

2009 INTERNATIONAL CONFERENCE ON SOLID STATE DEVICES AND MATERIALS

Conference: October 7-9, 2009

Short Course / Workshop: October 6, 2009

The 2009 International Conference on Solid State Devices and Materials (SSDM2009) will be held from October 7 to 9, 2009 at Sendai Kokusai Hotel (Sendai, Miyagi, Japan). Since 1969, the conference has provided an excellent opportunity to discuss key aspects of solid-state devices and materials. For the 2009 conference, 14 program subcommittees have been organized covering circuits and systems, as well as devices and materials. In SSDM 2009, a one-day short course and workshop are also scheduled prior to the conference. The short course offers tutorial lectures on important aspects of the technology. The workshop offers advanced discussion on topical device technologies, “green technology” in SSDM 2009.

Original, unpublished papers will be accepted after review by the Program Committee. Several invited speakers will cover topics of current interest. An Advance Program will appear in August. More information about SSDM2009 is available online at:

<http://www.ssdm.jp>

**SSDM 2009 Advance Program
General Information**

DATE

Conference: **October 7-9, 2009**

(Official language is English)

Short Course/Workshop: **October 6 (in English)**

LOCATION

Sendai Kokusai Hotel

4-6-1 Chuo, Aoba-ku, Sendai, Miyagi 980-0021, Japan

Phone: +81-22-268-1111 Fax: +81-22-268-1113

Sendai Kokusai Hotel is one of the biggest major hotels in Sendai, Japan. The hotel has been greatly contributed with many kinds of international conferences in Sendai. Sendai Kokusai Hotel is located in just 5 minutes walk from Sendai Station and 40 minutes by taxi from Sendai Airport where the center of Sendai City and its attractions.

<http://www.tobu-skh.co.jp/>

Institute of Fluid Science, Tohoku University

2-1-1 Katahira, Aoba-ku, Sendai, Miyagi, 980-8577, Japan

Phone: +81-22-217-5310 Fax: +81-22-217-5311

[Short Course] Lecture room, 2nd building, 5F

[Workshop] Seminar room, COE building, 3F

Institute of Fluid Science is located in 15 minutes walk from Sendai Station and 40 minutes by taxi from Sendai Airport.

<http://www.ifs.tohoku.ac.jp/>

REGISTRATION

The registration desk will be open from October 7 to 9 on 2nd floor.

Open hours are as follows:

October 7 8:30-17:00

8 8:30-17:00

9 8:30-15:30

Early registration will be accepted only through the conference website until August 16, 2009, 24:00 Japan time. (<http://www.ssdm.jp>)

Online registration will be closed on September 18, 2009, 24:00 Japan time.

After the date, registration will be possible at the conference venue as on-site registration.

Conference

	Registration Fee		Banquet
	Before 24:00, Aug 16 (Japan time)	After 0:00, Aug 17 (Japan time)	
Regular	¥50,000	¥55,000	¥7,000
Student	¥20,000		¥4,000
Accompanied person			¥4,000

Short Course / Workshop

	Short Course (in English)	Workshop (in English)	Short Course & Workshop
Regular	¥15,000	¥15,000	¥20,000
Student	¥3,000	¥3,000	¥5,000

*Fees include tax.

- (1) This year, we disuse a paper extended abstracts book. Extended abstracts are provided by USB thumb. The registration fee includes an extended abstract USB thumb. Banquet fee is not included. (The conference banquet will be held on the evening of Wednesday, October 7.)
- (2) Those who register as students are required to fax a copy of their current student ID to KNT (Fax:+81-3-5256-1588) after they complete on-line registration, and to present their student ID at the registration desk in order to be eligible for the student registration fee. When sending the fax, please write down your registration ID, which will be given at the completion of online registration of individual information.
- (3) Registration will be completed only with full payment.

Payment Procedure

Payment can be made by:

- One of the following credit cards:
 1. VISA
 2. MasterCard
 3. Diners Club
 4. AMEX
 5. JCB
- A bank transfer to KNT Co., Ltd. (Message: SSDM)
Account at Sumitomo Mitsui Banking Corp., Suzuran Branch, 1-3-12 Nishishimbashi, Minato-ku, Tokyo 105-0003, Japan (SWIFT Code: SMBCJPJT, Ordinary Account: 6103515, Account Name: Kinki Nippon Tourist Co., Ltd.)

