Have you seen your capillary vessels?

Photoacoustic Data Restoration

どんな研究？

We are participating in AMED to realize early diagnosis of diseases and ultra-precise examinations, and are working on the advancement of photo-acoustic imaging for non-invasive, non-destructive, real-time 3D visualization of the inside of living bodies and objects. In this research, we proposed a computer vision technique for obtaining clear images in order to understand capillary vessel conditions closely related to diseases.

何がわかる？

- Proposed a restoration framework.
- Reconstruct high quality PA for further application.
- Use multi spectral PA for colorful visualization.

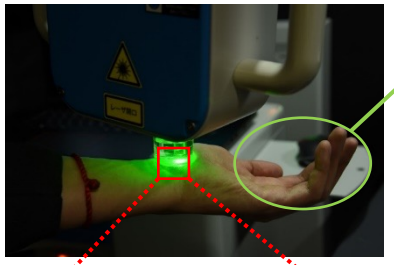
研究内容

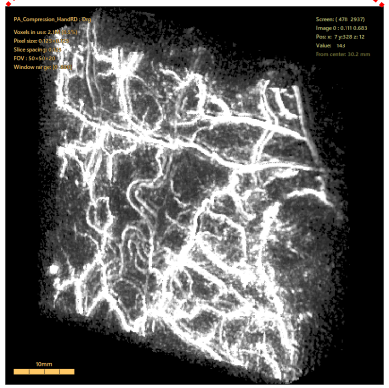
PA scanning
time-consuming
complex noise

Imaging

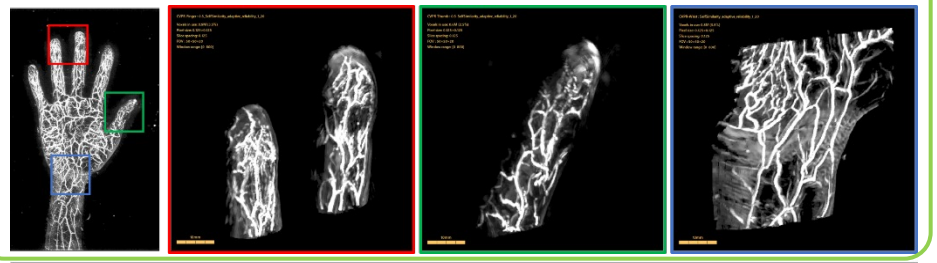
PA effect

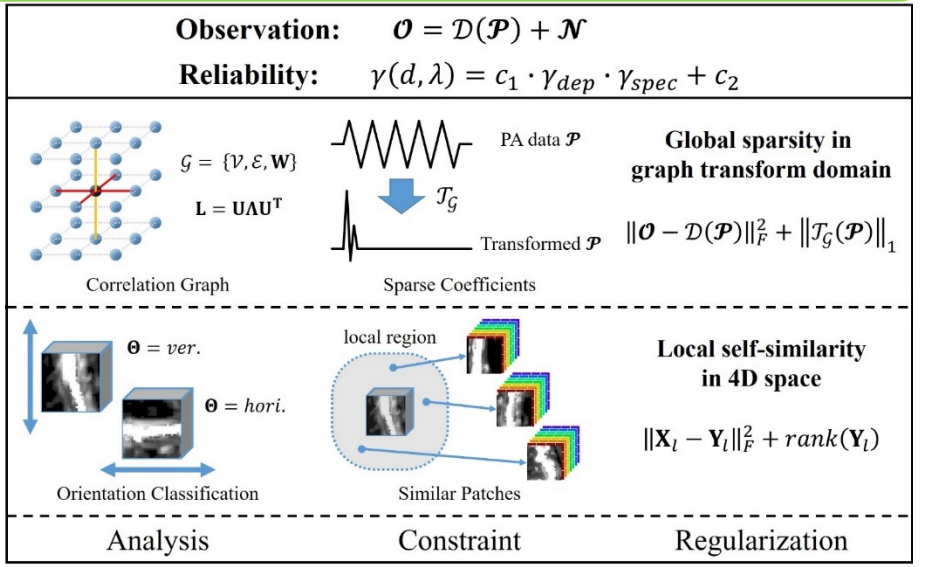
Org data
degradation
low-quality
difficult to diagnosis



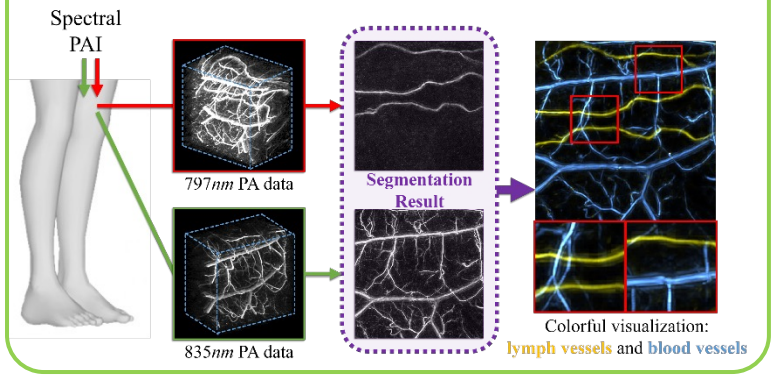


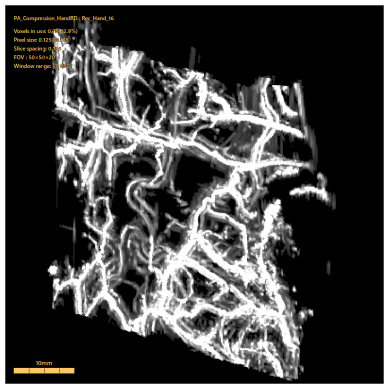
Other visualization





Use Multi Spectral…?





Medical check

Rec result
clean, noise-free
high-quality
easy for diagnosis