

2nd Asian Image Sensors and Imaging Systems Symposium

Sponsored by IEEE SSCS Japan Chapter

Co-sponsored by Technical Group on Information Sensing Technologies (IST), the Institute of Image Information and Television Engineers (ITE), and IEEE SSCS Kansai Chapter

In cooperation with Group of Information Photonics (Optical Society of Japan),
+CMOS Working Group, Computational Optics Working Group, and Nanophotonic Information Systems Working Group

Date: December 1-2, 2014

Venue: Tamachi Campus, Tokyo Institute of Technology

Access: see Tamachi Campus at <http://www.titech.ac.jp/english/maps/index.html>

Address: 3-3-6 Shibaura, Minato-ku, Tokyo, 108-0023 JAPAN

Official language: English

The latest information: see <http://www.ieee-jp.org/japancouncil/chapter/SSC-37/aisiss2014.pdf>

Overview: In this symposium, people from various research fields, such as image sensing, imaging systems, optics and image processing, come together to discuss the future and frontiers of image sensor technologies. For the continuous progress and diversity in the engineering of image sensors and imaging systems, state-of-the-art and emerging technologies will be explored. The symposium is composed of invited talks, a poster session, and a welcome party. **Submission of papers for the poster presentation starts in September, and the deadline is on October 10, 2014.** Awards will be given to selected excellent papers presented by IEEE members. We encourage everyone to submit latest original work. **To reserve your proceedings, please pre-register by October 31, 2014.** The scope of this symposium is as follows.

Scope:

- Image sensor technologies
- Image sensor applications
- Imaging systems
- Related process and circuit technologies
- Next-generation technologies for image sensors and imaging systems

Join and enjoy the symposium!

Chair: Shoji Kawahito (Shizuoka University)

Vice-chair: Shigetoshi Sugawa (Tohoku University)

Technical Program Chair: Keiichiro Kagawa (Shizuoka University), Shinya Itoh (Toshiba Corp.), Hiroyuki Suzuki (Tokyo Institute of Technology), Min-Woong Seo (Shizuoka University)

Pre-registration to reserve your proceedings:

Pre-registration is necessary to reserve your proceedings. Send e-mail to aisiss2014@idl.rie.shizuoka.ac.jp with the following information by Oct. 31. Please pay registration (proceeding) fee (1,500-yen or ~15USD) and welcome party admission on site.

- (1) Your name
- (2) Affiliation
- (3) Title: Prof./ Dr./ Mr./ Ms. (choose one)
- (4) Regular/ Student (choose one)
- (5) Membership: IEEE member/ non-member (choose one)
- (6) Membership number if you are a member of IEEE
- (7) E-mail address (Official e-mail is preferred)
- (8) Join welcome party (2,000-yen for students/ 4,000-yen for the regular): Yes/ No (choose one)

NOTES) Proceedings are available for free for the invited speakers and the poster presenters.

Paper submission to the poster session:

Entry your paper at the following URL:

https://www.ite.or.jp/ken/form/index.php?tgs_regid=8a1a0ff611e74d0a308fa324c5d887acaa2197d5d1dbf960466bb33a8645c7ce&tgid=ITE-IST&lang=eng

(Use the above English page for the paper entry. DO NOT follow the Japanese instructions at the bottom of the page.)

Paper entry deadline: Oct. 10(Fri), 2014 (Only title, authors, and short abstract are required)

Manuscript submission deadline: Nov. 7(Fri), 2014 (2-page English proceeding is required)

All presenters will be asked to submit a 2-page proceeding by Nov. 7.

A few excellent posters presented by IEEE members will be awarded. Please consider to become a member of IEEE before submitting a paper.

Submission of 2-page English proceeding:

All speakers of the invited speakers and the poster presenters are due to submit a 2-page proceeding written in English. (Japanese and the other languages are not allowed.)

Poster award:

One or a few excellent papers will be awarded among the papers presented by IEEE members.

Special issue:

Special issue of AISISS2014 will be published in ITE MTA in Oct. 2015. The paper submission deadline is Jan. 2015. More information will be provided for the corresponding authors of the poster presentation. See http://www.ite.or.jp/en/c/?p=mta_home

Program:

December 1 (Mon)

8:30- Registration @ In front of Int'l Conf. Room (1F) NOTE) Conference hall is open at 9:00

9:30-9:40@ Int'l Conf. Room (1F)

Opening remarks, IEEE SSCS Japan Chapter Chair

9:40-11:20 Process technologies (100-min) @ Int'l Conf. Room (1F)

Presider: Shoji Kawahito (Shizuoka University)

1. [Plenary] "Recent trend of image sensor development" (40-min)
by Nobukazu Teranishi (University of Hyogo and Shizuoka University, Japan)
2. [Invited]"Highly sensitive image sensors using micro color splitters" (30-min)
by Seiji Nishiwaki, Tatsuya Nakamura, Masa-aki Suzuki (Panasonic Corp.)
3. [Invited] "Wide spectral response and highly robust Si image sensor technology" (30-min)
by Rihito Kuroda and Shigetoshi Sugawa (Tohoku University, Japan)

