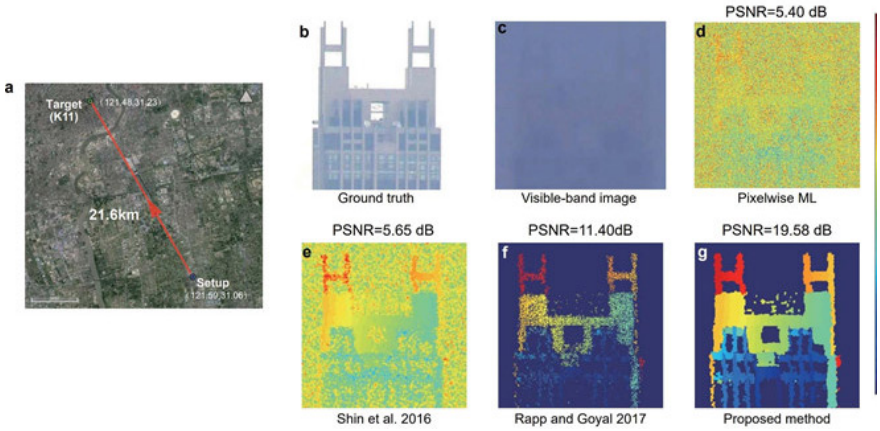
China developed cameras that can take pictures 45km away, through fog and dust

This ultra-sensitive camera system can take pictures from a distance of 45 km even when obscured by haze.

Physicist Zheng-Ping Li and colleagues at the China University of Science and Technology in Shanghai have developed a new LIDAR-based optical system that captures people in the haze of city ??from great distance.

Specifically, Zheng-Ping Li and fortifications combine super-sensitive photon sensors and unique image processing algorithms to knit the data together to achieve super-high resolution images. This makes their new device able to take pictures from a distance of 45 km even when obscured by haze.

This new optical technique works on LIDAR principle - irradiating objects with lasers, then through reflected light rays from the object itself to record images. This makes it unaffected by photon streams from other light sources.



Humans can capture objects at great distances thanks to new algorithms.Photo: Technology Review.

The entire improved optical system is only about the size of a shoe box and can be applied in many different areas in the future such as distance positioning or object detection.

The ultra-sensitive camera system is currently located on the 20th floor of a building on Chongming Island (Shanghai) and directs the lens to the Pudong Civil Aviation building 45 km away.

According to Zheng-Ping and his colleagues, this system, if tweaked, could take pictures at distances up to 100km.

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