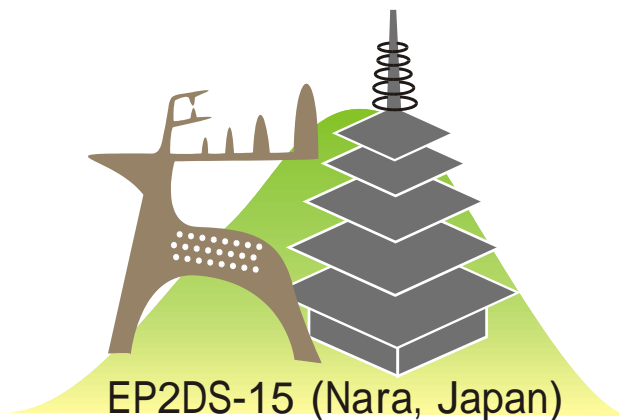


# Final Announcement

## The 15th International Conference on Electronic Properties of Two-Dimensional Systems

# EP2DS-15



<http://www.issp.u-tokyo.ac.jp/ep2ds-15/>

EP2DS-15 will be held from Monday, July 14 to Friday, July 18, 2003  
in Nara-ken New Public Hall (Shin-Kokaido), Nara, Japan  
under the auspices of

International Union of Pure and Applied Physics (IUPAP)  
Ministry of Education, Culture, Sports, Science and Technology  
(MEXT), Japan  
The Physical Society of Japan  
The Japan Society of Applied Physics  
Commemorative Association for the Japan World Exposition '70

The 15th International Conference on Electronic Properties of Two-Dimensional Systems (EP2DS-15) will be held in Nara, Japan, from July 14 (Mon.) through 18 (Fri.), 2003. This is the 15th conference of the biennial series that began in 1975 and is now established as one of the major events in the research field of physical properties of low-dimensional and mesoscopic electron systems in semiconductors and other materials.



## Conference Organization



### **Organizing Committee**

Y.Iye (ISSP, Univ. of Tokyo) : *Chair*  
 S.Iwabuchi (Nara Woman's Univ.)  
 S.Katsumoto (ISSP, Univ. of Tokyo)  
 K.Kono (Riken)  
 S.Tarucha (Univ. of Tokyo)  
 H.Takayanagi (NTT)  
 D.Yoshioka (Univ. of Tokyo) : *Program*



### **International Program Committee**

D.Yoshioka (Tokyo) : *Chair*  
 M.I.Dykman (East Lansing)  
 Y.Iye (Kashiwa)  
 T.M.Klapwijk (Delft)  
 I.V.Kukushikin (Chernogolovka)  
 A.H.MacDonald (Austin)  
 R.J.Nicholas (Oxford)  
 C.Tejedor (Madrid)  
 K.von Klitzing (Stuttgart)



### **International Advisory Committee**

S.J.Allen (USA)	T.Ando (Japan)	H.Aoki (Japan)
R.Clark (Australia)	T.Dietl (Poland)	L.Eaves (UK)
K.Ensslin (Switzerland)	H.Fukuyama(Japan)	D.C.Glattli(France)
B.I.Halperin (USA)	M.Heiblum (Israel)	Y.Imry (Israel)
S.Kawaji (Japan)	S.Komiyama (Japan)	J.P.Kotthaus (Germany)
J.J.Lin (Taiwan)	Y.E.Loikov (Russia)	E.Molinari (Italy)
M.A.Paalanen (Finland)	F.Peeters (Belgium)	A.Pinczuk (USA)
P.Streda (Czech)	H.L.Stormer (USA)	N.Studart (Brazil)
S.-R.E.Yang (Korea)		



## **Sponsors**

International Union of Pure and Applied Physics (IUPAP)  
Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan  
Nara Convention Bureau  
Commemorative Association for the Japan World Exposition '70  
Futaba Electronics Memorial Foundation  
Hitachi, Ltd.  
Inoue Foundation for Science  
JECC TORISHA Co. Ltd.  
NEC Corporation  
NIKI GLASS CO. LTD.  
NTT Basic Research Laboratories  
Oxford Instruments KK  
SAKAGUCHI GIKEN Co. Ltd.  
The Tokyo Electric Power Company, Incorporated



