

# ALEX

7-8 November

Singapore

## Southeast Asia 2019

Marina Bay Sands Convention Centre  
Jasmine Ballroom | Level 3

### Topics and Abstracts:

<b>Speaker</b>	<b>Dr. Pawel E. Malinowski</b>
<b>Company</b>	<b>imec</b>
<b>Designation</b>	<b>Program Manager “User Interfaces &amp; Imagers”</b>
<b>Title of Presentation</b>	<b>Thin-Film Image Sensors and Integration into Displays</b>
<b>Abstract</b>	<p>Pixel arrays based on thin-film semiconductors have become a commodity. Thanks to advances in flat panel display (FPD) manufacturing on large glass sheets, it is possible to not only lower the production cost, but also to obtain large-area, flexible devices in new form factors. Displays based on AMOLED technology are dominating mobile electronics and image sensors with thin-film photodiode read out by a TFT circuit are making their way into x-ray detectors and biometric devices. The next disruption is to integrate light sensing pixels into displays to add functionality to the panel and limit the number of non-FPD components. Such smart pixels can enable full-screen fingerprint scanners, precise ambient sensing and gesture control. In this presentation, we will show technology approaches leading to include thin-film photodiodes into AMOLED displays.</p>

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### Biography



Pawel E. Malinowski was born in Lodz, Poland. He received the M.Sc.Eng. degree in electronics and telecommunications (thesis on design of radiation-tolerant integrated circuits) from the Lodz University of Technology, Poland, in 2006. In 2011, he received the Ph.D. degree in electrical engineering from the KU Leuven, Belgium (thesis on III-nitride-based imagers for space applications).

Pawel is working at imec since 2005, and in the Large Area Electronics Department since 2011. Currently, he is Program Manager “User Interfaces & Imagers” and focuses on thin-film image sensors and high resolution OLED displays. He coordinates activities related to applications of thin-film electronics technology in future devices, prepares go-to-market scenarios and sets the technology roadmaps.

Pawel has coauthored more than 40 publications and submitted 4 patent applications.

He was a recipient of the International Display Workshops Best Paper Award in 2014 and the SID Display Week Distinguished Paper Award in 2018. Pawel is Member of IEEE, SID and SPIE and serves on the ODI committee for IEDM since 2018.