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MAGAZINE

Discovering SPAD sensors

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The 2024 edition of the ISSW biennial conference and related school to understand how SPAD sensors work and how they can be used in modern technologies.

A summer-like day welcomed the 200 participants of the **SPAD Sensor School** and ISSW **2024 – International SPAD Sensor Workshop** conference, who gathered in Trento June 3-6, 2024 after two editions held entirely online.



This type of event, held every two years, deliberately limits attendance to a couple of hundred people to create a coy environment that will make networking and scientific discussions easier and more straight to the point.

As the name suggests, the school – reserved for a select group of students, PhDs and young researchers – offered an introductory overview of **SPAD (Single-Photon Avalanche Diode) technologies**, **from the principle of device operation to sensor architectures and applications.** The first day of the proceedings was held in the spaces of FBK's S. Croce venue,

whose cloister hosted a catering service that was highly appreciated, offering participants the opportunity to exchange remarks on the talks and to network in a pleasant and confidential setting.

Participants **from Italian, European and Asian (South Korea, Japan, Singapore, China) universities and institutes but also and for the most part from companies such as Sony, Huawei, Canon,** LG-just to name a few – continued the scientific sessions in the halls of the Grand Hotel Trento. In addition to the presentations by the more than 20 speakers, lively poster-sessions were held on each of the three days with **more than 40 posters,** preceded by related *flash-presentations*.

The conference also counted **10 sponsoring companies**, whose representatives actively took part in the sessions; in particular, the **3 Platinum category sponsors (SONY, Adaps Photonics, ST Microelectronics)** had set up a booth and during the coffee-breaks, interacted with the participants and showed them the technologies developed.

The **local chair** of the conference, **Leonardo Gasparini with the IRIS – Integrated Readout Asics and Image Sensors unit** at the **Center for Sensors and Devices,** thus commented on the success of the Trentino edition of ISSW:



“It was a very well-attended edition, with many questions during all three days and intense poster sessions. Moreover, the high involvement of the industry (more than half of the 200 people registered) shows the relevance and impact of this technology in everyone’s life. For FBK, having organed the fourth edition of the International SPAD Sensor Workshop is a source of pride and recognition for the work done over the past 20 years in the field of single-photon sensors.”

It is not yet certain where the 2026 edition of the event will be held, but South Korea seems to be an excellent candidate.

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