11:20-13:00 Lunch

13:00-15:00 Circuit technologies (120-min) @ Int'l Conf. Room (1F)

Presider: Min-Woong Seo (Shizuoka University)

4. [Invited] "High speed vision chips based on multiple levels of parallel processors" (30-min)
by Nanjian Wu (Institute of Semiconductors, Chinese Academy of Sciences, China)
5. [Invited] "Column-parallel oversampled ADCs for high performance CMOS image sensors"
(30-min) by Youngcheol Chae (Yonsei University, Korea)
6. [Invited] "Column parallel SS-ADC with TDC using multi-phase clock signals for CMOS
imagers" (30-min) by Masayuki Ikebe (Hokkaido University, Japan)
7. [Invited] "Column-parallel cyclic ADC for CMOS imagers" (30-min)
by Shoji Kawahito (Shizuoka University, Japan)

15:00-15:20 Break

15:20-16:20 Low-power technologies (60-min) @ Int'l Conf. Room (1F)

Presider: Keita Yasutomi (Shizuoka University)

8. [Invited] "Ultra low voltage and low power mixed-signal circuits" (30-min)
by Hiroki Ishikuro (Keio University, Japan)
9. [Invited] "Design of low-voltage low-power CMOS imager" (30-min) by Chih-Cheng Hsieh,
Chin Yin, Albert Yen-Chih Chiou, Chih-Lin Lee (National Tsing Hua University, Taiwan)

16:20-16:30 Break

16:30-17:30 Poster session (60-min) @ Multi-purpose Room (5F)

Presider: Shinya Itoh (Toshiba Corp.)

18:00-20:00 Welcome party and awards ceremony @ Int'l Conf. Room (1F)

(Continued to the next page)

December 2 (Tue)

8:30- Registration @ In front of Int'l Conf. Room (1F) NOTE) Conference hall is open at 9:00

9:30-10:30 TOF depth map sensors (60-min) @ Int'l Conf. Room (1F)

Presider: Hyngjune Yoon (Shizuoka University)

10. [Invited] "A 2-D/3-D image sensor with PPD-based lock-in pixels" (30-min)
by Seong-Jin Kim (Institute of Microelectronics, A*STAR, Singapore)
11. [Invited] "High-resolution time-of-flight range imagers with lateral electric field modulation pixels" (30-min) by K.Yasutomi, K.Kagawa, S.Kawahito (Shizuoka University, Japan)

10:30-11:30 Imaging systems (60-min) @ Int'l Conf. Room (1F)

Presider: Hiroyuki Suzuki (Tokyo Institute of Technology)

12. [Invited] "Functional imaging of biological tissues based on diffuse reflectance spectroscopy with a digital RGB camera" (30-min)
by Izumi Nishidate (Tokyo University of Agriculture and Technology, Japan)
13. [Invited] "Multi-color, stain-free medical imaging by stimulated Raman scattering microscopy" (30-min) by Yasuyuki Ozeki (The University of Tokyo, Japan)

11:30-13:00 Lunch

13:00-14:30 Scientific image sensors (90-min) @ Int'l Conf. Room (1F)

Presider: Nobukazu Teranishi (University of Hyogo and Shizuoka University)

14. [Invited] "CCD image sensor for astronomical applications" (30-min)
by Hisanori Suzuki, Masaharu Muramatsu, Yasuhito Miyazaki, and Shin'ichiro Takagi (Hamamatsu Photonics K. K.)
15. [Invited] "Radiation image sensor with SOI technology" (30-min)
by Yasuo Arai (High Energy Accelerator Research Organization (KEK), Japan)
16. [Invited] "Advancement of sensor technologies and live imaging -- from a user's viewpoint" (30-min) by Yasushi Okada (RIKEN Quantitative Biology Center (QBiC), Japan)

14:30-14:50 Break

14:50-16:20 Next technology trends (90-min) @ Int'l Conf. Room (1F)

Presider: Keiichiro Kagawa (Shizuoka University)

17. [Invited] "Implantable bioimaging device based on CMOS image sensor technology" (30-min) by Takashi Tokuda, Hiroaki Takehara, Toshihiko Noda, Kiyotaka Sasagawa, and Jun Ohta (Nara Institute of Science and Technology, Japan)
18. [Invited] "Plasmonics for sensor applications" (30-min)
by Atsushi Ono, Hiroaki Satoh, and Hiroshi Inokawa (Shizuoka University, Japan)
19. [Invited] "Computational imaging" (30-min) by Hajime Nagahara (Kyushu University, Japan)

16:20-16:30 Closing remarks, ITE IST Chair

<Contact for any question about AISISS2014>

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(Keiichiro Kagawa, Shizuoka University)