

HOVERSPACE INTERACTIONS USING REFLECTED LIGHT

GOAL

To provide hover space interactions using **no additional sensors**

HARDWARE

Diffused Surface Illumination multitouch table

SOFTWARE

Vision-based tracker

Splits each frame into slices using pixel intensity

Finds blobs in each slice and combines them into a 3D structure

EVALUATION

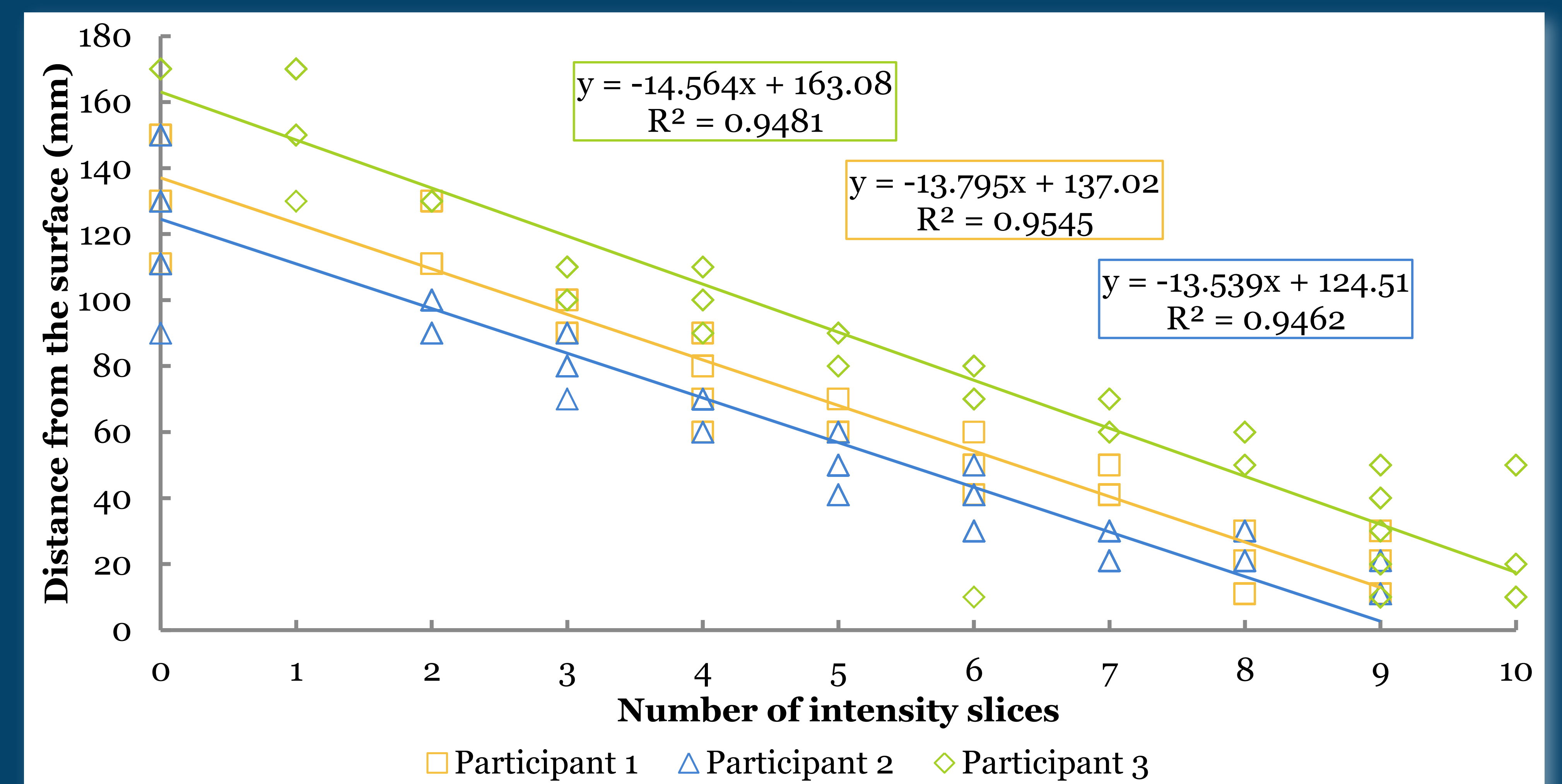
