# Seminar I on Agricultural Process Engineering
# 農産加工学演習 I

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Division of Environmental Science & Technology,

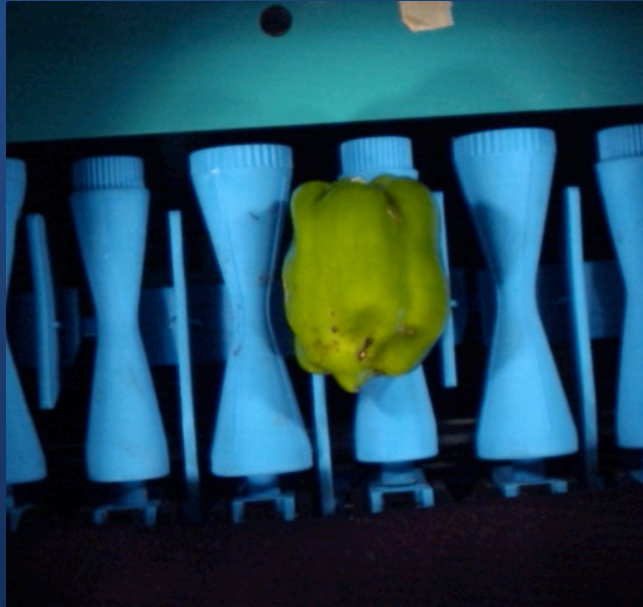Graduate School of Agriculture, Kyoto University

農学研究科　地域環境科学専攻

近藤　直・清水　浩

# Practice

1. Color analysis
2. Size measurement
3. Shape analysis
4. Defect detection in tomato
5. Spot detection
6. Extraction of object

# Objects for separation-operation



Object "green pepper" was captured with conveyer.
It will be recommended to extract the object from the
background as the first step of the image processing.

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# Subtraction operation

Subtraction with an active window, a specification picture window, or a constant.
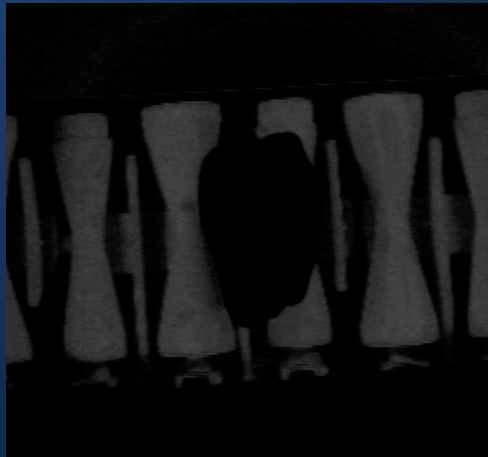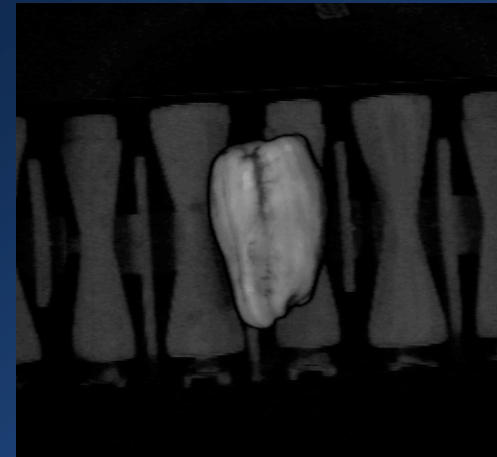The output can be chose only an image with plus value, minus portion, or an absolute value.
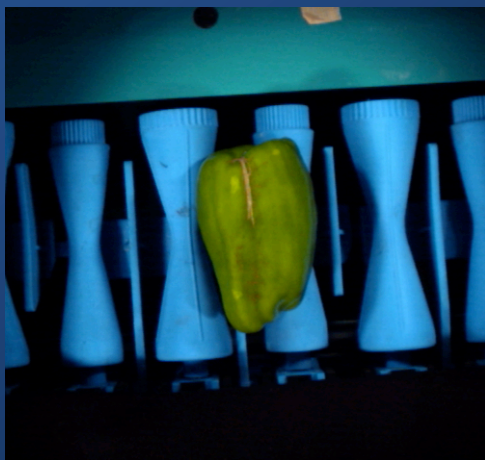


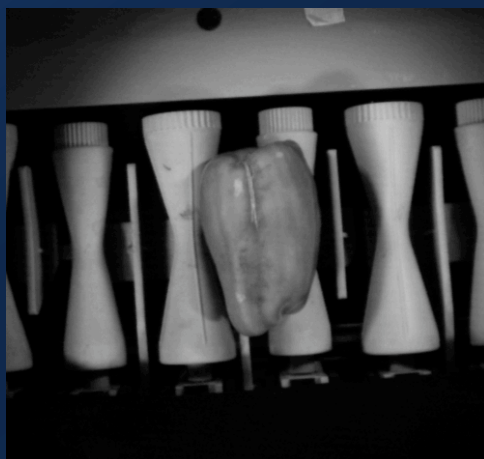Image with plus value



Minus value



Absolute value

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# Separation of object from background



Original image



Blue plane



Green plane



Subtraction operation of
"Blue-Green" with negative output