

FINAL CALL FOR PAPERS

2017 International Image Sensor Workshop

Hiroshima, Japan

**May 30 - June 2
2017**



**General Workshop
Co-Chairs:**

Nobukazu Teranishi
*Univ. of Hyogo and Shizuoka
University, Japan*

Junichi Nakamura
Brillnics, Japan

**Technical Program
Chair :**

Shoji Kawahito
Shizuoka University, Japan

**Technical Program
Committee:**

Gennadiy Agranov
Apple, USA

Edoardo Charbon
*Delft University of Technology,
The Netherlands*

Bart Dierickx
Caeleste, Belgium

Neal Dutton
ST Microelectronics, UK

Eric Fossum
Dartmouth College, USA

Boyd Fowler
OmniVision, USA

Michael Guidash
RM Guidash Consult, USA

Shoji Kawahito
Shizuoka University, Japan

Bumsuk Kim
Samsung, South Korea

Vladimir Koifman
Analog Value, Israel

Pierre Magnan
ISAE, France

Guy Meynants
AMS, Belgium

Junichi Nakamura
Brillnics, Japan

Shouleh Nikzad
JPL, Caltech, USA

The 2017 International Image Sensor Workshop (IISW) will provide an opportunity to present innovative work in the area of solid-state image sensors and share new results with the imaging community. The workshop is intended for image sensor technologists and has limited attendance.

As in the previous years, the workshop will emphasize active interaction and encourage exchange of information among the workshop participants in an informal and open atmosphere at a great venue.

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

Papers on the following topics are solicited:

Image Sensor Design and Performance

CMOS imagers, CCD imagers, APD arrays.
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

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 and back side illuminated 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 and computational Imaging
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
Backside thinning
Stacked imagers, 3D integration

On-chip optics

Advanced optical path, Color filters, Microlens, Light guide
Nanotechnologies for Imaging
Wafer level cameras. Packaging and testing
Reliability, Yield, Cost
Defects. Leakage current.
Radiation damages and radiation hard imagers

ABSTRACT SUBMISSION DEADLINE: January 19, 2017

Jun Ohta

NAIST, Japan

Yusuke Oike

Sony, Japan

Johannes Solhusvik

OmniVision, Norway

Eric Stevens

ON Semiconductor, USA

David Stoppa

Fondazione Bruno Kessler, Italy

Shigetoshi Sugawa

Tohoku University, Japan

Vyshnavi**Suntharalingam**

MIT Lincoln Labs, USA

Hidekazu Takahashi

Canon, Japan

Nobukazu Teranishi

Univ. of Hyogo and Shizuoka University, Japan

Albert Theuwissen

Harvest Imaging and Delft Univ. of Technology, Belgium

Daniel Van Blerkom

Forza Silicon, USA

Orly Yadid-Pecht

University of Calgary, Canada

Dun-Nian Yang

TSMC, Taiwan

IISS Board of Directors**Eric R. Fossum**

Dartmouth College, USA

Junichi Nakamura

Brillnics, Japan

Johannes Solhusvik

OmniVision, Norway

Eric Stevens

ON Semiconductor, USA

Nobukazu TeranishiUniv. of Hyogo and Shizuoka University, Japan
(President)**Albert Theuwissen**

Harvest Imaging and Delft Univ. of Technology, Belgium

Submission of papers:

Abstracts should be submitted electronically to the Technical Program Chair, Shoji Kawahito (kawahito@idl.rie.shizuoka.ac.jp) by January 19, 2017 (JST).

An abstract should consist of a single page of maximum 500-words text with up to two pages of illustration (preferably in A4 size), and include authors' name(s) and affiliation, mailing address, telephone and e-mail address.

The electronic file with abstract should be prepared in .pdf format. The name of the file should be the last name of presenter. Also, please include a category/categories of topics of your paper that is listed above when you submit an abstract to the Technical Program Chair.

Abstracts will be considered on the basis of originality and quality. High quality papers on work in progress are also welcome.

Authors will be notified of the acceptance of their abstract by March 13, 2017

Final-form 4-page paper submission date is April 13, 2017.

Presentation material submission date is May 22, 2017.

Location:

The IISW 2017 will be held at the Grand Prince Hotel Hiroshima, Hiroshima, Japan. The hotel is located on the shore of the beautiful island-studded sea. <http://www.princehotels.com/hiroshima/>
There are two UNESCO world heritage sites close to the IISW site, Peach Memorial (Genbaku dome) and Itsukushima Shrine. <http://www.city.hiroshima.lg.jp/english/>

Attendance is limited to 160 participants.

Forthcoming announcements and additional information will be posted on the **2017 Workshop page** of the International Image Sensor Society website at:

<http://www.imagesensors.org/>

Registration Procedures

Registration is limited to approximately 160 attendees on a first-come, first-served basis. Registration will be guaranteed for presenters, but they are still required to register. Past experience shows that registration is often filled to capacity within a few days' time.

Registration forms (Pre-registration form and Registration form) will be available on the web. Pre-registration will start on **January 24**, 2017 and end on **February 10**, 2017.

You will receive confirmation of your registration, and registration payment instructions, after all 160 attendees have been identified. It will be around **February 20**, 2017.

Together with the confirmation of your registration, you will receive further information for your Hotel Reservation.

The details of payment for the Workshop will be described in the registration confirmation form sent to you by the Workshop.

The Workshop fee will be announced later but it will be around 100,000 Japanese Yen, which includes one copy of the Proceedings of the Workshop.

Workshop Program

The Workshop will start on Tuesday, May 30, 2017, and will end on Friday, June 2, 2017 at noon. Lunch and dinner each day are included in the Workshop fee.

The details of the Workshop Program will be sent out before **March 13, 2017** to those who have registered and been admitted to the Workshop and will also be available on the Workshop's website.

Hotel Reservation

Paperwork for making the hotel reservation will be sent after your registration is complete.

Twin room, single use:	Yen 13,500 /room/day
Twin room, two people:	Yen 16,200 /room/day
Twin room, three people with a rollway bed	Yen 22,680 /room/day (including breakfast, service charge and tax)