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Rangefinding Using Time Correlated Single Photon Counting

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Time correlated single photon counting (TCSPC) is a statistical sampling technique with single photon detection sensitivity, capable of picosecond timing resolution. This technique offers two great strengths in comparison with previous methods for laser ranging based on time-of-flight technique, very accurate time (and hence distance) resolution, and great sensitivity. This talk will describe a prototype 3D range finder based on the TCSPC technique and the software architecture for processing the TCSPC data. If there is time, the talk will end with an overview of computer vision research at the Heriot Watt University.

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