Acknowledgement

I would like to express my sincere gratitude to all speakers, chair persons, sponsors, committee members and all participants for their contribution to the success of the workshop.

Tadatomo Suga, Conference Chair
2017 5th International Workshop on Low Temperature Bonding for 3D Integration

Ito International Research Center Symposium
The University of Tokyo

http://www.3dwb.org/

May 16 - 18, 2017
General session: May 16 - 17
General session & Student session: May 18

The University of Tokyo
Ito International Research Center, Tokyo
Organized by

191st Committee on Innovative Interface Bonding Technology, Japan Society for the Promotion of Science (JSPS)

Co-sponsored by

IEEE CPMT Society, Japan Chapter
The Japan Society of Applied Physics
Institute for Advanced Microsystem Integration (IMSI)
The Precise Measurement Technology Promotion Foundation (PMTPF)
Ito International Research Center, The University of Tokyo
Past meetings

International Workshop on Low Temperature Bonding for 3D Integration

■ 1st  November 8-9, 2007, IEEE-CPMT
■ 2nd  January 19-20, 2010, IEEE-CPMT
■ 3rd  May 22-23, 2012, IEEE-CPMT
■ 4th  July 15-16, 2014, IEEE-CPMT
■ 5th  May 16-18, 2017, JSPS & IEEE-CPMT
LTB-3D 2017

- Oral Sessions
  - SURFACE ACTIVATED BONDING (SAB)
  - MEMS and SENSOR INTEGRATION
  - LOW-TEMPERATURE BONDING and APPLICATIONS
  - BONDING PROCESS INTEGRATION
  - HETERO-INTEGRATION
  - PACKAGING INTEGRATION

- Short presentations & Posters
- Student session
- Tutorial
May 16, Tuesday
8:30 REGISTRATION
9:00 OPENING REMARKS
9:20 SURFACE ACTIVATED BONDING (SAB) I
10:40 SURFACE ACTIVATED BONDING (SAB) II
12:20 LUNCH
13:50 MEMS and SENSOR INTEGRATION
16:50 LOW-TEMPERATURE BONDING and APPLICATIONS

May 17, Wednesday
8:30 BONDING PROCESS INTEGRATION
10:50 SHORT PRESENTATION for Poster
11:50 LUNCH / POSTER
13:20 STUDENT SESSION SHORT PRESENTATION for Poster
14:40 POSTER
15:30 HETERO-INTEGRATION
17:30 RECEPTION (Bus Transfer to Tokyo Bay Cruise)

May 18, Thursday
8:30 STUDENT SESSION
11:45 LUNCH
13:40 PACKAGING INTEGRATION
16:30 TUTORIAL
17:30 AWARDS
17:50 CLOSING REMARKS
18:30 STUDENT RECEPTION (Restaurant Abreuvoir)
LTB-3D 2017 summary

■ Presentations: 85 + Tutorial 1
  ■ Keynotes 6, Oral presentations 38, Short & poster presentation 41

■ Participants: 235
  ■ Japan 189, Oversea 46 from Austria, Belgium, Canada, China, Denmark, France, Germany, India, Netherlands, Norway, Korea, Singapore, Taiwan, UK, USA
  ■ Students 39, Univ./Research 62, Industries 134
Financial Support / Exhibition

- AML
- ME
- bondtech
- EVG
- MITSUBISHI HEAVY INDUSTRIES
- Canon
- Ayumi INDUSTRY CO., LTD.
- Hitachi High-Tech
- ‘TORAY’
- HAMAMATSU
- LAN
- Fuji Electric
International network

Austria, Belgium, Canada, China, Denmark, France, Germany, India, Netherlands, Norway, Korea, Singapore, Taiwan, UK, USA
Night cruise around Tokyo Bay
## Organizing Committee

