

- **Main Research**

Image Processing, Communication Theory, Machine Learning

- **Self Supported Projects**

- 懷舊時光 (there once was a good time but in English)

Optical image processing:

Our experiments demonstrated that the raw MTF obtained from the reference image “book” would produce interference patterns in the restored image “people” shown in Fig. 1 (f). This interference can be fixed if applied by the calibrated MTF using Kalman filtering. It is noted that the calibrated MTF removed the spikes efficiently from the raw MTF in Fig.1 (a).



Figure 1. (a) Comparison for the calibrated MTF with the spiky raw MTF. (b) the clean reference image (c) the polluted reference image (d) the clean test image (e) the polluted test image (f) the restored test image by raw MTF: significant interference (g) the restored test image by calibrated MTF.

- 活到老\_學到老 (Remains of the Day: Sound of Silence and back to the Native Language)

逐漸學習：

因為逐漸就是一件件的逐件，這適合將心肺圖中隱藏的資訊逐件抽取出來為多元資訊(如 BMI僅為二元資訊，胖或瘦為一元資訊)。此多元資訊可了解變化慢的空污數據；並可與各種其他多元數據：來作結合決策。這就是我們研究的特點：突破傳統人為評估（也依靠傳統心肺圖數據集）轉而提倡作AI評估（利用空污數據集）而細緻的分級。

我們方法與現有 RBM 做法比較之創新與圖例如圖 11:

