

ADVANCE PROGRAM

MOC '05



11th MICROOPTICS CONFERENCE

<http://www.din.or.jp/~microopt/moc05/>

Sponsored by
The Japan Society of Applied Physics



In cooperation with

- Optical Society of America
- IEEE/Lasers and Electro-Optics Society
- IEICE/Electronics Society
- The Chemical Society of Japan
- The Society of Polymer Science, Japan
- The Laser Society of Japan
- Optoelectronic Industry and Technology Development Association
- Japan Optoelectro-Mechanics Association
- Japan Science and Technology Agency (JST)

Oct. 30(Sun.) – Nov. 2(Wed.), 2005
SABO KAIKAN, Tokyo, Japan

MOC '05 Agenda At-A-Glance

| October 30 (Sun.) | | October 31 (Mon.) | |
|-------------------|-------------------|-------------------|--|
| 8:30 | | 8:30 | |
| 9:00 | | 9:00 | Opening Remarks |
| 30 | | 30 | A. Plenary |
| 10:00 | | 10:00 | |
| 30 | | 30 | Break |
| 11:00 | | 11:00 | B. 2D Components |
| 30 | | 30 | |
| 12:00 | | 12:00 | Lunch |
| 30 | | 30 | |
| 13:00 | | 13:00 | C. Waveguide Devices |
| 30 | | 30 | |
| 14:00 | | 14:00 | Break |
| 30 | | 30 | |
| 15:00 | Tutorial Workshop | 15:00 | D. High Index Contrast Waveguide Devices |
| 30 | | 30 | |
| 16:00 | | 16:00 | Break |
| 30 | | 30 | |
| 17:00 | | 17:00 | E. Special Session-1 |
| 30 | | 30 | |
| 18:00 | Get Together | 18:00 | Refreshment |
| 30 | | 30 | |
| 19:00 | | 19:00 | E. Special Session-2 |
| 30 | 30 | | |
| 20:00 | | 20:00 | |

 Registration hours

 Exhibition hours

MOC '05 Agenda At-A-Glance

| November 1 (Tue.) | | November 2 (Wed.) | |
|-------------------|---|-------------------|--------------------------------|
| 8:30 | | 8:30 | |
| 9:00 | F. Optical Memory | 9:00 | L. Bio-optics and Sensing |
| 30 | | 30 | |
| 10:00 | Break | 10:00 | Break |
| 30 | | 30 | |
| 11:00 | G. Optical Sensing | 11:00 | M. VCSEL |
| 30 | | 30 | |
| 12:00 | Lunch | 12:00 | Lunch |
| 30 | | 30 | |
| 13:00 | H. Poster Session | 13:00 | N. Display and Light Sources |
| 30 | | 30 | |
| 14:00 | Break | 14:00 | Break |
| 30 | | 30 | |
| 15:00 | J. Nano-structures | 15:00 | PD. Post Deadline Papers |
| 30 | | 30 | |
| 16:00 | Refreshment | 16:00 | Closing Remarks |
| 30 | | 30 | |
| 17:00 | K. Optical Signal Processing and Fibers | 17:00 | Move to Matsuya Salon |
| 30 | | 30 | Award Ceremony & Micro Concert |
| 18:00 | Conference Party | 18:00 | Conference Party |
| 30 | | 30 | |
| 19:00 | | 19:00 | |
| 30 | | 30 | |
| 20:00 | | 20:00 | |

 Registration hours

 Exhibition hours

Technical Program

The 11th MICROOPTICS CONFERENCE (MOC '05) will be held at Sabo Kaikan, Tokyo, Japan on October 30- November 2, 2005. This conference is organized and sponsored by the Japan Society of Applied Physics in cooperation with several academic societies and associations. The MOC '05 is intended to provide a central forum for an update and review of scientific and technical information covering a wide range of microoptics field from fundamental researches to systems and applications. The latest information will be available on the following web site:

<http://www.din.or.jp/~microopt/moc05/>

Tutorial Workshop

The tutorial workshop will be held in the afternoon on October 30, co-sponsored by **JST**. Some related topical fields of microoptics are selected.

- "Introduction" H. Nakajima, *Waseda University & JST*
- "VCSEL microoptics" K. Iga, *JSPS*
- "Photonic sensing" K. Hotate, *University of Tokyo*
- "Polymer photonics" Y. Koike, *Keio University*
- "Photonic crystals" T. Baba, *Yokohama National University*
- "Impressive summary" K. Goto, *Tokai University*

Get Together

Get Together will be held in the evening on October 30. All attendees of MOC'05 are cordially invited.

Plenary Session

The following papers are invited as the plenary talks.

- "Photonic integration - From ARROW and microring toward VLSI photonics -"
Y. Kokubun, *Yokohama National University*
- "Erbium-doped optical fibre amplifier - Functional fibres and impacts -"
D. N. Payne, *Southampton University*
- "Binary micro optics and beyond"
W. B. Veldkamp, *MIT Lincoln Laboratory*

Special Session

The special session entitled as "**Silicon Photonics**" is planned on Monday, October 31, 2005, which is co-sponsored by **IEEE/LEOS Japan Chapter** and **JST**. The followings are invited talks for special session.

- "Light generation in silicon"
B. Jalali, *UCLA*
- "Silicon-on-Insulator based high index contrast waveguide devices: research in Europe"
R. Baets, *Gent University -IMEC*
- "Optical resonance in photonic crystals: Fano interference and stopping light"
S. Fan, *Stanford University*

Technical Program

"Stimulated light emission from silicon nanostructured PN junctions using current injection"

C. S. Tsai, *UC Irvine*

"Trends in micro and nanophotonics"

G. T. Reed, *Surrey University*

"Silicon photonics: Opportunities, challenges and recent advances"

M. Paniccia, *Intel Corporation*

Oral Presentation

The presentation time (including discussion) will be 30 min. for invited papers, 15 min. for regular papers and 10 min. for post deadline papers. The invited speakers for special session will have 20 min. talks. All speakers are requested to present the paper with a data (LCD) projector and to contact the session chairs prior to the starting time of the session.

Poster Session

In the conference, poster session will be held in the afternoon of November 1. For the convenience of the participants, this session will be divided into two parts. The first half is for authors with the paper of odd-number (H1, H3, ...) and the second half is for authors with the paper of even-number (H2, H4, ...). Authors should stay by turns in the vicinity of the bulletin board for discussion. Each author is requested to display materials on a 180 cm wide and 180 cm high bulletin board.