## **Collaboration with MSS-11**

The 11th International Conference on Modulated Semiconductor Structures (MSS-11) (Chairman: Prof. Y. Arakawa, Institute of Industrial Science, University of Tokyo) will be held at the same time and location. The participants of EP2DS-15 are entitled to attend sessions of MSS-11, and vice versa. There will be a few joint sessions on the topics of common interest. Most of the social activities (banquet, excursion, etc.) will be arranged jointly.



## General Information



### Conference Venue

The conference site, Nara New Public Hall, is located in Nara Park, about 25 minutes on foot or about 10 minutes by bus from downtown Nara. Nara is one of the most historically important cities in Japan, located about 35 kilometers east of Osaka or south of Kyoto. It was the location of the capital of Japan in ancient times, 710-784A.D. Many important designated Cultural Assets and National Treasures can be found there, as well as temples, shrines, statues, carvings and paintings. In Nara Park, nature and history are beautifully preserved as they are, which include Todai-ji Temple, Koufuku-ji Temple, and Kasuga Grand Shrine. Nara park is also famous for its hundreds of tame deer that roam freely.



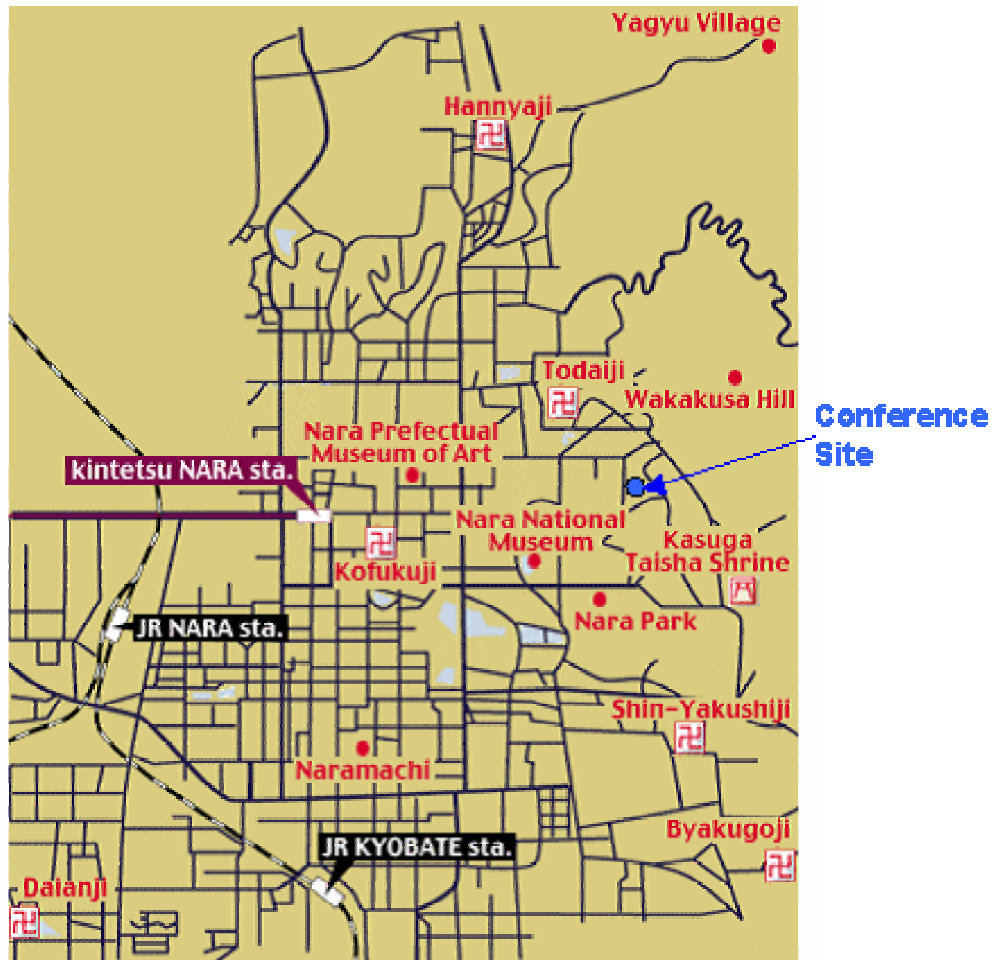
*Nara New-Public Hall (Shin-Kokaido) in Nara Park*



