Colloquium

Computational single-photon imaging

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Time-of-flight imaging and LIDAR systems enable 3D scene acquisition at long range using active illumination. This is useful for autonomous driving, robotic vision, human-computer interaction and many other applications. The technological requirements on these imaging systems are extreme: individual photon events need to be recorded and time-stamped at a picosecond timescale, which is facilitated by emerging single-photon detectors. In this talk, we discuss a new class of computational cameras based on single-photon detectors. These enable efficient ways for non-line-of-sight imaging (i.e., looking around corners) and efficient depth sensing as well as other unprecedented imaging modalities.

Monday, June 24, 2019 04:00pm - 05:00pm
Raiffeisen Lecture Hall, Central Building

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