* Personal checks are not acceptable.

Confirmation of Pre-Registration

Upon receipt of your online registration, a written confirmation will be e-mailed to you after your payment is confirmed. Please bring this confirmation slip with you and present it to the registration desk.

Registration Cancellation

Conference:

Cancellation fee of JPY3,000 will be deducted from the refund. Cancellation should be made in writing to KNT Co., Ltd. No cancellation will be accepted on or after August 16, 2009. Extended Abstracts will be sent to absent registrants after the conference.

Short Course / Workshop:

Cancellation fee of JPY2,000 will be deducted from the refund. Cancellations should be made in writing to KNT Co., Ltd. No cancellation will be accepted on or after August 16, 2009. Short-course and workshop textbooks will be sent to the absent registrants after the conference.

Banquet:

Cancellation fee of JPY1,000 will be deducted from the refund, Cancellations should be made in writing to KNT Co., Ltd. No cancellation will be accepted on or after August 16, 2009.

Inquiries for Registration

Kinki Nippon Tourist Co., Ltd. (KNT)
Global Business Management Branch
Tokyo Kintetsu Bldg. 6F 19-2 Kanda-Matsunaga-cho
Chiyoda-ku, Tokyo 101-8641, JAPAN

Tel: +81-3-5256-1581 Fax: +81-3-5256-1588

E-mail: ssdm2009-gb@or.knt.co.jp

Open hours: 9:30-17:30 (weekdays only)

On-site Registration

Conference:

Registration fees should be paid in cash (JPY) or credit cards. VISA, MasterCard, Diners Club, AMEX and JCB are acceptable. Personal checks are not acceptable.

Short Course / Workshop:

Registration fees should be paid in cash (JPY) only.

BANQUET

The conference banquet will be held on the evening of Wednesday, October 7 19:30-21:30. The banquet fee (Regular: JPY7,000, Student/Accompanied person: JPY4,000) is NOT included in the Registration fee.

Participants who wish to attend the banquet are requested to order the banquet ticket through the on-line registration. Banquet tickets may also be purchased at the on-site registration desk.

LATE NEWS PAPERS

Submission of Late News Papers has been already closed on 24:00, July 27, 2009 (Japan time). The accepted papers will be on "Advance Program Part II" which will be available at the conference venue.

SPECIAL Issue of JJAP

Authors of SSDM2009 papers are encouraged to submit their original papers to the Special Issue of Japanese Journal of Applied Physics which will be published in April 2010.

RUMP SESSIONS - October 8 (Thursday) 19:00-21:30

Session A (4F Hirose-Higashi)

“Novel Lithography for more Moore/beyond CMOS and More than Moore”

Based on the discussion of orthodox lithography technology for ultimate CMOS, future of beyond CMOS technology is discussed then the novel lithography technology is foreseen with glances of beyond CMOS devices. Furthermore, lithography for toward more than Moore, such as 3D integration, MEMS integration, etc. are discussed.

Organizer: K. Masu (Tokyo Tech, Japan)
Moderator: H. Wakabayashi (Sony Corp., Japan)
M. Hane (NEC Corp., Japan)

Session B (4F Hirose-Nishi)

“Solar Cells for Electronics: from In-Vehicle to Ubiquitous”

Mass production of solar cells has boosted their market growth from several MW to more than 1 GW in the past quarter century. These cells present great promise as a clean, inexpensive electric power source for portable electronics applications. Future inexpensive lightweight photo voltaic devices are expected to change the electronic systems more ubiquitous ones by eliminating unnecessary electric wires. In this rump session, we will invite presenters representing application and technology sides from all the areas of the 41th SSDM to provide a vision of “How new photovoltaic systems change the electronics and human societies”.

Organizer: K. Ohashi (NEC Corp., Japan)
Moderator: M. Ishiko (Toyota Central R&D Labs., Inc, Japan)
N. Usami (Tohoku Univ., Japan)

SHORT COURSE

“From Basic Theory to Newest Application in MOS Devices”

Date: October 6th (Tue), 2009

Location: Lecture room, 2nd build, 5F, Inst of Fluid Sci, Tohoku Univ.

Organizers: Yukiharu Uraoka (NAIST) / Noriaki Matsunaga (Toshiba)

※ All lectures are given in English.