*Some of the oral presentations will be made on Noh Stage. (Noh is classical theatrical performance art.)*



## Map of Nara City



More detailed information is available from the following websites;

- Japan National Tourist Organization  
<http://www.jnto.go.jp/eng/RTG/RI/kansai/nara/nara/nara.html>
- Nara City Tourist Information Center  
[http://www1.sphere.ne.jp/naracity/j/e/e\\_n\\_hp.html](http://www1.sphere.ne.jp/naracity/j/e/e_n_hp.html)



### Access to Nara from Airports

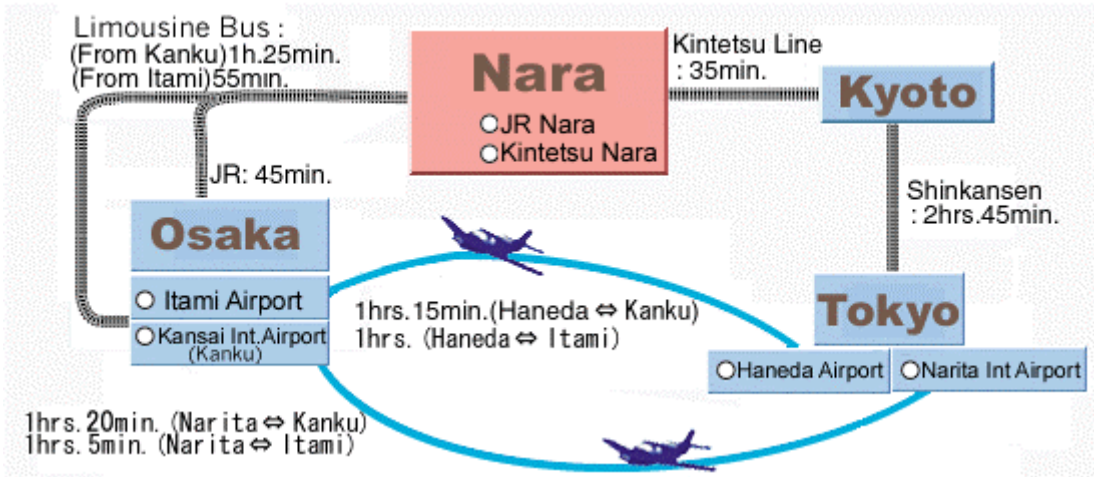
#### (a) From Kansai International Airport (Kanku)

- (a-1) Limousine Bus to Nara (Terminal #9) on the Arrival Terminal for International Flights (1st floor)
- (a-2) Japan Railway (JR) Kansai-Kuko Line, Kansai-Kuko Station to Tennoji Station change to JR Yamatoji Line to Nara (JR Nara Station)

