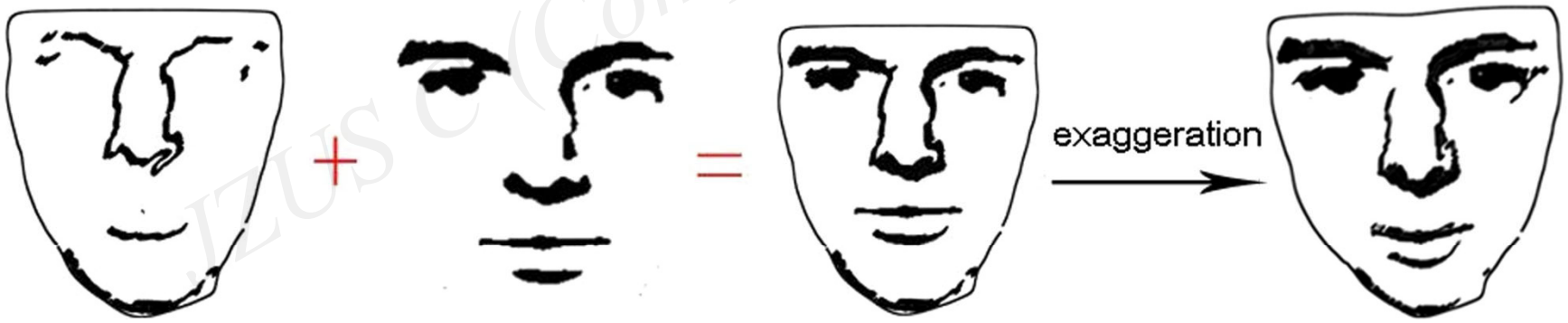
Portrait drawing from corresponding range and intensity images

基于深度图像和灰度图像的人脸绘制方法

JZUSC (Comput & Electron)

Citation: Lu Wang, Li-ming Lou, Cheng-lei Yang, Yue-zhu Huang, Xiang-xu Meng, 2013. Portrait drawing from corresponding range and intensity images. *Journal of Zhejiang University-Science C (Computers & Electronics)*, 14(7):530-541. [doi:10.1631/jzus.CIDE1306]

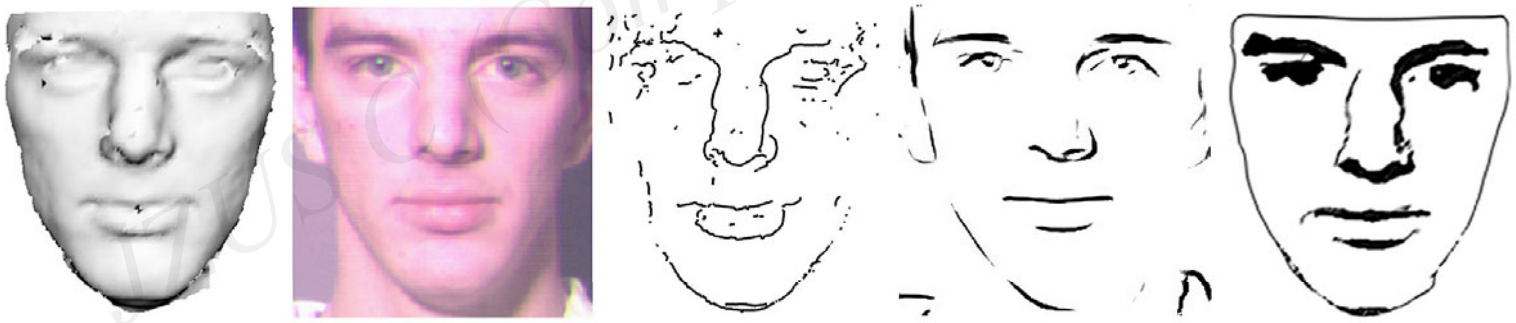
- We propose a real-time rendering system for automatically creating a caricature drawing, i.e., an exaggerated portrait, of a human face, based on simultaneous use of a range image (or 3D mesh) and a registered photograph of the same face.
- Significant geometric lines such as occluding contours and suggestive contours are extracted from the range data, while textured areas corresponding to shading features are extracted from the intensity image. These are combined, and then distorted to produce the final caricature.



Portrait caricatures production by adding feature lines from geometric and textured areas from a photograph



Exaggeration of the nose, the mouth, and face shape



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

(a) Input 3D mesh; (b) Input texture image; (c) Results obtained using DeCarlo *et al*. (2003)'s method from the 3D mesh; (d) Results obtained using Kang *et al.* (2007)'s method from the texture image; (e) Results obtained using our method