



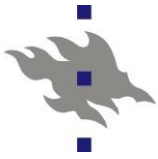
HELSINGIN YLIOPISTO  
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# Statistics of Angles in SEM images of Breakdown Sites

27.8.2013

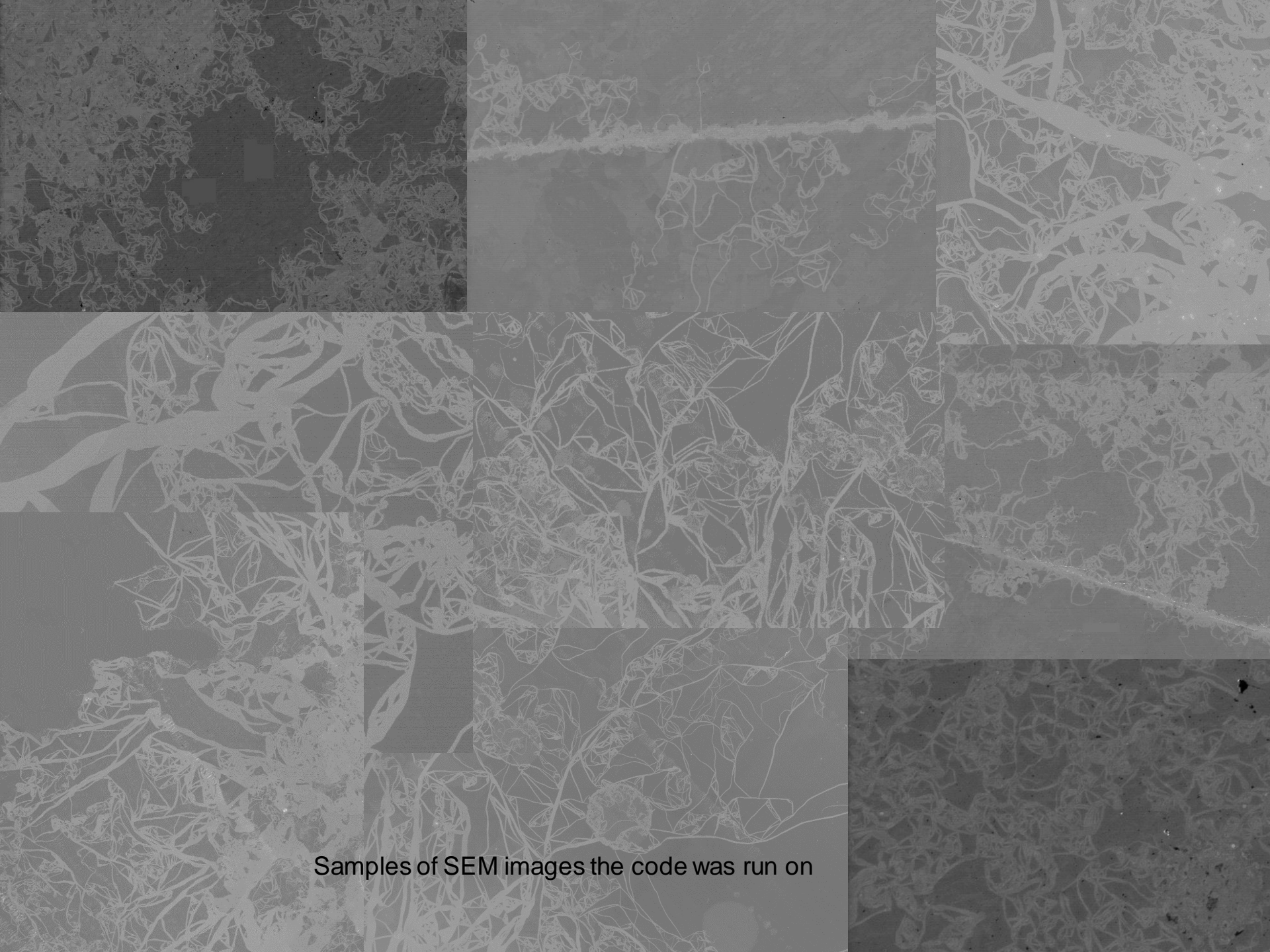
Anders Korsbäck



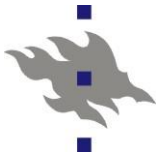


## Statistics of Angles in SEM images of Breakdown Sites

- Method for fitting polygons to areas between lines (wormlike features) developed to better deal with low-quality images
- New issues discovered when code used on new image data, were solved
- Code was run on 15 SEM images taken by Patrick Alknes in 2010. Areas of size less than 100 pixels were excluded