Post Deadline Papers

A limited number of post deadline papers will be accepted for the post deadline oral session or the poster session. Latest significant results obtained after the regular deadline are most welcome. Post deadline papers must be submitted electronically to:

S. Yamashita

Program Co-chair, MOC'05

University of Tokyo

E-mail: syama@ee.t.u-tokyo.ac.jp

The deadline for submission is **October 11, 2005**. Detailed instructions on how to prepare a paper are available as the template from the web site:

<http://www.din.or.jp/~microopt/moc05/>

Award Ceremony and Micro Concert

Award Ceremony and Micro Concert will be held on the last day after the technical program. Micro Concert will be performed by Machida Philharmony Baroque organized by Prof. K. Iga. The ceremony and the concert will be held at Matsuya Salon which locates near SABO KAIKAN.

Technical Program

Conference Party

Conference Party will be held after Micro Concert at the same place. All attendees of MOC'05 are cordially invited.

Technical Exhibition

Table-top technical exhibition will be planned at Tone Gallery. Take this opportunity to see the latest products and technologies in relation to Micro Optics. Exhibition hours are 9:00 to 17:00 on October 31 to November 2. For information about exhibiting at this conference, please contact:

H. Fuji
Sharp Corp.
2613-1 Ichinomoto-cho, Tenri 632-8567, Japan
Tel: +81-743-65-0617, Fax: +81-743-65-0597
E-mail: fuji.hiroshi@sharp.co.jp

Official Language

The official language of MOC '05 is English.

Special Issue "Microoptics"

A special issue on microoptics of the Japanese Journal of Applied Physics (JJAP) is scheduled for publication in August, 2006. Not only authors of papers for MOC '05 but also people having activities related to microoptics are strongly encouraged to submit original papers to the special issue. The deadline for submission is January 16, 2006. If you want any further information, please contact:

T. Mizumoto
Editor/Secretariat, MOC Special Issue
Dept. of Electrical and Electronic Eng.,
Tokyo Institute of Technology
2-12-1 Ookayama, Meguro-ku, Tokyo 152-8852, Japan
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E-mail: tmizumot@pe.titech.ac.jp

Technical Sessions

Monday, October 31

Yodoshinano Hall

9:00-9:20 Opening Remarks

Conference Co-chairs of MOC '05:

T. Mizumoto, *Tokyo Institute of Technology*

Y. Handa, *Canon Inc.*

9:20-10:50 Session A: Plenary

Chairs: T. Mizumoto, *Tokyo Institute of Technology*

Y. Handa, *Canon Inc.*

A1 Photonic integration - From ARROW and microring toward VLSI photonics - (Plenary)

9:20 Y. Kokubun, *Yokohama National University*

A2 Erbium-doped optical fibre amplifier - Functional fibres and impacts - (Plenary)

9:50 D. N. Payne, *Southampton University*

A3 Binary micro optics and beyond (Plenary)

10:20 W. B. Veldkamp, *MIT Lincoln Laboratory*

Break (10:50-11:15)

11:15-12:30 Session B: 2D Components

Chairs: W. B. Veldkamp, *MIT Lincoln Laboratory*

S. Ura, *Kyoto Institute of Technology*

B1 Integrated microoptical technologies for the optical data storage (Invited)

11:15 Y. Park, *Yonsei University*

B2 Microlens fabrication by nanoimprint lithography

11:45 F. Nikolajeff and A. Lundvall, *The Ångström Laboratory, Uppsala University*

B3 Fabrication of blazed area-coded effective medium structures (BLACES)

12:00 H. Elfström¹, B. H. Kleemann², J. Ruoff², T. Vallius¹, and R. Arnold³, ¹*University of Joensuu, Department of Physics*, ²*Corporate Research and Technology, Carl Zeiss AG*, ³*Lithography Optics Division, Carl Zeiss SMT AG*

B4 Array of hollow beams obtained with doughnut shaped microlenses

12:15 G. Boer¹, F. Merenda¹, and T. Scharf², ¹*Ecole Polytechnique Fédérale de Lausanne (EPFL), Institute of Applied Optics (IOA)*, ²*University of Neuchâtel, Institute of Microtechniques (IMT)*

Lunch (12:30-13:50)

13:50-15:05 Session C: Waveguide Devices

Chairs: R. Baets, *Gent University -IMEC*

T. Suhara, *Osaka University*

C1 Effect of apodization on high rejection fiber Bragg gratings

13:50 A. Sakamoto, K. Horimoto, and S. Okude, *Optics and Electronics Laboratory, Fujikura Ltd.*

C2 Silica-based PLC-type polarization beam splitter with >30dB high extinction ratio over 75nm band width

14:05 N. Matsubara, H. Kawashima, and K. Nara, *Fitel Photonics Laboratory, The Furukawa Electric Co., Ltd.*

Technical Sessions

Monday, October 31

**C3 2.5%- Δ athermal arrayed-waveguide grating
14:20 multi/demultiplexer with low trench diffraction loss**

K. Maru^{1,2,3}, Y. Abe¹, H. Ishikawa^{1,2}, M. Ito^{1,2}, S. Himi¹,
H. Uetsuka^{1,2}, and T. Mizumoto³, ¹*Advanced Technology
Laboratories, Hitachi Cable, Ltd.*, ²*Optoelectronic Industry
and Technology Development Association*, ³*Graduate
School of Science and Engineering, Tokyo Institute of
Technology*

**C4 Er³⁺-Yb³⁺ codoped polymeric waveguide amplifiers
14:35 fabricated using UV direct printing**

E. Y. B. Pun, W. H. Wong, and K. S. Chan, *City University of
Hong Kong*

**C5 Electro-optic single-sideband modulators with resonant
14:50 electrodes and polarization-reversed structures for
USB/LSB splitting operation**

H. Murata, D. Nakata, K. Ono, and Y. Okamura, *Graduate
School of Engineering Science, Osaka University*

Break (15:05-15:25)

**15:25-16:40 Session D: High Index Contrast Waveguide
Devices**

Chairs: G. T. Reed, *Surrey University*

H. Nishihara, *The University of the Air*

**D1 Mach-Zehnder interferometer with Si wire waveguides
15:25 for ultracompact optical isolator**

Y. Shoji¹, H. Yokoi², and T. Mizumoto^{1,3}, ¹*Tokyo Institute of
Technology*, ²*Shibaura Institute of Technology*,
³*Optoelectronic Industry and Technology Development
Association*

**D2 Low-loss Si wire waveguides and their applications to
15:40 thermooptic switches**

T. Tsuchizawa, K. Yamada, H. Fukuda, T. Watanabe,
S. Uchiyama, and S. Itabashi, *NTT Microsystem Integration
Laboratories*