Over sixty years has past after the invention of transistor by Shockley. This invention has brought about highly advanced information society which has never been expected. Miniaturization of the semiconductor device has progressed steadily until now, however, many researchers points out their limit recently. MOS (Metal-Oxide-Semiconductor) transistors have played important role in various devices such as logic or memory and their high performance have been pursued extensively. In recent years, new materials such as high-k film or strain silicon have been introduced, however, their important role will not be replaced. In this short course, MOS transistors are lectured in various view points from basic theory to newest application for beginners such as students or younger researchers.

- 11:00-12:00 Advanced LSI Technology - Operation Principles of Scaled MOS Transistors-
T. Hiramoto, Univ. of Tokyo
- 13:00-14:00 Gate Stack Technology -From thin gate oxide to High-k gate dielectric-
M. Niwa, Panasonic Corp.
- 14:00-15:00 Interconnect Technology
K. Ueno, Shibaura Inst. of Tech.
- 15:20-16:20 Analysis Technique of LSI device
S. Miyazaki, Hiroshima Univ.
- 16:20-17:20 Nano Device Design by Theoretical Approach
K. Shiraishi, Univ. of Tsukuba

WORKSHOP

“Green Technology -Nanodevices Toward Environmental-Friendly Society-”

Date: October 6th (Tue), 2009

Location: Seminar room, COE Build, 3F, Inst of Fluid Sci, Tohoku Univ.

Organizers: Tetsuo Endoh(Tohoku Univ.) / Takahiro Shinada (Waseda Univ.)

※ All lectures are given in English.

The earth is currently going to face environmental issues due to global warming caused by greenhouse gases. There is a growing interest in “green technologies” for building a sustainable society by reducing environmental burdens. Technological innovation in various leading-edge technology fields will drive the environmental-friendly society. This workshop is focused on device technologies: photovoltaic cell for the application of solar energy; light-emitting diode (LED) illumination and low power integrated-circuit (IC) for low power operation; power devices for power management; and micro-system technology for energy saving, so as to contribute to green technology. These technologies will be presented by experts in the fields.

- 12:30-13:15 Latest Technology on Solar Photovoltaics and Future Outlook
M. Kondo, AIST
- 13:15-14:00 Low Power Organic Light Emitting Devices
C. Adachi, Kyushu Univ.
- 14:10-14:55 Low-Power 3D CMOS Integration
T. Kuroda, Keio Univ.
- 14:55-15:40 Ultra-Low Power IC Technology Integrated with Innovative Materials
T. Hanyu, Tohoku Univ.
- 15:40-16:25 Leading-Edge Power Devices and Future Prospective
H. Ohashi, AIST
- 16:35-17:20 Micro-System Technologies for Energy Saving
M. Esashi, Tohoku Univ.

AGREEMENT NOT TO PRE-PUBLISH ABSTRACTS

By submitting an abstract to the committee for review, the author(s) agrees that the work will not be published prior to presentation at the conference. Papers found to be in breach of this agreement will be withdrawn by the conference committee.

AWARDS

“SSDM Awards” will be given to outstanding papers presented at previous conferences.

SSDM Award

Given for an outstanding contribution to the field of solid state devices and materials, among papers presented in or before 2003.

SSDM Paper Award

Given for the best paper presented at the conference last year.

SSDM Young Researcher Award

Given for outstanding papers authored by young researchers and presented at the conference last year.

FINANCIAL SUPPORT

Limited financial support is available for presentations by full-time students. Student presenters who are interested in support should contact the SSDM Secretariat directly (e-mail: ssdm_secretariat@intergroup.co.jp) prior to the end of August after receiving their acceptance letter. A copy of their student ID should be submitted at application.

VISA REQUIREMENT

All overseas participants must have valid passports. Overseas participants who require a visa should consult the nearest Japanese Embassy or Consulate as soon as possible. If your paper is accepted for presentation at SSDM 2009 and your visa application requires an invitation to attend the conference, please contact the SSDM Secretariat.

OFFICIAL TRAVEL AGENT

Kinki Nippon Tourist Co., Ltd. (KNT)
Global Business Management Branch
Tokyo Kintetsu Bldg. 6F
19-2 Kanda-Matsunaga-cho, Chiyoda-ku
Tokyo 101-8641, Japan
Phone: +81-3-5256-1581
Fax: +81-3-5256-1588
E-mail: ssdm2009-gb@or.knt.co.jp

Hotel Accommodations

KNT has blocked rooms at following hotels in Sendai for the conference period.