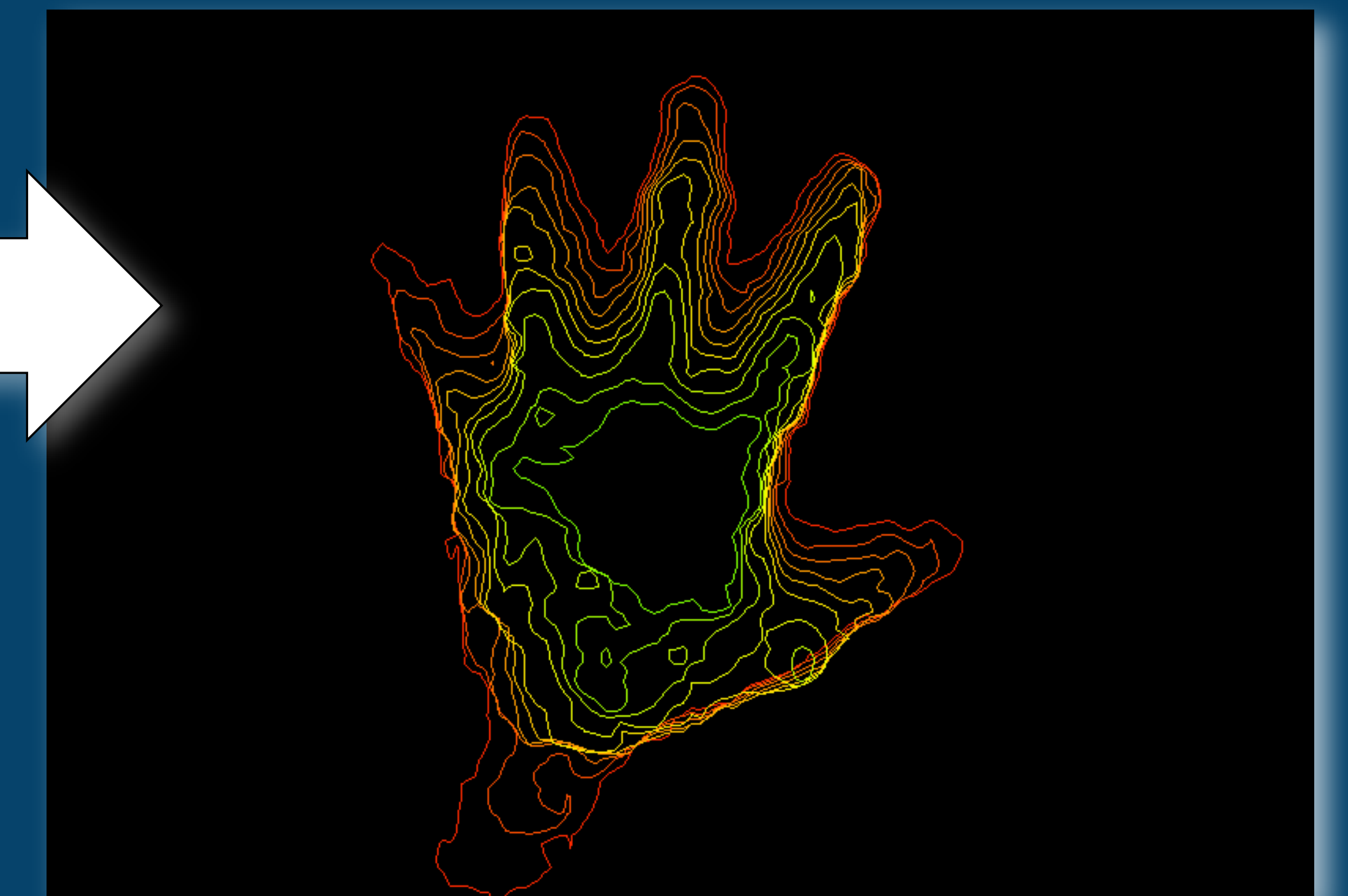
A linear correlation between the height of the hand and the number of slices was found

Able to predict the height of a person's hand with a precision of 10mm in $79.3\% \pm 2.5\%$ of cases



Original Image

Contour Map, built from the blobs found in 10 slices (computed in 10-15ms)



Distance to number of intensity slices correlation

