

# The five highlights of October 2017

Life is busy! So you might not always have the time to keep up with imec's latest news and achievements. On this page you can find a quick overview of what imec has been doing in the past month.

## Researchers imec - KU Leuven unveil Wi-Fi security breach

Researchers from DistriNet, an imec research group at KU Leuven, have discovered a serious security breach in WPA2, one of the most commonly used systems to set up 'safe' wireless networks. The security keys used by WPA2 are not chosen entirely randomly and can thus be predicted. Hackers that are within physical reach of your Wi-Fi network can use Key Reinstallation Attacks to steal sensitive information from your device. To prevent this, you need to install new security updates as soon as they are available. Read the full paper [here](#).

## 3,000 visitors on Open Company Day

On Sunday 1 October, imec participated in the Flemish Open Company Day and opened its doors to the general public. Over 3,000 people visited our campus in Heverlee, where they experienced what our daily life could look like in the future. From breakfast to work, leisure time and sleeping – smart software and microchip technology can make the difference! On the demo floor, our researchers enthusiastically explained how imec technology can improve our quality of life in the future. In the meantime, our youngest visitors were welcomed by our partner [RVO-Society](#) to experiment with electrical circuits, to program a Lego train, or to figure out how drones can fly.

## Record number of participants for Partner Technical Week

Twice a year imec invites its partners to discuss its most recent research results. At the end of October, a record number of 660 participants joined us for the Partner Technical Week (PTW). They attended numerous presentations on imec's most recent breakthroughs and most exciting future plans with regard to advanced technology and system solutions for next generation logic and memory ICs.

## **Imec and Analog Devices join forces to advance Internet of Things technology**

Imec has entered into a strategic partnership with Analog Devices, Inc. (ADI) to develop the next generation of Internet of Things devices, devices that are not only low-power but also come with largely improved – or completely new – sensing capabilities.

At the moment, two initiatives are already underway. The first initiative focuses on the development of a low-power sensor for highly accurate indoor localization in the context of smart building or smart industry solutions. More specifically, this sensor should achieve up to five times better accuracy than today's best performing solution. The second initiative is the creation and commercialization of a highly-integrated liquid sensor that can be used in a variety of application domains, such as the analysis of water, blood, or urine. This single-chip sensor will excel in terms of cost and size, while demonstrating industry leading sensitivity and accuracy. More information in [this press release](#).

## **Micro-optomechanical pressure sensor for biomedical applications**

At ITF Health (3 October, San Diego, USA), we unveiled a new high-precision large-range pressure sensor that combines the best of MEMS and photonics technology. The advanced pressure sensor, which is based on micro-optomechanical (MOMS) technology, could be used in a variety of (biomedical) applications such as intracranial pressure or intravascular blood monitoring, where high-quality remote sensing is required. It offers a level of precision similar to commercial MEMS, over a very large range. Moreover, the sensor shows high tolerance to EMI interference and supports multiplexing. With this sensor, imec researchers have demonstrated a root mean square (rms) precision lower than 1Pa across a large range that could easily reach 100kPa.

We are currently looking for partners who are interested in conducting joint research on this topic or want to engage in joint development and/or low-volume production. More information in [this press release](#).