Reservations can be made through the conference website beginning in June.

If the hotel of your first choice is fully booked, your second choice or a hotel in the same grade will be reserved.

Hotel Name	Sendai Kokusai Hotel
Room Rates	Single: ¥10,000 Twin ¥8,500 (per person, per night)
Hotel Deposit	¥15,000
Check-in/out	Check-in: 13:00 / Check-out: 12:00
Address	4-6-1, Chuo, Aoba-ku, Sendai City, Miyagi Pref., 980-0021, Japan
Phone	+81-22-268-1111
Access to Hotel	5 min. walk from JR Sendai Sta.
To Conference site	0 min.

Hotel Name	Chisun Hotel Sendai
Room Rates	Single: ¥6,900 (per person, per night)
Hotel Deposit	¥10,000
Check-in/out	Check-in: 15:00 / Check-out: 10:00
Address	4-8-7, Chuo, Aoba-ku, Sendai City, Miyagi Pref., 980-0021, Japan
Phone	+81-22-262-3211
Access to Hotel	5 min. walk from Sendai Sta.
To Conference site	2 min. walk.

Hotel Name	Hotel Richfield Aoba Do-ri
Room Rates	Single: ¥7,980 (per person, per night)
Hotel Deposit	¥10,000
Check-in/out	Check-in: 13:00 / Check-out: 11:00
Address	2-3-18 Chuo, Aoba-ku, Sendai City, Miyagi Pref., 980-0021, Japan
Phone	+81-22-262-1355
Access to Hotel	7 min. walk from Sendai Sta.
To Conference site	5 min. walk

Hotel Name	Hotel Sunroute Sendai
Room Rates	Single: ¥8,000 (per person, per night)
Hotel Deposit	¥10,000
Check-in/out	Check-in: 14:00 / Check-out: 10:00
Address	4-10-8, Chuo, Aoba-ku, Sendai City, Miyagi Pref. 980-0021, Japan
Phone	+81-22-262-2323
Access to Hotel	5min. walk from Sendai Sta., west exit
To Conference site	3 min. walk

Hotel Name	Hotel Monterey Sendai
Room Rates	Single: ¥12,600 (per person, per night)
Hotel Deposit	¥15,000
Check-in/out	Check-in: 14:00 / Check-out: 11:00
Address	4-1-8 Chuo Aoba-ku Sendai City, Miyagi Pref., 980-0021, Japan
Phone	+81-22-265-7110
Access to Hotel	3 min. walk from Sendai Sta.
To Conference site	5 min. walk

Hotel Name	Hotel Metropolitan Sendai
Room Rates	Single: ¥13,900 (per person, per night)
Hotel Deposit	¥15,000
Check-in/out	Check-in: 14:00 / Check-out: 12:00
Address	1-1-1, Chuo, Aoba-ku, Sendai City, Miyagi Pref., 980-8477, Japan
Phone	+81-22-268-2525
Access to Hotel	1min. walk from Sendai Sta.
To Conference site	5 min. walk

Hotel Name	R&B Hotel Sendai Hirose-dori Ekimae
Room Rates	Single: ¥5,460 (per person, per night)
Hotel Deposit	¥10,000
Check-in/out	Check-in: 15:00 / Check-out: 10:00
Address	2-6-37 Honcho, Aoba-ku, Sendai City, Miyagi Pref., 980-0014, Japan
Phone	+81-22-726-1919
Access to Hotel	8 min. walk from JR Sendai Sta.
To Conference site	15 min. walk

Notes:

All room rates are per person per night including breakfast, 10% service charge, and consumption tax.

Application and Payment

Participants wishing to reserve hotel accommodations should access the Registration and Accommodation pages of the conference website.

The page will be opened in early June and reservations should be made by no later than September 18, 2009 (Japan time).

*Confirmation sheet will be sent by KNT after the application deadline.

Application should be accompanied by the payment of room deposit and communication fee of 500 JPY.

No reservation will be confirmed in the absence of this payment.

All payment must be paid only in Japanese yen by one of the following method.

1) Credit Card by Online

(VISA, MasterCard, AMEX, Diners Club or JCB only.).

*Please fill in the necessary items in the credit card section of the application form.

2) Bank Transfer:

Sumitomo Mitsui Banking Corp.

Suzuran Branch

SWIFT Code: SMBCJPJT

Account Number: 6103515

Account Name: Kinki Nippon Tourist Co., Ltd.

Cancellation

In case of cancellation, a written notification should be sent to KNT to avoid any troubles.

The cancellation charge are:

Up to 14 days before the arrival date----- No Charge

13 - 7 days before-----10 % of daily room charge

6 - 2 days before-----40 % of daily room charge

Less than 2 days, or no notice given

-----100 % of daily room charge

INSURANCE

The organizer cannot accept responsibility for accidents that may occur during a delegate's stay. Delegates are therefore encouraged to obtain travel insurance (medical, personal accident and luggage) in their home countries prior to departure.

CLIMATE

Sendai shares the same latitude as Washington D.C., the capital of the United States, and Athens, Greece. Sendai enjoys a very comfortable and temperate climate compared to other cities in Japan. Its average temperature is 12.1°C and its annual precipitation is 1,241.8 mm. The hottest month is August with an average temperature of 24.1°C; the coldest month is January with an average temperature of 1.5°C.

ELECTRICAL APPLIANCES

Japan operates on 100 volts for electrical appliances. The frequency is 50 Hz in Eastern Japan including Sendai (conference site) and Tokyo, and 60 Hz in Western Japan including Kyoto and Osaka.

SSDM 2008 INSTRUCTION for SPEAKERS

Oral Presentation

Time Schedule

	Total session time	Presentation time	Discussion time
Plenary	45 min.	40 min.	5 min.
Invited	30 min.	25 min.	5 min.
Regular-1	20 min.	15 min.	5 min.
Regular-2	15 min.	10 min.	5 min.

BELL: First: Warning, Second: End of speech,
Third: End of the discussion.

Oral Presentation

Audio-Visual Equipment

The following equipments are ready at each conference meeting room during SSDM 2009:

- LCD projector
- PC (laptop computer), Windows XP , **PowerPoint 2003 (No PowerPoint 2007) or PDF**
The use of personal PCs for presentations is prohibited.
- Microphone
- Projection laser pointer

Preparing your Presentation

Please note that the presentation file format should be **PowerPoint 2003** but **Acrobat pdf** (Windows XP) is acceptable. Use of special fonts such as Asian fonts is prohibited. If you have to use those, embedding all fonts in PDF is only acceptable.

Uploading your Presentation

The single most important action of the authors is to upload your presentation file to the SSDM PC in the Speaker's Room (**Yuki room 4F**) one day in advance of your expected presentation date, or **as soon as possible upon your arrival**. The Speaker's Room Hours are following. Please make sure to bring the electronic copy of your presentation files with you to the SSDM using your USB thumb drive. Speakers are requested to check the compatibility of the presentation files with the format ready in the SSDM PC.

Speaker's Room (Yuki room 4F)

Oct. 7 Wednesday: 9:00-12:30

Oct. 8 Thursday: 10:30-12:30, 18:40-20:30

Just in case you miss the Speaker's Room Hours, bring your presentation file directly to the Meeting Room.

Confidentiality

At the end of meeting, all electronic files will be destroyed and the SSDM PC hard drives will be reformatted.

Poster Presentation

Posting board and poster board

Poster sessions are scheduled for Thursday, October 8, from 10:30 to 12:00 at Heisei <Naka & Nishi> on 2nd floor. Poster boards will be available with identifying labels. Authors are requested to prepare their posters between 8:45 and 10:30 on October 8 and remove them by 12:30 on October 8. Any posters remaining after 12:30 will be disposed by the SSDM Secretariat. Usable space on each poster board will be approximately 900 mm wide and 1,500 mm high. Pushpins will be available.

Each presentation will be assigned a board, labeled with the Abstract number. Please display the paper title, author names and affiliations on the poster. Authors are requested to stay near by their posters during the poster session for discussions.

Short Oral Presentation for Poster Presenters

All poster presenters are required to make 3 minutes short oral presentation on October 8. The presentation time should be kept strictly to 3 minutes per poster presentation, including the time needed to move on to the next speaker. To ensure the session progresses smoothly, it is essential that these short presentations be held in a quick, successive sequence. While one speaker is giving his/her presentation, the next speakers should wait nearby in line for their turn in order to move on to the next presentation.

