

## **Next Frontier in CMOS Imaging – Always ON Sensing**

### **Abstract:**

Optical Imagers have progressed tremendously over the last 2 decades from film to CCDs, to now the ubiquitous CMOS sensor that almost every one of us carries on our smartphones. Over the last decade, CMOS in consumer devices drove technological advancements from lower noise, pixel shrink, to BSI. As a result, camera in consumer space benefits from higher resolution, in line with the needs from Smartphones. However, there is now a new frontier that we should not overlook; the need for ultra-low power imagers for Always ON sensing. Thinking back, this why CMOS low power advantage was able to outpace CCDs in the first place.

The development in CMOS imaging has also brought along tremendous benefits in implementing on chip SOC for image analytics. With the emergence of smart sensors in application that involves detection, CMOS sensors can now be more widely used in non “Capture and Display” application. In the discussion, I will share my thoughts about what is sure to become a reality in Always ON sensing.