#### (b) From Narita International Airport

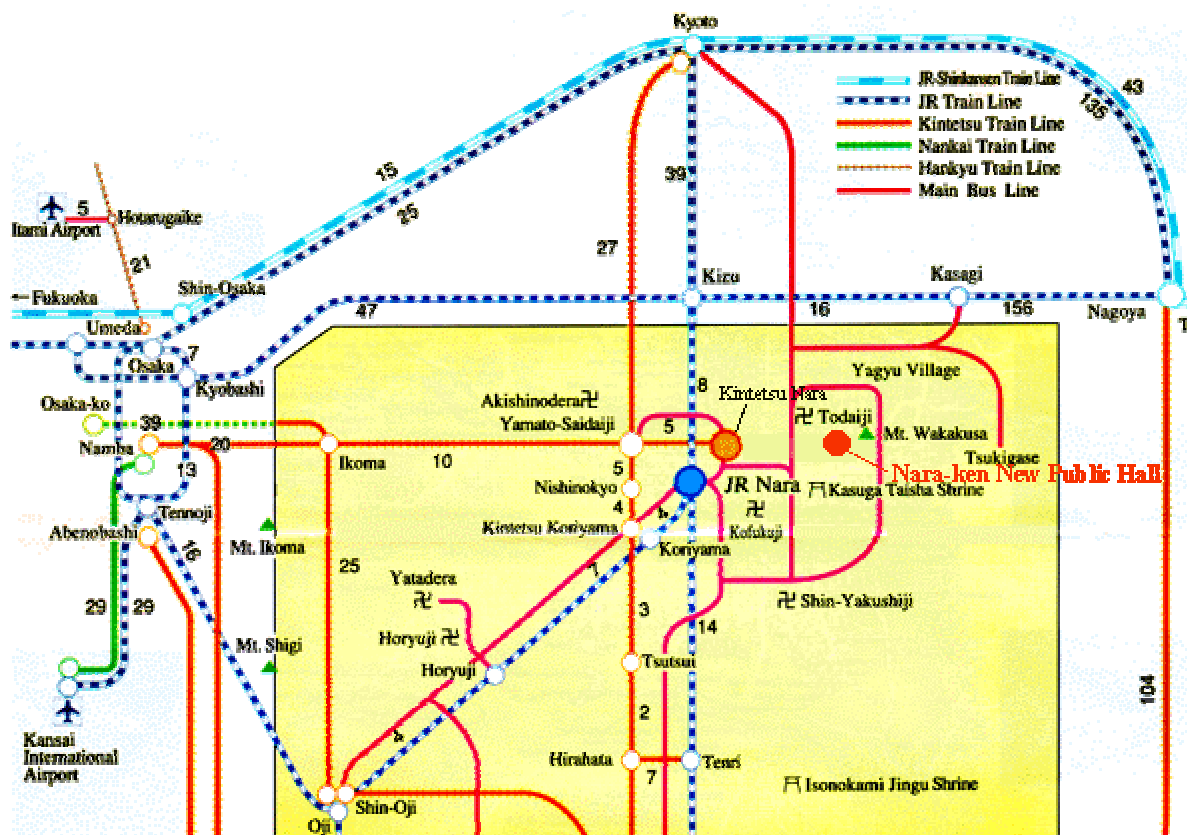
- (b-1) Fly to Kansai International Airport      follow (a-1) or (a-2)
- (b-2) Fly to Osaka Itami Airport      Limousine Bus to Nara
- (b-3) Fly to Osaka Itami Airport      Japan Railway (JR) to Nara

- (b-4) Limousine bus to Tokyo Station      Shinkansen (JR bullet train) to Kyoto  
change to JR Nara Line to Nara (JR Nara Station)
- (b-5) Limousine bus to Tokyo Station      Shinkansen (JR bullet train) to Kyoto  
change to Kintetsu Line to Nara (Kintetsu Nara Station)



### Railway Network in the Kansai Area (Nara, Kyoto, Osaka)

The figures between stations represent the distance in minutes.





## Registration at the New Public Hall

Registration Desk at the Conference Site (New Public Hall) will be open on Sunday, July 13, from 15:00 to 18:00. All participants and accompanying persons are cordially invited to an informal Get-together Party to be held on Sunday, July 13, from 16:00 to 18:00 in the garden of the New Public Hall.

Registration Desk will be open from 8:30 to 18:00 (8:30 to 12:00 on Wednesday 16th and Friday 18th) during the Conference period.

*Please be reminded that in order to present a paper at EP2DS-15 you have to be a registered participant of EP2DS-15. (Registration to MSS-11 makes you eligible to attend EP2DS-15 sessions but not to present a paper at EP2DS-15.)*

Participants and accompanying persons are requested to wear the conference badge at all time for the events of the Conference.



## Climate and Clothing

The conference is held during the end of rainy season, beginning of humid Japanese summer. The average temperature is around 26 in the day and 22 at night. Be sure to bring an umbrella or rain wear. **No formal wear is required.**



## Currency

The latest exchange rates between Japanese yen and foreign currencies can be checked at, for example, <http://www.xe.com/ucc/>. Currency exchange can be done at banks in airports and cities.



## Insurance

The Conference Organizers cannot accept liability for personal injuries, loss or damage to properties of participants and their accompanies, either during or as a result of the Conference. Participants are advised to check the terms and validity of their travel insurance.



## Electricity

Standard electrical outlet supplies 100volt a.c. The power line frequency is 60Hz in the western half of Japan including Nara. (It is 50Hz in the eastern half including Tokyo.)



## Internet

Several ethernet port will be available. Since the number of computers available will be limited, those who wish to use the internet are advised to bring their own computers equipped with a 10BASE-T compatible ethernet interface.





## **Travel Desk**

Travel desk will be set up in the lobby of the conference site for your assistance.



## **Scientific Program**



## **Scope of the Conference**

The EP2DS traditionally covers the fundamental physics of electronic and optical properties of systems based on semiconductor heterostructures and other low dimensional electronic systems.

The scope of the EP2DS-15 includes

- Quantum Hall effects and related phenomena
- Metal-insulator transition
- Electronic and optical properties of quantum structures
- Transport in low dimensional systems
- Single electron phenomena
- Spin-related phenomena
- Quantum coherence and qubits
- Hybrid structures
- Organic conductors
- Carbon nanotubes
- Nanostructures
- Electrons on helium surface
- Novel probes and techniques



## **Time Table**

**Time Table** is printed on the back cover of this leaflet.



## **Invited Talks**

**Tsuneya Ando** (Tokyo Institute of Technology, Japan)

Carbon Nanotubes and Exotic Transport Properties

**Ophir Auslaender** (Weizman Institute, Israel)

Measurement of Spin-Charge Separation and Spontaneous Localization in One-Dimensional Wires

**Leonid V. Butov** (Lawrence Berkeley National Laboratory)

Condensation and Macroscopic Ordering in Cold Exciton Gases



- Rui-Rui Du** (University of Utah, USA)  
Dissipationless 2D Electronic Transport Induced by Microwave
- James P. Eisenstein** (California Institute of Technology, USA)  
Experiments on Exciton Condensation in Bilayer Quantum Hall Systems
- Michael Fogler** (University of California San Diego, USA)  
Dynamics of Magnetic-Field Induced Electron Solids
- Steven Girvin** (Yale University, USA)  
Theory of Microwave-Induced Magneto-Resistance Oscillations in a Two-Dimensional Electron Gas
- Harold Y Hwang** (Lucent Technologies, USA/ University of Tokyo, Japan)  
High Mobility Electrons in SrTiO<sub>3</sub> Heterostructures
- Jan Jaroszynski** (Polish Academy of Sciences, Poland, and National High Magnetic Field Laboratory, U.S.A.)  
Quantum Hall Ferromagnet in Magnetically-Doped Quantum Wells
- Kensuke Kobayashi** (ISSP, University of Tokyo, Japan)  
Mesoscopic Fano Effect through a Quantum Dot in an Aharonov-Bohm Ring
- Michael Lea** (University of London, UK)  
Confined Electron Crystals and Rydberg States on Liquid Helium
- Stefano Luin** (NEST-INFN and Scuola Normale Superiore, Italy)  
Soft Magnetorotons and Broken-Symmetry States in Bilayer Quantum Hall Ferromagnets
- Ramesh Mani** (Harvard University, USA)  
Zero-Resistance States Induced by Electromagnetic-Wave Excitation in GaAs/AlGaAs Heterostructures
- Allan MacDonald** (University of Texas, USA)  
Collective Transport in Bilayer Quantum Hall Systems
- J.E. Mooij** (Delft University of Technology, Netherlands)  
Superconducting Flux Qubits
- Victor Ryzhii** (University of Aizu, Japan)  
Mechanisms of Absolute Negative Conductivity in a Two-Dimensional Electron Gas Stimulated by Microwave Radiation and Zero-Resistance States
- Alex Savchenko** (University of Exeter, UK)  
Interactions in High-Mobility 2D Electron and Hole Systems
- Jürgen Smet** (Max Planck Institute, Germany)  
Resistively Monitoring Electron-Nuclear Spin Interactions in a Two-Dimensional Electron System
- Ady Stern** (Weizmann Institute, Israel)  
Phase Coherence in Paired Quantum Hall States
- Seigo Tarucha** (University of Tokyo, Japan)  
Manipulation of Electron Spin and Nuclear Spin in Double Quantum Dot System
- Lieven Vandersypen** (Delft University of Technology, Netherlands)  
Electron Spin Qubits in Quantum Dots



## Workbook and Proceedings

The Conference Workbook is a compilation of unrefereed manuscripts. A copy of Workbook will be handed at the Registration Desk.

The Proceedings of the EP2DS-15 will be published as a special (but consecutively numbered) issue of the Journal *Physica E Low-Dimensional Systems & Nano-structures*. Every participant (except student registrant) will receive a copy of the Proceedings. Extra

copies can be ordered at a discount rate (contact the Secretariat Office during the conference).



## **Exhibition**

Exhibition booths will be set up in the lobby of the conference site, where scientific equipments, books, journals and other products and services of interest to attendees will be displayed.

*Exhibitors:*

ELIONIX

MY SCIENCES/AIR LIQUIDE

R-DEC Co., Ltd.

Oxford Instruments KK

Elsevier

Institute of Physics Publishing



## **Instruction for Preparation of Presentation**



## **Oral Presentation**

The allotted time for oral presentation is

45 minutes for a plenary talk in the Joint Sessions with MSS-11,

30 minutes for an invited talk, and

15 minutes for a contributed talk.

including 5 minutes for discussions.

In addition to a standard overhead projector (OHP), a PC projector will be available for oral presentation. The PC projector is compatible with the standard PC video output (15pin D-sub connector) and XGA resolution (1024 × 768 pixels). Bring your own PC or bring your Powerpoint file in a CD-ROM. Although the system has reasonable flexibility, compatibility with your computer is not guaranteed. Speakers are recommended to bring viewgraphs as backup. Those who wish to make computer-aided presentation are requested come to the Secretariat Office well in advance of their Session to do a test run with our technical staff.

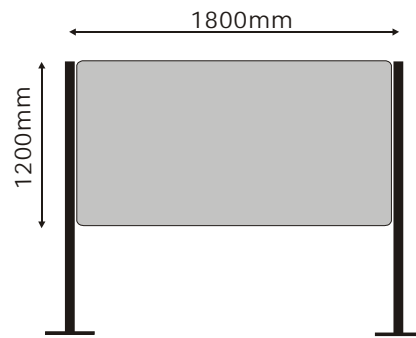
Those who wish to use other audio-visual equipments (slide projector, video projector, etc.) should contact the Secretariat prior to the Conference.



## **Poster Presentation**

Poster Sessions will be held from 16:00 to 18:00 on Monday, Tuesday and Thursday, in the Poster Room on the Second Floor. Poster boards are 180cm wide and 120cm high. Posters

can be put up from the morning of the respective day. They have to be removed right after the Session.



*The size of poster board*



## **Social Programs**



### **Get-Together Party**

All participants and accompanying persons are cordially invited to an informal Get-together Party to be held on Sunday, July 13, from 16:00 to 18:00 in the garden of the New Public Hall.



### **Banquet**

Conference Banquet will be held jointly with MSS-11 on Wednesday, July 16, from 18:30 to 20:00 at Mitsui Garden Hotel. Banquet ticket is 5,000 yen.



### **Noh Performance**

On Monday, July 14, from 18:15 (after the Poster Session), Noh play will be performed on the Noh Stage. All participants and accompanying persons are cordially invited. Noh is a classical Japanese performance form which combines elements of dance, drama, music and poetry into one highly aesthetic stage art. It is performed by professional artists, mainly men, who have passed down the art among family members for numerous generations. There is also a wide following of both male and female amateurs who practice and perform its chant, dance, and instruments. Noh developed into its present form during the 14th and 15th centuries under the leadership of the distinguished performer playwrights Kan'ami and his son Zeami. Zeami, in particular, wrote numerous plays which are still performed in today's classical repertory of some 250 plays. He also wrote a number of secret works which explain the aesthetic principles governing Noh and give details on how the art should be composed, acted, directed, taught, and produced.



## Deer Calling

In early morning of Tuesday, July 15, Deer Calling will be performed in Nara Park by members of the local Society for Protection of Deer. Deer caller blows a horn to gather deer.



## Excursion

### Course-A Excursion to World Heritage Sites

You will visit Ruins of Heijo Palace (1,000m x 800m) in Heijo-kyo city (5km x 6km), which was a capital city from 710 to 784 AD (Nara era). Eight Emperors in Nara-era lived through the era, and a few thousand bureaucrats worked in Heijo Palace. The front gate of Heijo Palace is called Suzaku-Mon. The gate having two stories and 18 red pillars with 700-mm diameter was rebuilt in 1998. After leaving Heijo Palace, you will visit Yakushi-ji temple, registered on UNESCO's World Heritage List. Yakushi-ji Temple was originally built in Fujiwara-kyo city in 680 AD by Emperor Temmu. However, with the transfer of the capital to the Heijo-kyo city, Yakushi-ji was rebuilt at the present location. The basic architectural style consisting of a central main hall flanked by two three-storied pagodas was established and gave rise to the architectural term "the Yakushi-ji style".

#### Itinerary

New Public Hall----Heijo Palace----Yakushi-ji Temple----Mitsui Garden Hotel

**Excursion Time:** 4 hours

**Fee:** 4,000 yen

### Course-B Visit to Sharp Corporation and Horyu-ji Temple

Sharp Corporation is one of the most active electric companies in Japan. Sharp has pioneered Liquid Crystal Display (LCD), LCD ViewCams, and Color Zaurus Personal Information Tools, and so on. You can enjoy advanced technology and products. After leaving Sharp, you will visit Horyu-ji temple, registered on UNESCO's World Heritage List. Horyu-ji Temple dates back to the 7th century, when construction was initiated by Empress Suiko and Prince Shotoku. The temple is famous for its wooden buildings, the oldest in the world, located in a 130,000 sq.m. compound, which is divided into Eastern and Western Precincts.

#### Itinerary

New Public Hall----Sharp Corporation at Tenri----Horyu-ji Temple----Mitsui Garden Hotel

**Excursion Time:** 4 hours

**Fee:** 4,000 yen



## Accompanying Person's Program

Cultural activities will be arranged for accompanying persons during the conference period. They include walking tour to temples and other places of interest, flower arrangement and calligraphy. All activities are guided by English-speaking local volunteers. The actual program will be decided according to the number and interest of participants.



## Contact Addresses



### **Before and after the Conference**

#### **EP2DS-15 Secretariat**

**Prof. Yasuhiro Iye (Secretary: Ms. Junko Kawamura)**

Institute for Solid State Physics,

University of Tokyo

5-1-5, Kashiwanoha, Kashiwa, Chiba 277-8581 Japan

fax and telephone: +81-4-7136-3300

e-mail: ep2ds-15@issp.u-tokyo.ac.jp

#### **EP2DS-15 Desk**

*(Conference Registration, Hotel and Tour Reservation)*

Kinki Nippon Tourist Co., Ltd.