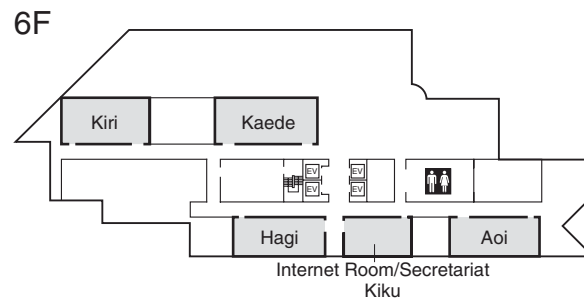
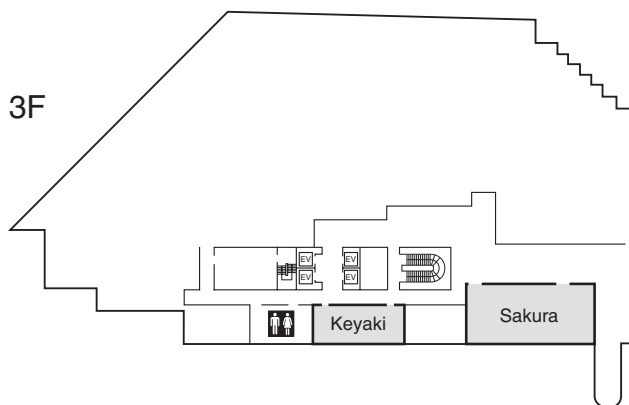
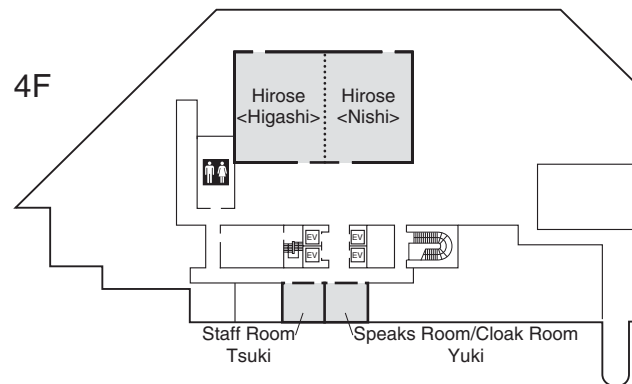
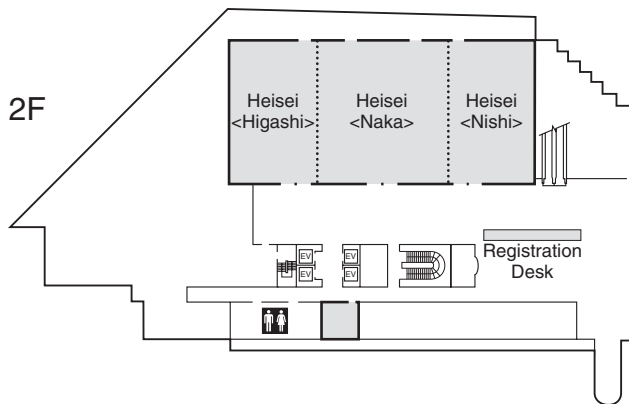
Please note that any absent speakers will be skipped and each presentation will be automatically stopped after 3 minutes have elapsed. Only a PC projector will be made available. You should send your short presentation file to the secretariat (ssdm2009-abs@intergroup.co.jp) by

e-mail by before September 6, 2009. Please indicate your paper number and name in the title of your e-mail. The file must be in 3-page landscape PDF format, and the 1st page must indicate your paper title, name of authors and their affiliations only. Because of the limited presentation time, please describe clearly and tersely your research objective and results.