<table>
<thead>
<tr>
<th>Name+</th>
<th>Affiliation</th>
<th>Role</th>
</tr>
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<tbody>
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<td>Conferece Chair</td>
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<td>Takehito Shimatsu</td>
<td>Tohoku University</td>
<td>Conferece Vice Chair</td>
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<td>AIST</td>
<td>Technical Committee Chair</td>
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<td>Suss MicroTec AG.</td>
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<td>Masahisa Fujino</td>
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<tr>
<td>Natsuko Kawamata</td>
<td>The University of Tokyo</td>
<td>Finance, Public Relations, Administration</td>
</tr>
</tbody>
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+ Hula, Book cover design, Shirts design
Upcoming conferences

- **WaferBond ’17**
  - Leuven (Belgium), November 27-29, 2017

- **ECS 15th International Symposium on Semiconductor Wafer Bonding: Science, Technology and Applications**
  - Cancun (Mexico), September 30 – October 4, 2018

- **WaferBond ’19 East - LTB-3D 2019 -**
  - Kanazawa (Japan), May 22- May 24, 2019
LTB-3D Student Session

Student steering committee

K. Takeuchi, PhD candidate, The University of Tokyo (Committee Chair)
K. Jerchel, PhD candidate, The University of Tokyo (Committee vice Chair)
N. Sekine, Master course 2nd, The University of Tokyo
W. Fu, PhD candidate, Waseda University
S. Yamajou, PhD candidate, Osaka City University
M. Khairi Faiz, PhD candidate, Waseda University
S. Choowitsakunlert, PhD candidate, Shibaura Institute of Technology
S. Yahagi, Master course 2nd, Toyota Technological Institute
B. Miao, PhD candidate, The University of Tokyo
S. Ikeda, Master course 1st, University of Hyogo
K. Watanabe, Master course 2nd, Shibaura Institute of Technology
Established on October 1st, 2015

Members: Academia 23; Industry 31

To survey the latest R&D trends in interface bonding so as to navigate R&D direction in advancing bonding technologies, systematize the theory for the interface generation and propose new processes for achieving them.
26 Academia Members

- Akitsu Shigetou, National Institute for Materials Science (NIMS)
- Eiji Higurashi, The University of Tokyo
- Hideki Takagi, National Institute of Advanced Industrial Science and Technology (AIST)
- Hideki Yokoi, Shibaura Institute Tecknology
- Ikuo Shoji, Gunma University
- Jyun Mizuno, Waseda University
- Katsuaki Suganauma, The University of Tokyo
- Masahisa Fujino, The University of Tokyo
- Masakazu Sugiyama, The University of Tokyo
- Masanori Kohyama, National Institute of Advanced Industrial Science and Technology (AIST)
- Minoru Sasaki, Toyota Technological Institute
- Mitusuru Takenaka, The University of Tokyo
- Naoe Hosoda, National Institute for Materials Science (NIMS)
- Naoteru Shigekawa, Osaka City University
- Nobuhiko Nishiyama, Tokyo Institute of Tecknology
- Noriaki Toyoda, University of Hyogo
- Ryo Takigawa, Kyushu University
- Shijyo Nagao, Osaka University
- Tadatomo Suga, The University of Tokyo
- Takafumi Fukushima, Tohoku University
- Takehito Shimatsu, Tohoku University
- Takunori Taira, Institute for Molecular Science
- Yoshiharu Kariya, Shibaura Institute Tecknology
- Yuichi Ikuhara, The University of Tokyo
- Yuki Nagao, Japan Advanced Institute of Science and Technology
- Yutaka Ohno, Tohoku University
JSPS 191st Committee on Innovative Interface Bonding Technology

31 Industry members

- NTT
- Fuji Electric
- FUJITSU
- FUKUSHIMA
- NHK
- Canon
- Nikon
- RICOH
- SHINKO
- TAIYO YUDEN
- muRata
- HAMAMATSU
- Nichia
- azbil
- SUMITOMO ELECTRIC
- TANAKA
- LINTEC
- AGC
- Namiki
- Shinkawa
- Hitachi High-Tech
- ACCRETECH
- SUSS MicroTec
- EV Group
- Revolution Tec
- bondtech
- Mitsubishi Heavy Industries
- ME
- Ayumi