INTERNATIONAL IMAGE SENSOR SOCIETY

FIRST CALL FOR PAPERS

ABSTRACTS DUE Dec 10, 2026

2027 International Image Sensor Workshop

The Westin Resort & Spa, Whistler, BC, Canada
June 13-17, 2027

General Workshop Co-Chairs:

Boyd Fowler
Bharat Semi, USA

Daniel Van Blerkom
Swirlabs, USA

Technical Program Chair:

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Technical Program Committee:

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TowerJazz, Israel

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Gpixel, China

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Edoardo Charbon
EPFL, Switzerland

Eric Webster
Bharat Semi, USA

The 2027 International Image Sensor Workshop (IISW) provides a biennial opportunity to present innovative work in the area of solid-state image sensors and share new results with the image sensor community. The event is intended for image sensor technologists; in order to encourage attendee interaction and a shared experience, attendance is limited, with strong acceptance preference given to workshop presenters. As is its tradition, the 2027 workshop will emphasize an open exchange of information among participants in an informal, secluded setting besides Whistler, BC, Canada.

The scope of the workshop includes all aspects of electronic image sensor design and development. In addition to regular oral and flash presentation papers, the workshop will include invited talks and announcement of International Image Sensors Society (IISS) Award winners.

Papers on the following topics are solicited:

Image Sensor Design and Performance
CMOS imagers, CCD imagers, SPAD sensors
New and disruptive architectures
Global shutter image sensors
Low noise readout circuitry, ADC designs
Single photon sensitivity sensors
High frame rate image sensors
High dynamic range sensors
Low voltage and low power imagers
High image quality; Low noise; High sensitivity
Improved color reproduction
Non-standard color patterns with special digital processing
Imaging system-on-a-chip, On-chip image processing
Event-based image sensors

Pixels and Image Sensor Device Physics
New devices and pixel structures
Advanced materials
Ultra miniaturized pixels development, testing, and characterization
New device physics and phenomena
Electron multiplication pixels
Techniques for increasing QE, well capacity, reducing crosstalk, and improving angular response
Front side illuminated, back side illuminated, and stacked pixels and pixel arrays
Pixel simulation: Optical and electrical simulation, 2D and 3D, CAD for design and simulation, improved models

Application Specific Imagers
Image sensors and pixels for range sensing: TOF, RGBZ, Structured light, Stereo imaging, etc.
Image sensors with enhanced spectral sensitivity (NIR, UV, IR)
Sensors for DSC, DSLR, mobile, digital video cameras and mirror-less cameras
Array imagers and sensors for multi-aperture imaging, computational imaging, and machine learning
Sensors for medical applications, microbiology, genome sequencing
High energy photon and particle sensors (X-ray, radiation)
Line arrays, TDI, Very large format imagers
Multi and hyperspectral imagers
Polarization sensitive imagers

Image sensor manufacturing and testing
New manufacturing techniques
Wafer-on-wafer and chip-on-wafer stacking technologies
Backside thinning
New characterization methods
Packaging and testing: reliability, yield, cost
Defects, noises, and leakage currents
Radiation damage and radiation hard imagers

On-chip optics
Advanced optical path, color filters, microlens, light guides
Nanotechnologies for Imaging
Wafer level cameras

Submission of abstracts:
An abstract should consist of a single page of maximum 500-words text with up to two pages of illustrations (3 pages maximum), and include authors' name(s) and affiliation, mailing address, telephone and e-mail address.

> The deadline for abstract submission is **11:59pm, Thursday Dec 10th, 2026** (**PST**).
> To submit an abstract, please go to: https://cmt3.research.microsoft.com/IISW2027
> Above website should be open by Aug 1st, 2026.

The first time you visit the paper submission site, you'll need to click on "Create Account". Once you create and verify your account with your email address, you will be able to submit abstracts by logging in and clicking "Create New Submission".

Please visit **http://imagesensors.org/CFP2027** for complete instructions and any updates to the abstract and paper submission procedures.

Abstracts will be considered on the basis of originality and quality. High quality papers on work in progress are also welcome. Abstracts will be reviewed confidentially by the Technical Program Committee.

Key Dates
Authors will be notified of the acceptance of their abstract by **February 12th, 2027**.
Final-form 4-page paper submission date is **March 20th, 2027.**
Presentation material submission date is **April 30th, 2027**.

Location and format:
The IISW 2027 will be held at the Westin Resort & Spa in Whistler, British Columbia in Canada.

Registration, Workshop fee and Program:
The Workshop Program and registration details will be provided in the Final Announcement of the Workshop.

Forthcoming announcements and additional information will be posted on the **2027 Workshop page** of the International Image Sensor Society website at:

http://www.imagesensors.org/