Short oral presentations will be held as follows:

2F Heisei <Higashi>	Area 3, 12
3F Sakura	Area 4, 5
4F Hirose <Higashi>	Area 10
4F Hirose <Nishi>	Area 1
6F Kiri	Area 7, 14
6F Kaede	Area 2, 8
6F Hagi	Area 6, 13
6F Aoi	Area 9, 11

SSDM 2009 Floor Guide, Sendai Kokusai Hotel



Access to Sendai

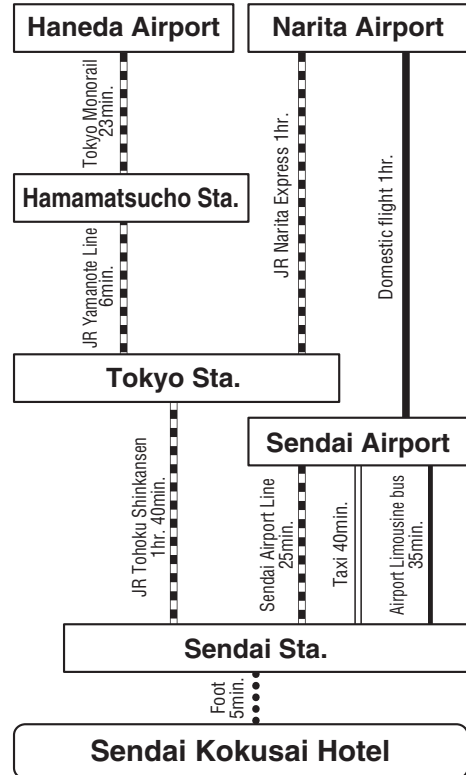
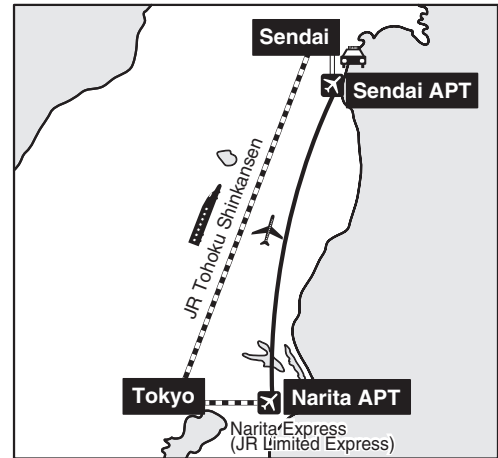
Sendai is 350 kilometers north of Tokyo, Japan's capital. If you are coming from abroad, you can fly directly or transfer to a domestic flight to Sendai Airport. You can arrive in Sendai by air or train from any cities in Japan.

Flying in to Sendai Airport from Abroad

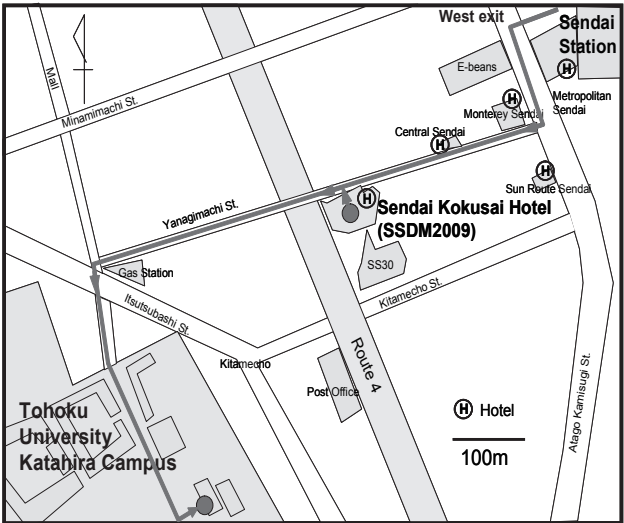
Flights to Sendai Airport from overseas are as shown below. Connecting flights from Seoul and China (e.g. Beijing) fly daily to connect Sendai with other countries. Chartered flights fly out of several cities such as Hong Kong and Bangkok. Domestic flights connect ten cities in Japan to Sendai. Passengers landing at Narita, Nagoya or Kansai can transfer to a domestic flight to connect directly to Sendai.



ACCESS TO SENDAI KOKUSAI HOTEL



ACCESS MAP



SSDM2009 Conference: Sendai Kokusai Hotel

Workshop/ Short Course: Institute of Fluid Science, Tohoku Univ.

- 5 minutes on foot from JR Sendai Station
- 3 minutes on foot from South Exit (2) Sendai Subway Station
- 15 minutes by car from Miyagi I.C., Tohoku Expressway
- 40 minutes by car from Sendai Airport
- 2 hours by Shinkansen from Tokyo