**D3 Vertically-coupled cascaded microdisk resonators in
15:55 silicon**

P. Koonath, T. Indukuri, and B. Jalali, *University of California,
Los Angeles*

**D4 Non-blocking wavelength switch using TO effect of
16:10 double series coupled dielectric microring resonator**

Y. Goebuchi, T. Kato, and Y. Kokubun, *Graduate School of
Engineering, Yokohama National University*

**D5 Filter response improvement of higher-order series
16:25 coupled microring resonators by selective UV trimming**

S. Ueno, T. Naganawa, and Y. Kokubun, *Graduate School of
Engineering, Yokohama National University*

Break (16:40-17:00)

**17:00-20:30 Session E: Special Session
"Silicon Photonics"**

Chairs: K. Wada, *University of Tokyo*

Y. Kokubun, *Yokohama National University*

T. Mizumoto, *Tokyo Institute of Technology*

Technical Sessions

Monday, October 31

17:00 **Introduction**

K. Wada, *University of Tokyo*

E1 Light generation in silicon (Invited)

17:05 B. Jalali, *UCLA*

E2 Silicon-on-Insulator based high index contrast waveguide devices: research in Europe (Invited)

17:25 R. Baets, *Gent University -IMEC*

E3 Optical resonance in photonic crystals: Fano interference and stopping light (Invited)

17:45 S. Fan, *Stanford University*

E4 Stimulated light emission from silicon nanostructured

18:05 **PN junctions using current injection** (Invited)

C. S. Tsai, *UC Irvine*

Refreshment (18:25-19:00)

E5 Trends in micro and nanophotonics (Invited)

19:00 G. T. Reed, *Surrey University*

E6 Silicon photonics: Opportunities, challenges and recent advances (Invited)

19:20 M. Paniccia, *Intel Corporation*

19:40 **Panel Discussion**

|
20:30

* * *



Flower of Tokyo: Someiyoshino cherry blossom

Technical Sessions

Tuesday, November 1

Yodoshinano Hall

9:00-10:45 Session F: Optical Memory

Chairs: Y. Park, *Yonsei University*
K. Ueyanagi, *Fuji Xerox Co., Ltd.*

- F1 Surface plasmons for optical disk head** (Invited)
9:00 W. A. Challener, *Seagate*
- F2 Nano-fabrication trial report to the GaP optical head of ultrahigh density disk for evanescent light enhancement by surface plasmon**
9:30 K. Goto¹, K. Ohkuma¹, K. Suzuki¹, K. Nakamatsu², and S. Matsui², ¹*Tokai University*, ²*Japan and Hyogo University*
- F3 Fabrication of nanoprobe array integrated with VCSEL and microlens**
9:45 J.-K. Oh¹, D.-S. Lim², S.-M. Kim², Y.-J. Kim¹, and S. Kang², ¹*Center for Information Storage Device, Yonsei University*, ²*School of Mechanical Engineering, Yonsei University*
- F4 Integration of microlenses on aperture array to increase optical efficiency in optical ROM card system**
10:00 S.-M. Kim¹, H. Kim¹, J. Lim¹, J. Han¹, S. Kang¹, and C. Busch², ¹*School of Mechanical Engineering, Yonsei University*, ²*Philips Research*
- F5 Ultra-compact optical pickup with an integrated optical system**
10:15 H. Nakata, T. Nagata, and H. Tomita, *AV Core Technology Department Center, Matsushita Electric Industrial Co., Ltd.*
- F6 Energy-gap-induced super-resolution (EG-SR) ROM disc with a zinc oxide film in a Blu-ray disc optical system**
10:30 M. Yamamoto, G. Mori, H. Tajima, N. Takamori, K. Kojima, and A. Takahashi, *Devices Technology Research Laboratories, Corporate R&D Group, SHARP Corporation*

Break (10:45-11:15)

11:15-12:30 Session G: Optical Sensing

Chairs: M. J. Schnitzer, *Stanford University*
K. Hotate, *University of Tokyo*

- G1 Amplified fiberoptic networks for sensor multiplexing**
11:15 (Invited)
M. López-Amo, *Public University of Navarra*
- G2 High-speed high-reflectance-resolution optical reflectometry by synthesis of optical coherence function**
11:45 Z. He¹, T. Tomizawa¹, M. Kashiwagi², and K. Hotate¹, ¹*School of Engineering, University of Tokyo*, ²*Graduate School of Frontier Sciences, University of Tokyo*
- G3 Polarization-insensitive measurement by fiber optic interferometer with Faraday rotator elements**
12:00 D. Moteki, C. Samuel, T. Shioda, Y. Tanaka, and T. Kurokawa, *Graduate School of Technology, Tokyo University of Agriculture and Technology*
- G4 Noise characterization of CMOS two-colour APS**
12:15 S. Feruglio, P. Garda, and G. Vasilescu, *LISIF, University Pierre & Marie Curie*

Lunch (12:30-13:30)

Technical Sessions

Tuesday, November 1

Kiso Hall

13:30-16:00 Session H: Poster Session

Chairs: T. Watanabe, *Fujikura Ltd.*
K. Shimizu, *Japan Women's University*

(13:30-14:45) Odd numbers: 1st half

(14:45-16:00) Even numbers: 2nd half

- H1 Feasibility of GaN intersubband optical switches in a photonic wire resonator for 160-Gb/s applications**
N. Suzuki, *Corporate R&D Center, Toshiba Corp.*
- H2 Combined simulation of active and passive microoptical components**
O. Stuebbe¹, T. Bierhoff², M. Jarczyński³, J. Jahns³, G. Mroczynski⁴, J. Schrage², and A. Wallrabenstein⁴, ¹*University of Paderborn C-LAB*, ²*Siemens C-LAB*, ³*University of Hagen*, ⁴*University of Paderborn*
- H3 Design of high-efficiency broadband diffractive elements**
H. Lajunen, A. Lehmuskero, J. Tervo, and J. Turunen, *Department of Physics, University of Joensuu*
- H4 RIE lag eliminated by an ICP system with SF₆/O₂/CHF₃**
H.-H. Chen, *Opto-Electronics & Systems Laboratories, Industrial Technology Research Institute*
- H5 Fabrication of polymer waveguide using an electroplating mold process**
W.-C. Chuang¹, P.-J. Chou¹, C.-T. Ho², and R. F. Shyu³, ¹*Department of Electro-Optics Engineering, National Huwei Formosa University*, ²*Department of Mechanical Design Engineering*, ³*Department of Mechanical Manufacturing Engineering*
- H6 Wafer direct bonding by plasma treatment for waveguide isolator**
H. Saito¹, K. Sakurai¹, and T. Mizumoto^{1,2}, ¹*Tokyo Institute of Technology*, ²*OITDA*
- H7 Fabrication of novel polymer waveguides consisting of alicyclic methacrylate copolymers by deep UV exposure**
Y. Ichihashi, P. Henzi, M. Bruendel, D. G. Rabus, and J. Mohr, *Institute for Microstructure Technology, Forschungszentrum Karlsruhe GmbH*
- H8 Multistep cascaded third harmonic generation in periodically poled directional couplers**
K. Koynov¹, S. M. Saltiel¹, and Y. S. Kivshar², ¹*University of Sofia*, ²*Australian National University*
- H9 A high-NA lensed fiber employing a high-index layer**
N. Kawasaki^{1,2}, K. Watanabe¹, M. Umetsu¹, H. Yoda¹, T. Masujima², S. Shikano², and K. Shiraiishi¹, ¹*Utsunomiya University*, ²*MORITEX Corporation*
- H10 TE-cut polarizer based on silicon wire waveguide**
M. Taya¹, Y. Shoji¹, and T. Mizumoto^{1,2}, ¹*Tokyo Institute of Technology*, ²*OITDA*

Technical Sessions

Tuesday, November 1

- H11 Optimization of Y-branches by wavefront matching method and their application to 1×16 splitters**
Y. Sakamaki, T. Saida, Y. Hida, T. Hashimoto, M. Tamura, and H. Takahashi, *NTT Photonics Laboratories, NTT Corporation*
- H12 A silicon-based spot-size converter using an up-taper waveguide connected with a GRIN slab chip**
H. Ikedo¹, H. Yoda¹, K. Shiraishi¹, and C. S. Tsai^{2,3},
¹Graduate School of Engineering, Utsunomiya University,
²University of California, Irvine, ³National Taiwan University
- H13 Self-alignment effect on self-written waveguides between single-mode optical devices**
F. Huang and Y. Eriyama, *Tsukuba Research Laboratories, JSR Corporation*
- H14 Optical add drop multiplexers using fiber Bragg grating couplers**
S. Hagiwara¹, H. Miyakawa¹, J. Usui¹, N. Nakamura², and S. Kawai¹, ¹University of Industrial Technology, ²TOTO Ltd.
- H15 Fabrication of rugate optical filter with multi-step spectrum**
H. Yoda, D. Tanaka, and K. Shiraishi, *Graduate School of Engineering, Utsunomiya University*
- H16 Negative feedback optical amplifier based on cross-gain modulation in semiconductor optical amplifiers**
Y. Maeda, *Toyota Technological Institute*
- H17 Application of photoconductive layer for improvement of domain-inverted grating formation in MgO:LiNbO₃ by applying voltage under ultraviolet light**
M. Fujimura, S. Yoshimoto, and T. Suhara, *Graduate School of Engineering, Osaka University*
- H18 Characteristics of all-optical ultra-fast retiming switches using cascaded second-order nonlinear effect in periodically poled lithium niobate devices**
T. Kawashima, Y. Fukuchi, and M. Akaike, *Faculty of Engineering, Tokyo University of Science*
- H19 Integration of different-period waveguide DBRs by interference exposure using cylindrical mirror**
T. Asada¹, S. Yamaguchi¹, K. Nishio¹, A. Horii¹, S. Ura¹, and K. Kintaka², ¹Kyoto Institute of Technology, ²Photonics Research Institute, National Institute of Advanced Industrial Science and Technology
- H20 Message encoding and decoding using chaotic laser diode transmitter/receiver array with optical feedback**
S. Ebisawa and S. Komatsu, *Waseda University*
- H21 Infrared rejection by free-standing inductive grid filter**
J. Laukkanen¹, K. Jefimovs², T. Vallius³, T. Pilvi⁴, M. Ritala⁴, T. Meilahti⁵, M. Kaipainen⁵, and J. Turunen³, ¹InFotonics Center, University of Joensuu, ²Laboratory for Micro- and Nanotechnology, Paul Scherrer Institut, ³Department of Physics, University of Joensuu, ⁴Department of Chemistry, University of Helsinki, ⁵Oxford Instruments Analytical Ltd.

Technical Sessions

Tuesday, November 1

- H22 Volume holographic filter at 1.55 μm in near-stoichiometric lithium niobate**
Y. Liu¹, K. Kitamura¹, S. Takekawa¹, M. Nakamura¹, and H. Hatano², ¹National Institute for Materials Science, ²Corporate Research and Development Laboratories, Pioneer
- H23 The optimal recording geometry for shift-multiplexed holographic memory in a LiNbO₃ disk**
X.-H. Lee¹, W.-C. Su², and W.-C. Shih¹, ¹Graduate Program in Electro-Optical Engineering, Tatung University, ²Department of Physics, National Changhua University of Education
- H24 Numerical analysis of photoinduced surface relief formed on azobenzene polymer film by optical near-field exposure**
D. Barada^{1,3}, T. Fukuda^{2,3}, M. Itoh¹, and T. Yatagai^{1,2}, ¹Institute of Applied Physics, University of Tsukuba, ²Special Research Project on Nanoscience, University of Tsukuba, ³Photonics Research Institute, National Institute of Advanced Industrial Science and Technology (AIST)
- H25 Spectral properties of edge emitting laser with extremely short external cavity**
M. Arizaleta^{1,2}, J. Hernandez², A. Tabaka², H. Thienpont², M. López-Amo¹, and K. Panajotov², ¹Department of Electrical and Electronic Engineering, Universidad Pública de Navarra, ²Department of Applied Physics and Photonics, Vrije Universiteit Brussel
- H26 Integrated optical unit employing a two-wavelength laser diode for a DVD/CD optical pickup**
O. Miyazaki, T. Ueyama, Y. Watanabe, H. Iwasaki, Y. Nakata, and Y. Kurata, Precision Technology Development Center, Sharp Corporation
- H27 Diffractive white light diffuser with subwavelength structure**
H. Tsukamoto and M. Nishiyama, Nikon Corp.
- H28 Switching characteristics in a waveguide Mach-Zehnder interferometer with a ferro-electric liquid crystal cladding**
K. Nakatsuhara, R. Hoshi, and T. Nakagami, Kanagawa Institute of Technology
- H29 Assembly of microoptics with clipping structures in hybrid polymers**
S. Obi¹, A. Stuck¹, M. Schnieper¹, S. Droz¹, R. Stanley¹, A. Kuoni², and N. D. Rooij², ¹CSEM Centre Suisse d'Electronique et de Microtechnique SA, ²IMT Institute of Microtechnology, University of Neuchâtel
- H30 Feedback coupling module of optical transceiver using projecting core fiber**
T. Fujita, M. Iima, M. Fushimi, S. Tsukamoto, Y. Obara, M. Kakimoto, K. Asai, A. Ichikawa, S. Arai, and A. Arimoto, PENTAX Corporation
- H31 BPM analysis of a surface plasmon resonance waveguide sensor**
J. Shibayama, T. Takeuchi, T. Yamazaki, J. Yamauchi, and H. Nakano, Faculty of Engineering, Hosei University

Technical Sessions

Tuesday, November 1

- H32 Phase retrieval from quantized Fourier intensity using a modified multispectra method**
S. Yang, H. Ikeda, and H. Takajo, *Faculty of Engineering, Kyushu Institute of Technology*
- H33 Oversampling method for phase retrieval from quantized Fourier intensity**
M. Itoh, S. Yang, and H. Takajo, *Faculty of Engineering, Kyushu Institute of Technology*
- H34 Optical surface refractive index sensor using Si waveguide**
Y. Naoi, H. Okayama, and H. Nakajima, *School of Science and Engineering, Waseda University*
- H35 Analysis of one dimensional photonic crystals with two defects for optical filter and sensor applications**
H. Mayditia¹, H. Hardhienata¹, H. Alatas^{1,2}, A. A. Iskandar², and M. O. Tjia², ¹*Theoretical and Computational Physics Laboratory, Department of Physics, Bogor Agricultural University*, ²*Photonics Group, Department of Physics, Institute Technology of Bandung*
- H36 Band structure design of a finite 1D optical grating**
A. A. Iskandar¹, W. Yonan¹, M. O. Tjia¹, I. van de Voorde², and E. van Groesen², ¹*Department of Physics, Institut Teknologi Bandung*, ²*Department of Applied Mathematics, University of Twente*
- H37 An intrinsic FFPI embedded silicon acceleration sensor using micromachining technology**
H.-C. Kwon¹, S.-W. Jang¹, D.-E. Kim¹, and S.-W. Kang², ¹*Department of Electronic Engineering, Kyungpook National University*, ²*School of Electronic and Electrical Engineering, Kyungpook National University*
- H38 A 1.20 to 1.60 μm wavelength sensor using a structure of optical directional coupler**
K. Sae-tang and S. Somkuarnpanit, *Faculty of Engineering, KMITL*
- H39 Sensitivity improvement of AWG spectroscopic sensor using parabola-shaped sample injection waveguide**
Y. Komai¹, H. Nagano¹, K. Okamoto², and K. Kodate¹, ¹*Japan Women's University*, ²*Okamoto Laboratory*
- H40 High time resolution distributed fiber-optic sensor based on optical pulse correlation measurement**
H. Song, T. Suzuki, M. Sako, and K. Nonaka, *Department of Electronic and Photonic Systems Engineering, Kochi University of Technology*
- H41 Investigation of transmission property of optical resonator for effective frequency comb generation**
T. Sugimoto¹, M. Yamamoto¹, T. Yamamoto¹, T. Shioda¹, Y. Tanaka¹, S. Mori², K. Higuma², and T. Kurokawa¹, ¹*Graduate School of Technology, Tokyo University of Agriculture and Technology*, ²*New Technology Research Laboratories, Sumitomo Osaka Cement Co., Ltd.*
- H42 The maximum FSR and minimum HPBW prediction for the silicon based ring and racetrack microresonators**
S. Khuntaweetep and S. Somkuarnpanit, *Faculty of Engineering, KMITL*

Technical Sessions

Tuesday, November 1

- H43 Examination of tilt influence on readout signal quality from optical discs with different track pitch**
J.-T. Huang and F.-H. Lo, *Opto-Electronics & Systems Laboratories, Industrial Technology Research Institute*
- H44 Ultra fast face recognition optical parallel correlator for large scale database (several tens of thousands and over) -Discussion and prospect for general-purpose machine-**
E. Watanabe, M. Ohta, M. Ishikawa, and K. Kodate, *Japan Women's University*
- H45 Design and realization of a confocal micro optical distance sensor**
P. Lücke¹, A. Last¹, J. Mohr¹, A. K. Ruprecht², C. Pruss², H. J. Tiziani², W. Osten², P. Lehmann³, and S. Schönfelder⁴,
¹*Institut für Mikrostrukturtechnik (Forschungszentrum Karlsruhe)*, ²*Institut für Technische Optik / Universität Stuttgart*, ³*Mahr GmbH*, ⁴*Boehringer Ingelheim microParts GmbH*
- H46 Metameric mixed colors produced by diffractive optics**
N. Tossavainen¹, T. Vallius², and M. Kuittinen², ¹*InFotonics Center, University of Joensuu*, ²*Department of Physics, University of Joensuu*
- H47 White LED light incoupling using different refractive index radial gratings**
S. Siitonen¹, P. Laakkonen¹, P. Vahimaa¹, N. Tossavainen², and M. Kuittinen¹, ¹*Department of Physics, University of Joensuu*, ²*InFotonics Center, Department of Physics, University of Joensuu*
- H48 Boosting light transmission through interfaces using subwavelength Moth-eye structuring: nonstandard FDTD simulations**
S. Banerjee¹, T. Yatagai¹, and J. B. Cole², ¹*Institute of Applied Physics, University of Tsukuba*, ²*Department of System and Information Engineering, University of Tsukuba*
- H49 Optimal design for fabricating Dammann color separation grating (DCSG) using rigorous coupled wave analysis (RCWA)**
M. Nagayoshi¹, K. Oka², Y. Komai¹, W. Klaus³, and K. Kodate¹, ¹*Japan Women's University*, ²*Production Engineering Research Laboratory, Hitachi Ltd.*, ³*National Institute of Information and Communications Technology*
- H50 Molecular beam epitaxy of wurtzite GaN and β -Ga₂O₃ on transparent and conductive β -Ga₂O₃ substrates**
E. G. Villora¹, K. Shimamura¹, K. Aoki², and K. Kitamura¹,
¹*National Institute for Materials Science*, ²*Koha Co., Ltd.*
- H51 Enhanced transmission of subwavelength slit on tapered metallic structure**
J.-Y. Chang, C.-M. Wang, H.-I. Huang, and C.-C. Chao,
Institute of Optical Sciences, National Central University
- H52 Plasmonic band gap engineering for lasing applications**
J. Simonen^{1,2}, T. Okamoto¹, F. H'Dhili¹, and S. Kawata^{1,3},
¹*RIKEN, Nanophotonics Laboratory*, ²*Department of Physics, University of Joensuu*, ³*Department of Applied Physics, Osaka University*

Technical Sessions

Tuesday, November 1

- H53 Rigorous Fourier modal analysis on slab structures with finite thickness and one-dimensional arbitrary permittivity and permeability profiles**
H. Kim and B. Lee, *School of Electrical Engineering, Seoul National University*
- H54 Extended formulation of rigorous coupled wave analysis for two-dimensional binary grating structures with arbitrary transverse profiles of permittivity and permeability**
H. Kim, I.-m. Lee, and B. Lee, *School of Electrical Engineering, Seoul National University*
- H55 Nanodomain engineering of LiNbO₃ and LiTaO₃ by focused ion beam**
X. Li¹, K. Terabe¹, H. Hatano^{1,2}, and K. Kitamura¹, ¹*National Institute for Materials Science*, ²*Laboratory I Advanced Devices Department, R&D group, Pioneer Corporation*
- H56 Fabrication and optical evaluation of a microsphere coated with J-aggregates**
K. Yamaguchi, M. Haraguchi, T. Okamoto, and M. Fukui, *University of Tokushima*
- H57 Rare-earth-doped organic/inorganic optical nanocomposite: luminescence property control**
H. Matakai and T. Fukui, *KRI, Inc.*
- H58 Nanoscale domain and surface engineering in ferroelectric LiNbO₃ crystals**
X. Liu, K. Terabe, and K. Kitamura, *National Institute for Materials Science*
- H59 Waveplates with photonic crystal technology for optical disk pick up units**
A. Yamaguchi¹, Y. Suzuki², H. Terasaki², and S. Ichiura², ¹*SANYO MAVIC media Co., Ltd.*, ²*Frontier Devices Research Center, SANYO Electric Co., Ltd.*
- H60 Silicon-based subwavelength guided-mode resonance filter**
J.-Y. Chang, C.-L. Hsu, Y.-H. Chou, and C.-M. Wang, *Institute of Optical Sciences, National Central University*
- H61 Quasi-phase matched Type II parametric down converter with an adhered ridge waveguide**
M. Motoya^{1,2}, S. Kurimura^{1,3}, Y. Kato³, Y. Usui³, H. Nakajima³, and S. Inoue², ¹*National Institute for Materials Science*, ²*Nihon University*, ³*Waseda University*
- H62 Simulation and observation of resonance modes in a Si micro-cubic cavity couples with a Ge:SiO₂ waveguide**
K. Okada¹, H. Kasa¹, K. Kintaka², and K. Hirao³, ¹*New Glass Forum*, ²*National Institute of Advanced Industrial Science and Technology*, ³*Kyoto University*
- H63 Cascaded high-efficiency InGaAs QW DBR lasers for generation of quantum-correlated twin beams**
S. Nozu, T. Ishida, M. Uemukai, and T. Suhara, *Graduate School of Engineering, Osaka University*

Technical Sessions

Tuesday, November 1

H64 Light fields generated by microlenses with amplitude stops,

T. Scharf¹, P. Ruffieux¹, W. Noell¹, R. Völkel², and C. Rockstuhl³, ¹*Institute of Microtechnology, University of Neuchâtel*, ²*SUSS MicroOptics*, ³*Friedrich Schiller University Jena, Institute for Solid State Theory and Optics*

H65 One-dimensional composite meta-material structures formed by mixing positive and negative refractive index media

I.-m. Lee, H. Kim, S. Kim, and B. Lee, *School of Engineering, Seoul National University*

Break (16:00-16:10)

Yodoshinano Hall

16:10-17:55 Session J: Nano-structures

Chairs: W. A. Challener, *Seagate*
S. Tsuji, *Hitachi Ltd.*

J1 Diamond based photonic crystal microcavities

16:10 S. Tomljenovic-Hanic¹, M. J. Steel^{1,2}, C. Martijn de Sterke¹, and J. Salzman³, ¹*ARC Centre of Excellence for Ultrahigh-bandwidth Devices for Optical Systems (CUDOS)*, and *School of Physics, University of Sydney*, ²*RSoft Design Group, Inc.*, ³*Department of Electrical Engineering, Technion, Israel University of Technology*

J2 Reducing propagation loss of photonic crystal waveguide by sedimentation of three-dimensional microspheres

16:25 Y.-L. Tsai, C.-C. Chen, J.-Y. Chang, and C.-L. Hsu, *Institute of Optical Sciences, National Central University*

J3 High-order mode waveguide of one-dimensional photonic crystals

16:40 S. Kittaka¹, T. Nakazawa¹, K. Tsunetomo¹, and J. Nishii², ¹*Technical Research Laboratory, Nippon Sheet Glass Co., Ltd.*, ²*National Institute of Advanced Industrial Science and Technology*

J4 Self assembly quantum dots in semiconductors for telecom application in the 1500 nm region (Invited)

16:55 R. Noetzel, *Eindhoven University of Technology*

J5 Quantum dot optoelectronic devices (Invited)

17:25 Q. Gao, *Australian National University*

Refreshment (17:55-18:25)

18:25-20:10 Session K: Optical Signal Processing and Fibers

Chairs: B. Lee, *Seoul National University*
M. Nishimura, *Sumitomo Electric Industries, Ltd.*

K1 High capacity transmission via multimode optical fibers (Invited)

18:25 R. Penty, *Cambridge University*

K2 High bandwidth W-shaped POF

18:55 K. Takahashi, T. Ishigure, and Y. Koike, *Graduate School of Science and Technology, Keio University*

Technical Sessions

Tuesday, November 1

- K3** **High-speed wavelength switching of wavelength groups using multiple sideband generation**
19:10 E. Yamada, H. Sanjoh, M. Ishikawa, and Y. Yoshikuni, *NTT Photonics Laboratories, NTT Corporation*
- K4** **Performance of two-bit of optical serial-to-parallel converter using cascaded electroabsorption modulators**
19:25 M. Ohkado, and H. Uenohara, *Microsystem Research Center, P&I Laboratory, Tokyo Institute of Technology*
- K5** **Simultaneous 2R regeneration of two 10-Gbps Signals using a single self-injection locked Fabry-Perot laser diode**
19:40 H. M. Nguyen¹ and S. Yamashita², *¹Department of Frontier Informatics, Graduate School of Frontier Sciences, University of Tokyo, ²Department of Electronics Engineering, School of Engineering, University of Tokyo*
- K6** **Comparison of intensity-dependent index change below the bandgap wavelength among bulk, quantum well and quantum wire incorporated GaInAsP waveguides**
19:55 J.-K. Seo¹, T. Ishii¹, T. Mizumoto^{1,3}, H. Yagi^{2,3}, D. Plumwongrot², and S. Arai^{2,3}, *¹Department of Electrical and Electronic Engineering, Tokyo Institute of Technology, ²Quantum Nanoelectronics Research Center, Tokyo Institute of Technology, ³CREST, JST*
- 20:10



Technical Sessions

Wednesday, November 2

Yodoshinano Hall

9:00-10:30 Session L: Bio-optics and Sensing

Chairs: M. López-Amo, *Public University of Navarra*
M. Haruna, *Osaka University*

L1 Multi-photon micro-endoscopy (Invited)

9:00 M. J. Schnizer, *Stanford University*

L2 Microsphere sorting using double well potential of optical gradient force

9:30

Y. Hayashi, R. Fujimura, S. Ashihara, T. Shimura, and K. Kuroda, *Institute of Industrial Science, University of Tokyo*

L3 Microoptical artificial compound eyes – two different concepts for compact imaging systems

9:45

J. Duparré¹, P. Dannberg¹, A. Bräuer¹, R. Völkel², and T. Scharf³, ¹*Fraunhofer Institute Applied Optics and Precision Engineering IOF, Department Microoptical Systems, ²SUSS MicroOptics SA, ³Institute of Microtechnology, Applied Optics Laboratory*

L4 Modified point diffraction interferometer for corneal topography

10:00

E. Acosta¹, F. Granados², and M. E. Percino², ¹*Faculty of Physics, University of Santiago de Compostela, ²Instituto Nacional de Astrofísica, Óptica y Electrónica*

L5 Integration of surface-emitting red DBR laser and microfluidic structure for biomolecular sensing

10:15

M. Uemukai, H. Miyamoto, Y. Yamada, Y. D. Sharma, and T. Suhara, *Graduate School of Engineering, Osaka University*

Break (10:30-11:00)

11:00-12:30 Session M: VCSEL

Chairs: R. Noetzel, *Eindhoven University of Technology*
F. Koyama, *Tokyo Institute of Technology*

M1 High power extended vertical cavity surface emitting laser and its application (Invited)

11:00

A. Mooradian, *Novalux, Inc.*

M2 Modelling of a high-speed polarization controller based on injection-locked two-mode VCSEL

11:30

K. Hasebe, Y. Onishi, and F. Koyama, *Microsystem Research Center, Tokyo Institute of Technology*

M3 Wavelength extension with cavity detuning in vertical cavity surface emitting laser

11:45

K. Takeda, T. Miyamoto, T. Kondo, Y. Uchiyama, A. Matsutani, T. Uchida, and F. Koyama, *Microsystem Research Center, P&I Laboratory, Tokyo Institute of Technology*

M4 Micro/nano-optics in surface emitting lasers (Invited)

12:00

E. Johnson, *CREOL, University of Central Florida*

Lunch (12:30-13:50)

13:50-15:50 Session N: Display and Light Sources

Chairs: A. Mooradian, *Novalux Inc.*
N. Nishida, *University of Tokushima*

Technical Sessions

Wednesday, November 2

- N1** Ultra-miniature projector: a high-resolution, battery
13:50 powered laser display (Invited)
M. Stern, *Symbol Technologies, Inc.*
- N2** Compensation for the photoelastic birefringence of
14:20 optical polymer by doping with anisotropic molecule
H. Ohkita¹, K. Ishibashi², R. Tanaka², A. Tagaya^{1,2}, and
Y. Koike^{1,2}, ¹*ERATO Koike Photonics Polymer Project, Japan
Science and Technology Agency*, ²*Faculty of Science and
Technology, Keio University*
- N3** High beam quality continuous wave 3W green
14:35 generation in a bulk periodically poled MgO:LiNbO₃
H. Furuya, A. Morikawa, K. Mizuuchi, and K. Yamamoto, *AV
Core Technology Development Center, Matsushita Electric
Industrial Co., Ltd.*
- N4** Nonlinear optical device based on crystal quartz
14:50 S. Kurimura¹, T. Yamada^{1,2}, and K. Hayashi², ¹*National
Institute for Materials Science*, ²*Nidek Co., Ltd.*
- N5** Improvement of luminous efficacy of
15:05 phosphor-converted white LED lamps
N. Kimura¹, N. Hirotsuki², K. Sakuma¹, S. Hirafune¹,
K. Asano¹, and D. Tanaka¹, ¹*Optics and Electronics
Laboratory, Fujikura Ltd.*, ²*Advanced Materials Laboratory,
National Institute for Materials Science*
- N6** Diffractive optical elements and subwavelength gratings
15:20 for display and optical switching (Invited)
B. Lee, *Seoul National University*

Break (15:50-16:10)

- 16:10-16:40** Session PD: Post Deadline Papers
Chairs: Q. Gao, *Australian National University*
A. Arimoto, *PENTAX Corp.*

- 16:40-16:50** Closing Remarks
Program Co-chairs:
S. Yamashita, *University of Tokyo*
K. Yamamoto, *Matsushita Elect. Ind. Co., Ltd.*

Break (16:50-17:10)

Matsuya Salon

- 17:10-18:30** Award Ceremony and Micro Concert
18:30-20:00 Conference Party

Check! Important Deadlines

Pre-Registration: September 20, 2005
Post Deadline Papers: October 11, 2005
Hotel Accommodations: October 1, 2005

Registration Fees

| | Before/On Sept. 20, 2005 | After Sept. 21, 2005 |
|----------------------|-----------------------------|-------------------------|
| Conference (General) | JPY 45,000 | JPY 50,000 |
| (Student) | JPY 7,000 | JPY 8,000 |
| Extra Copy of Digest | JPY 6,000 | JPY 6,000 |

The registration fee includes admission to MOC '05 and a copy of Technical Digest.

MOC'05 Organizing Committee entrusts **Kinki Nippon Tourist Co., Ltd.** with a part of the management. The attached "**Registration and Hotel Reservation Form**" should be sent to

MOC'05 Desk, Kinki Nippon Tourist Co., Ltd.
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FAX: 81-3-6730-3230
E-Mail:tourdesk50-tjc@gp.knt.co.jp

All payment should be made in Japanese yen by one of the following methods:

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2. Credit card (Only for overseas attendees)

Master Card, VISA, American Express, and Diners Club are available **only for overseas attendees**. Personal checks are NOT accepted.

