

Deep learning algorithms for quantum imaging technology

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Quantum imaging technology offers time-efficient, lightweight, less-invasive and low-cost solutions in many different contexts including autonomous driving, security and health. Enhancing this technology with deep learning addresses challenges arising in experimental optimisation, inverse and classification/regression tasks and improves overall performance. I will talk about the deep learning algorithms I have developed for several projects. These include real time scene and depth reconstruction for single photon sensor camera and LiDAR systems, and high-speed imaging using a Micro LED-on-CMOS light projector.