



Contribution ID: 200

Type: Oral

## Low noise global shutter pixels and readout circuits for CMOS image sensors

*Thursday 20 September 2018 15:45 (45 minutes)*

The read noise of CMOS image sensors has been reduced by a factor 10 in the last 15 years. As a result, photon-counting applications are now in reach with CMOS image sensor technology. The talk will address the most important measures that have led to this noise reduction, such as CMOS scaling, improved readout circuits and low-noise CMOS transistor process technology. In most cases, the low-noise image sensors use a rolling shutter to control the exposure. Today, we also see a large interest in global shutter image sensors for a variety of consumer, automotive and industrial applications. In global shutter image sensors, all pixels acquire the image at the same time. The more complex global shutter pixel structure poses some challenges for noise reduction techniques which will also be addressed.

### Summary

**Presenter:** MEYNANTS, Guy

**Session Classification:** Invited