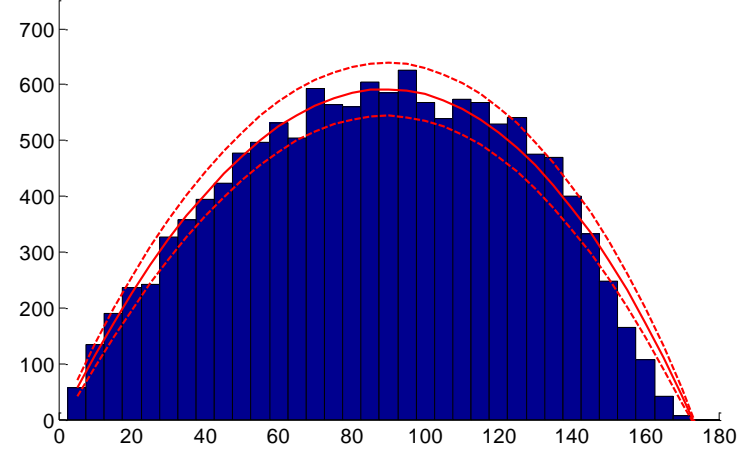
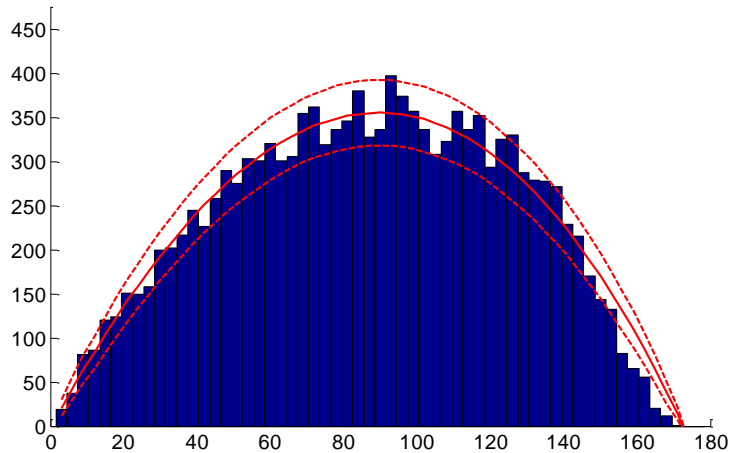
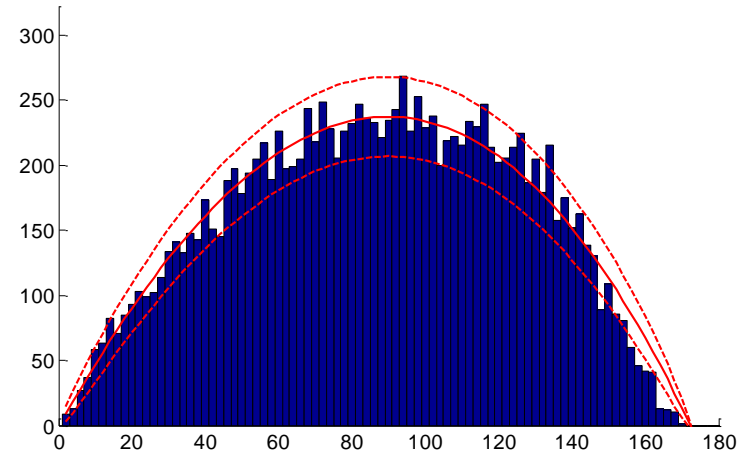
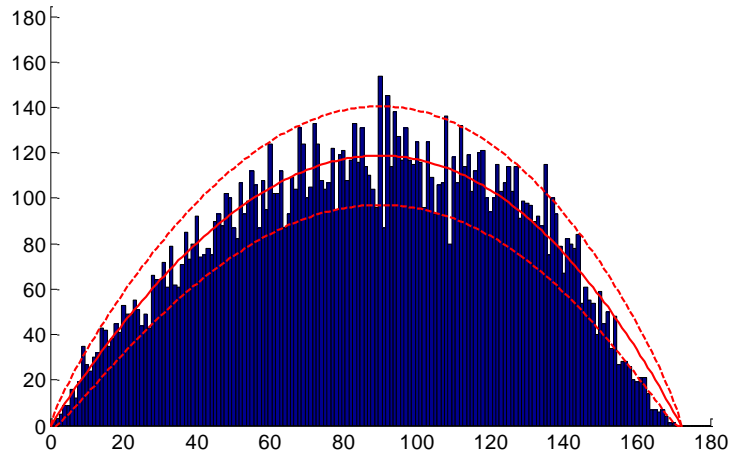


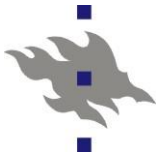
Samples of SEM images the code was run on



# Statistics for entire data set

Histograms of angle distribution for different bin widths, fit 3rd degree polynomial as "background estimate", with  $2\sigma$  (95%) confidence bounds:





# Original image revisited

- In light of negative result for entire dataset, latest version of the code was re-run on original image that sparked the investigation.

Corresponding histograms:

