# International Workshop on SOI Pixel Detector (SOIPIX2015)

from Tuesday 02 June 2015 at **16:00** to Saturday 06 June 2015 at **16:00** (Asia/Tokyo) at Tohoku University, Sendai, Japan (Katahira Sakura Hall)

## Description
All talks include 5min question time.

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<th>Date</th>
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<th>Convener</th>
<th>Location</th>
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<tr>
<td>Tuesday 02 June 2015</td>
<td>16:00 - 17:00</td>
<td>Registration</td>
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<td>Wednesday 03 June 2015</td>
<td>09:00 - 09:30</td>
<td>Opening Session</td>
<td>T. Wada (JAXA/ISAS)</td>
<td>Sendai, Japan (Katahira Sakura Hall)</td>
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<td></td>
<td>09:30 - 11:10</td>
<td><strong>Opening Address</strong> 10'</td>
<td>Akimasa Ishikawa (Tohoku Univ.)</td>
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<td></td>
<td>09:40</td>
<td><strong>Introduction of SOI Pixel Activities</strong> 30'</td>
<td>Yasuo ARAI (KEK/IPNS)</td>
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<td>10:10</td>
<td><strong>Kyoto’s X-ray Astronomical SOI pixel sensor - XRPIX</strong> 30'</td>
<td>Takeshi Tsuru (Kyoto Univ.)</td>
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<td>10:40</td>
<td><strong>SOI activities in Cracow</strong> 30'</td>
<td>Marek Idzik (AGH-Univ. of Science and Technology)</td>
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<td>11:10 - 11:30</td>
<td>Coffee Break</td>
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<td>11:30 - 12:50</td>
<td><strong>Development of KEK SOI pixel sensors</strong> 20'</td>
<td>Toshinobu MIYOSHI (KEK/IPNS)</td>
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<td>11:50</td>
<td><strong>A Study on the shielding mechanisms of SOI pixel detector</strong> 30'</td>
<td>Yunpeng Lu (IHEP)</td>
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<td>12:20</td>
<td><strong>Lapis SOI Pixel Process</strong> 30'</td>
<td>Masao Okihara (Lapis Semiconductor Co. Ltd.)</td>
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<td>12:50 - 14:10</td>
<td>Lunch</td>
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<td>14:10 - 15:30</td>
<td><strong>Development of Far-Infrared Image Sensor</strong> 20'</td>
<td>Takehioko Wada (JAXA/ISAS)</td>
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<td>14:30</td>
<td><strong>Some issues with DIPIX measurements</strong> 30'</td>
<td>Piotr Kapusta (IFJPAN)</td>
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<td>15:00</td>
<td><strong>SOI pixel sensor for gamma-ray imaging</strong> 30'</td>
<td>Kenji Shimazoe (Univ. of Tokyo)</td>
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<td>15:30 - 16:20</td>
<td>Poster Session (&amp; Coffee Break)</td>
<td>A. Ishikawa (Tohoku U.)</td>
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<td>15:30</td>
<td><strong>P1: Soft X-ray performance of Back-illuminated SOI pixel Sensor for X-ray astronomy</strong> 0'</td>
<td>Makoto Ito (Kyoto Univ.)</td>
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<td>15:31</td>
<td><strong>P2: Reduction of cross-talks in the Kyoto's X-ray Astronomical SOIPIXs with Double-SOI wafer</strong> 0'</td>
<td>Shunichi Ohmura (Kyoto Univ.)</td>
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<td>15:32</td>
<td><strong>P3: Study of the basic performance of the XRPIX for the future astronomical X-ray satellite</strong> 0'</td>
<td>Koki Tamasawa (Tokyo Univ. of Science)</td>
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<td>15:33</td>
<td><strong>P4: Improvement of the Positional Resolution of XRPIX and its Application to an X-ray Interferometer</strong> 0'</td>
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Thursday 04 June 2015

Morning Session #1
Convener: T. Hatsui (Riken)
09:00 X-ray Radiation Hardness of Fully-Depleted SOI MOSFETs and Its Improvement 30'
Speaker: Ikuo Kurachi (KEK)
09:30 Compensation of radiation damages for SOI pixel detector via tunneling 20'
Speaker: Miho Yamada (KEK)
09:50 TID responses of back-biased DSOI and FDSOI transistors 30'
Speaker: Kai Zhao (IMECAS)
10:20 Evaluations of TID-Effect Compensation and Sensor-Circuit Cross-Talk Suppression in

P5: Development of Far-Infrared Image Sensor with Silicon-supported Germanium Blocked Impurity Band Detector 01'
Speaker: Kiyoshi Hayashida (Osaka Univ.)

15:34

P6: Anti-reflection at the Detector Surface using Subwavelength Structure 01'
Speaker: Keita Yamamoto (Sokendai(JAXA/ISAS))

15:35

P7: DAQ Development for Silicon-On-Insulator Pixel detectors 01'
Speaker: Ryutaro Nishimura (Soukendai (KEK))

15:36

P8: X-ray induced total ionizing dose effect on the SOI pixel detector for X-ray astronomical use 01'
Speaker: Koji Mori (Miyazaki Univ.)

15:37

P9: Feasibility study of UV avalanche photosensors using SOI-CMOS technology for High-Sensitivity imaging 01'
Speaker: Ryutaro Hamasaki (Sokendai (KEK))

15:38

P10: Application of monolithic SOI pixel detector to stress analysis and materials evaluation for industrial use 01'
Speaker: Toshihiko Sasaki (Kanazawa Univ.)

15:39

P11: A SOI-Based Low Noise and Wide Dynamic Range Event-Driven Detector for X-Ray Imaging 01'
Speaker: Sumeet Shrestha (Shizuoka Univ.)

15:40

P12: SOI pixel circuits with synchronized TMC for time-of-flight stigmatic imaging mass spectrometry 01'
Speaker: Kaori Watanabe (Hokkaido Univ.)

15:41

P13: Characteristics of Non-Irradiated and Irradiated Double SOI Integration Type Sensor 01'
Speaker: Mari Asano (Univ. of Tsukuba)

15:42

P14: Bias Dependence of TID Effect Compensation in Double SOI 01'
Speaker: Naoshi Tobita (Univ. of Tsukuba)

15:43

P15: Development of a pixel ion detector for stigmatic time-of-flight imaging mass spectrometry 01'
Speaker: Fujita Yowichi (KEK)

15:44

P16: Improvement of spatial resolution of a stigmatic imaging mass spectrometer by ion trajectory simulation 01'
Speaker: Ayane Okazaki (Osaka Univ.)

15:45

P17: Light Dark Matter Search by SOIPIX 01'
Speaker: Naoya Oka (Kobe Univ.)

15:46

P18: Development of the Pixelated Photon Detector Using SOI Technology for TOF-PET 01'
Speaker: Akihiro Koyama (Univ. of Tokyo)

15:47

P19: A study of active shielding optimized for 1-80 keV wide-band X-ray detector in space 01'
Speaker: Yoshihiro Furuta (U. of Tokyo)

15:48

Afternoon Session #2
Convener: I. Kurachi (KEK)
16:20 Improving Charge-Collection Efficiency of Kyoto's SOI Pixel Sensors 20'
Speaker: Hideaki Matsumura (Kyoto Univ.)

16:20

Position and time sensitive ion detector for stigmatic imaging mass spectrometry 20'
Speaker: Hisano Hazama (Osaka Univ.)

16:40

Device and Circuit Techniques for SOI Pixel Sensors 30'
Speaker: Shoji Kawahito (Sizuoka Univ.)

17:00

Workshop Dinner 2h00' (Shokeikaku)

18:30 - 20:30

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Speaker: Kai Zhao (IMECAS)
10:20 Evaluations of TID-Effect Compensation and Sensor-Circuit Cross-Talk Suppression in
Double-SOI Devices 20'
Speaker: Shunsuke Honda (U. Tsukuba)

10:40 - 11:10 Poster Award Ceremony, Group Photo & Coffee Break
11:10 - 12:50 Morning Session #2
Convener: H. Hazama (Osaka U.)
11:10 X-ray imaging detectors for X-ray Free-Electron Lasers 30'
Speaker: Takaki Hatsui (Riken)
11:40 Application of SOI Area Detectors to Synchrotron Radiation X-ray Experiments 20'
Speaker: Ryo Hashimoto (KEK/IMSS)
12:00 SOI pixel sensor for the ILC vertex detector 20'
Speaker: Shun Ono (Osaka Univ.)
12:20 Fine Pitch Micro-Bump Junction for the 3D Stacked Detector/Sensor Devices 30'
Speaker: Makoto Motoyoshi (T-micro Co. Ltd.)

12:50 - 14:10 Lunch
14:10 - 15:30 Afternoon Session
Convener: S. Kawahito (Shizuoka U.)
14:10 Response of SOI image sensor to therapeutic carbon ion beam 20'
Speaker: Akihiko Matsumura (Gunma Univ.)
14:30 Two-dimensional diffraction X-ray measurement with monolithic SOI pixel detector 20'
Speaker: Shingo Mitsui (Kanazawa Univ.)
14:50 Plasmon filter for SOI pixel sensor 20'
Speaker: Atsushi Ono (Shizuoka Univ.)
15:10 SOIKID, SOI pixel detector combined with the superconducting detector KID 20'
Speaker: Hirokazu Ishino (Okayama Univ.)

15:30 - 15:50 Coffee Break
15:50 - 16:40 Final Session
Convener: T. Tsuboyama (KEK)
15:50 Development FD-SOI MOSFET amplifiers for integrated read-out circuit of superconducting-tunnel-junction single-photon-detectors 20'
Speaker: Kenji Kiuchi (U. Tsukuba)
16:10 Gamma Polarimeter with SOI pixels for proposals at Extreme Light Infrastructure (ELI-NP) 20'
Speaker: Kensuke Homma (Hiroshima U.)
16:30 Final Remark 10'
Speaker: Junji Haba (KEK)

Friday 05 June 2015

08:45 - 17:00 Tour II
08:45 Global INtegration Initiative (GINTI) 4h00' (Sendai, Japan)
Material: Participants Schedule
12:45 Matsushima Sightseeing 4h00' (Sendai, Japan)

09:00 - 17:00 Tour I
09:00 Lapis Miyagi Fab. 4h00' (Furukawa)
13:00 Matsushima Sightseeing 4h00'

09:15 - 17:00 Tour III
09:20 Tohoku Univ. Imaging Lab. & Fluctuation Free Facility (FFF) 6h45'

Saturday 06 June 2015

13:30 - 16:00 Public Lecture
Location: エルパーク仙台6階ギャラリーホール
13:30 Opening 10'
13:40 SOI検出器を使ってILCでヒッグス粒子の正体に迫る 45'
Speaker: Hitoshi Yamamoto (Tohoku Univ.)
14:25 3次元半導体検出器で切り拓く放射線イメージング 45'
Speaker: Yasuo Arai (KEK/IPNS)
15:10 ブラックホールと宇宙の進化をSOI検出器で探る 45'