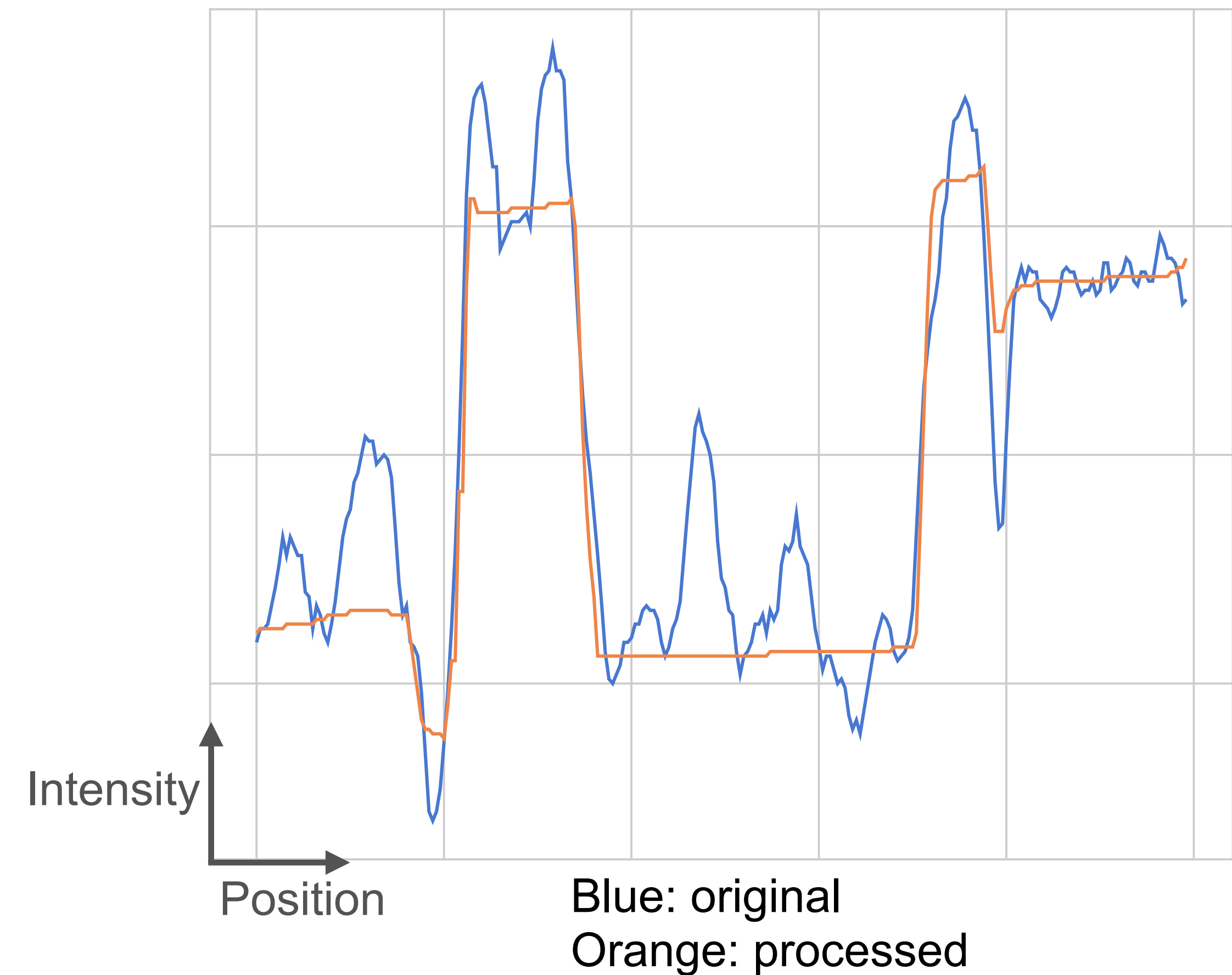- Given image I to find smoothed image S

- Counting function non-zero gradients: $C(S)$

- Add constraint term and weight:

$$\min\left\{\sum (S-I)^2 + \lambda \cdot C(S)\right\}$$

Intensity

Position

Blue: original
Orange: processed

Yuli Wu
Contour Refinement of Leukocyte Segmentations in Scans of Stained Bone Marrow

Lehrstuhl für
Bildverarbeitung

RWTH AACHEN
UNIVERSITY

- Analogy: topographic relief
- Immersion Algorithm: Sorting & Flooding

(a)   (b)   (c)   (d)   (e)

New local minimum   Watershed line   Watershed line