Event, Convention and Congress Department

6F, Kyodo Bldg., 2-2 Kanda-Jimbocho, Chiyoda-ku, Tokyo 101-0051 Japan

telephone: +81-3-3263-5581

fax: +81-3-3263-5961

e-mail: ep2ds@knt-tokyo.gr.jp



### **During the Conference Period**

#### **EP2DS-15 Secretariat**

**Prof. Yasuhiro Iye (Secretary: Ms. Junko Kawamura)**

Nara-ken New Public Hall (Shin-Kokaido),

101 Kasugano-cho, Nara, Nara 630-8512 Japan

telephone: +81-4-742-27-2630 (emergency only)

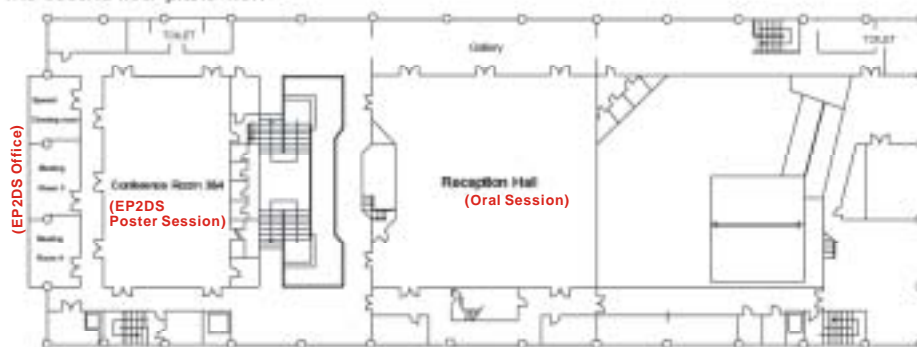
fax: +81-4-742-27-2634

## Time Table

Time	EP2DS-15					
	Sunday, 13th	Monday, 14th	Tuesday, 15th	Wednesday, 16th	Thursday, 17th	Friday, 18th
9:00		Registration	(C-1) Savchenko (C-2) Kravchenko (C-3) Narozhny	(F-1) Ando (F-2) Hwang	(H-1) Butov (H-2) Novoselov (H-3) Crook	(K-1) Smet (K-2) Kumada (K-3) Clarke
10:00		Opening	(C-4) Zhu (C-5) Pillarisetty	(F-3) Jarosynski	(H-4) Wilde (H-5) Nishino-Takeda	(K-4) Yang (K-5) Fuhrer
11:00		(A-1) Skolnick	Coffee	Coffee	Coffee	Coffee
12:00		(A-2) Mooij	(D-1) Fogler (D-2) Chen	(G-1) Eisenstein	(I-1) Auslaender (I-2) Feil	(L-1) Lea (L-2) Dvkmán
13:00		Group Photo	(D-3) Fisher (D-4) Shibata (D-5) Pfankuche	(G-2) Fujisawa	(I-3) Chung (I-4) Geisler (I-5) Huber	(L-3) Hanson (L-4) Vandersypen Closing
14:00			(B-1) Mani (B-2) Du	(E-1) Kobayashi (E-2) Aikawa (E-3) Schueller	Excursion (Free time)	(J-1) MacDonald (J-2) Stern
15:00	Registration	(B-3) Girvin (B-4) Ryzhii	(E-4) Tamura (E-5) Sasaki (E-6) Tarucha			(J-3) Luin (J-4) Muraki (J-5) Tutuc
16:00	Get-Together	Coffee Poster Session PA	Coffee Poster Session PB			Coffee Poster Session PC
17:00						
18:00		Noh Performance				
19:00				Banquet (Mitsui Garden Hotel)		Joint with MSS-11 Noh Theater Reception Hall
20:00						

## Floor Plan of the New Public Hall

The second floor plane view



The first floor plane view

