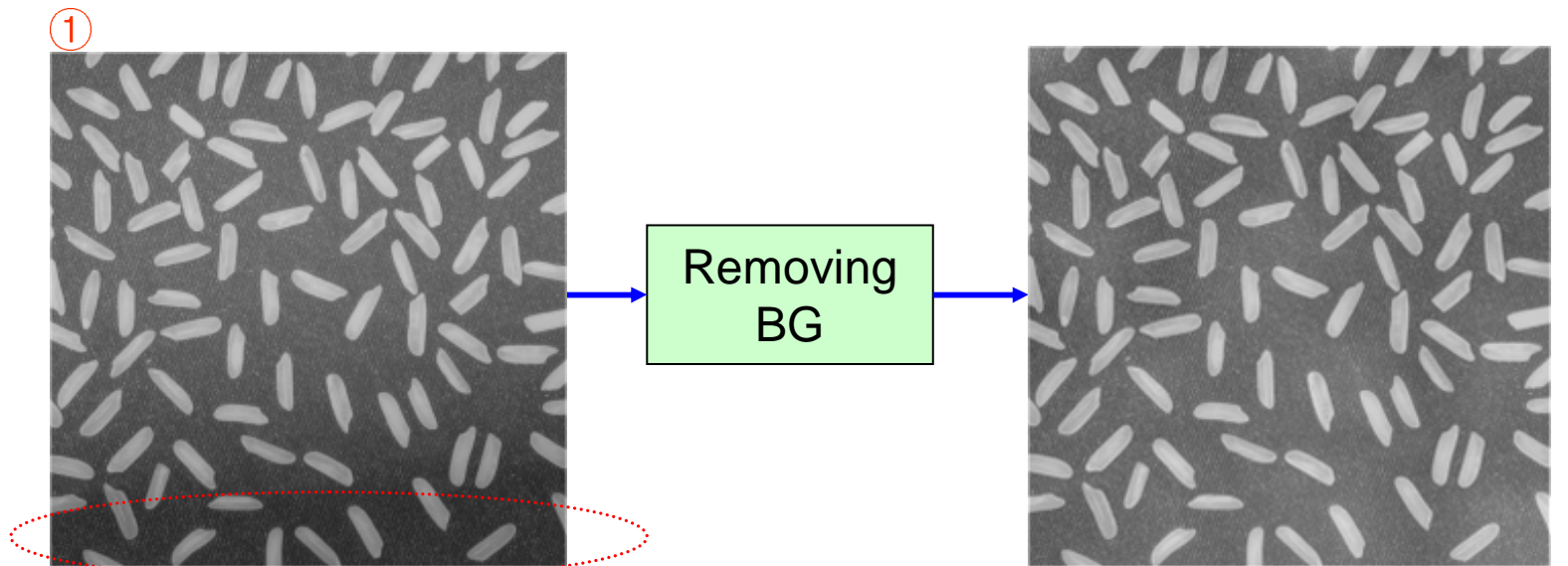
Two Decision Errors



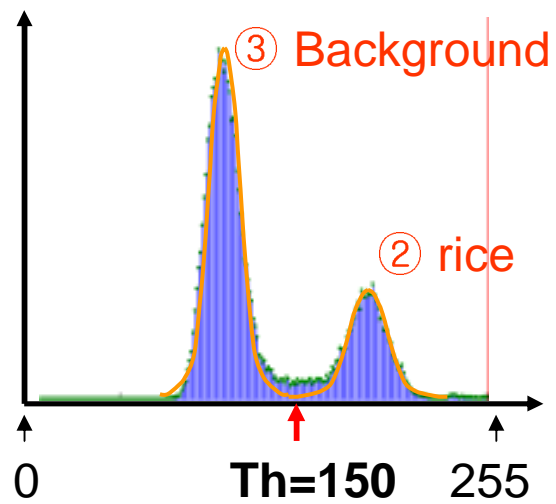
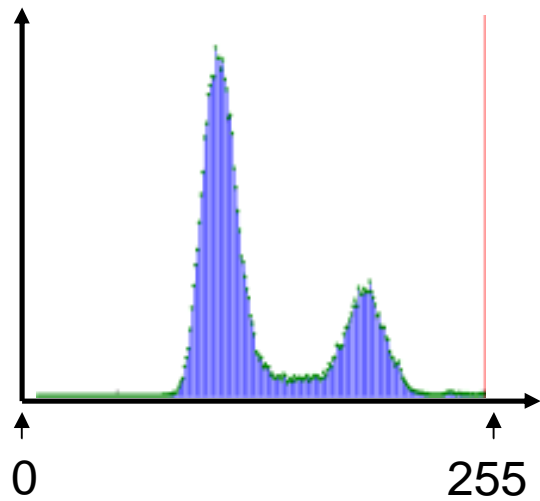
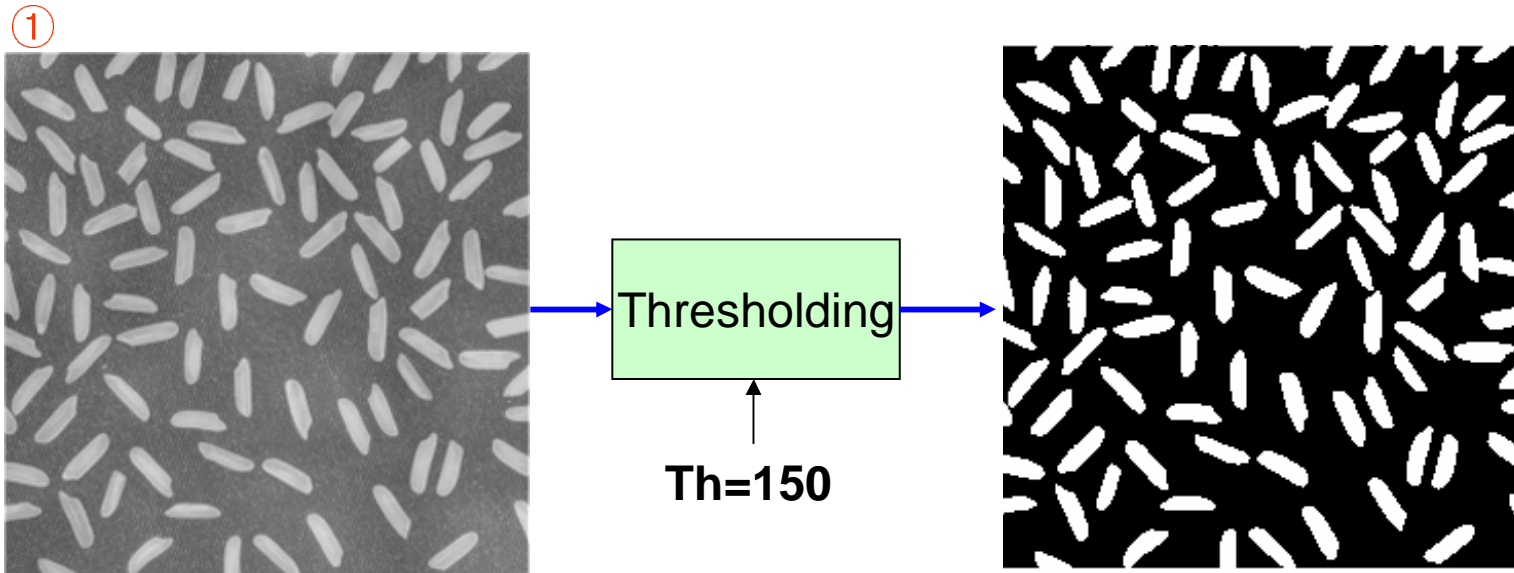
$A=10, m_x=0$

$B=1, m_y=2$

Removing Background



Removing Background



Summary

- Thresholding operation
- Finding a threshold
- Removing background