Pre-registration, by **September 20, 2005**, is encouraged and will be entitled to reduced fees. Upon receipt of registration form and payment, MOC '05 Desk will send a letter of confirmation which should be presented at the Conference Registration Desk.

REGISTRATION CANCELLATION POLICY

No refunds of the registration fee will be made for any reasons whatever. In the event of registrant unable to attend the conference, a copy of Technical Digest will be sent after the conference.

General Information

HOTEL ACCOMMODATIONS

Kinki Nippon Tourist Co., Ltd. will be the official agent for hotel accommodations and the other travel arrangements.

The attached "**Registration and Hotel Reservation Form**" should be sent to MOC '05, Desk Kinki Nippon Tourist Co., Ltd. **no later than Oct. 01, 2005**, together with **the payment of deposit (JPY10,000 per room)** and **handling charge of JPY 500 per room**.

The full amount of room charge will be billed after October 1, 2005.

| Hotel Name | Code | Room Type | Room Charge * (JPY) | Hotel Location |
|---------------------------|------|-----------|---------------------|--|
| Akasaka Prince Hotel | A | Single | 18,500 | 1min. walk from "Nagata-cho" station |
| Akasaka Excel Hotel Tokyu | B | Single | 16,900 | 1min. walk from "Akasaka-mitsuke" station |
| Villa Fontaine | C | Single | 13,645 | On "Roppongi 1-chome" station (3min. ride from "Nagata-cho" on "Namboku-line") |
| Toshi Center Hotel | D-S | Single | 12,500 ** | 3min. walk from "Nagata-cho" station |
| | D-T | Twin | 21,000 ** | |

* The above rates are per room, including service charge and consumption tax. Handling charge is not included.

**Breakfast is included only for Toshi Center Hotel.

Please refer to the MOC'05 website (<http://www.din.or.jp/~microopt/moc05/>) for the hotel location information.

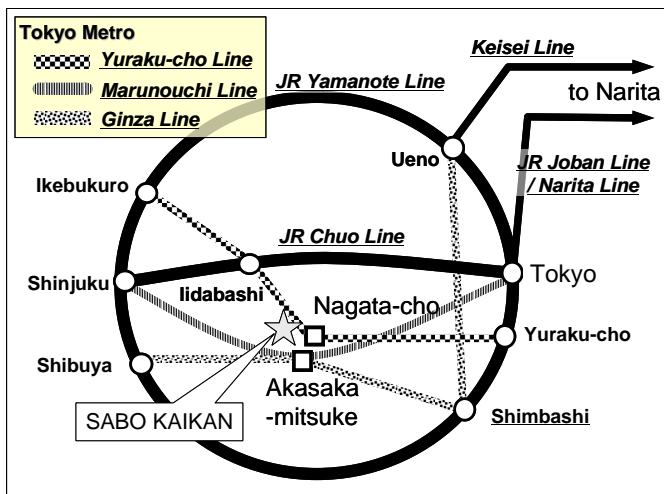
HOTEL CANCELLATION REFUND POLICY

Any kind of cancellation or reservation change must be submitted in writing to **MOC '05 Desk, Kinki Nippon Tourist Co., Ltd.**

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Access to SABO KAIKAN

SABO KAIKAN is located at the center of Tokyo metropolitan area. The nearest station is “Nagata-cho” station or “Akasaka-mitsuke” station on Tokyo Metro subway.



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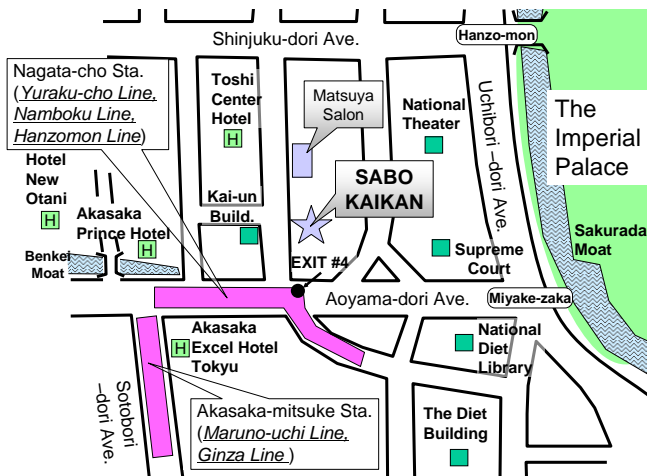
Address of SABO KAIKAN

2-7-5 Hirakawa-cho, Chiyoda-ku, Tokyo, 102-0093, Japan

TEL: +81-3-3261-8386, FAX: +81-3-3261-5449

<http://www.sabo.or.jp/map.htm> (in Japanese)

- 1-minute walk from “Nagata-cho” station #4 EXIT on Tokyo Metro Yuraku-cho Line, Namboku Line or Hanzomon Line.
- 8-minute walk from “Akasaka-mitsuke” station on Tokyo Metro Marunouchi Line, Ginza Line.



General Information

Visa

Visitors from countries whose citizens must have visas should apply to a Japanese consular office or diplomatic mission in their respective country. For details, please contact your travel agent or the local consular office in your country.

Climate

The weather in Tokyo during the period of the conference is typically sunny with temperature ranges between 15°C and 22°C.

Currency Exchange

Only Japanese yen (JPY, ¥) is acceptable at regular stores and restaurants. Certain foreign currencies may be accepted at a limited number of hotels, restaurants and souvenir shops. You can exchange your currency with Japanese yen at foreign exchange banks and other authorized money exchangers on presentation of your passport.

Traveler's Checks and Credit Cards

Traveler's checks are accepted only by leading banks and major hotels in principal cities, and the use of traveler's checks in Japan is not as popular as in some other countries. VISA, Master Card, Diners Club, and American Express are widely accepted at hotels, department stores, shops, restaurants and nightclubs.

Tipping

In Japan, tips are not necessary anywhere, even at hotels and restaurants.

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Japan operates on 100 volts for electrical appliances. The frequency is 50 Hz in eastern Japan including Tokyo, and 60 Hz in western Japan including Osaka and Kyoto.

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* * *

TOKYO AT A GLANCE

*Population: 12,527,115 (2005.6)

*GDP of Tokyo: ¥ 81,843 Billion (2002FY)

*Average temperature: 15.9 °C

*Symbol flower: Someiyoshino cherry blossom



Niju Bashi Bridge
(The Imperial Palace)



The Diet Building



Supreme Court



Tokyo Tower



Sensoji Temple

MOC '05
October 30 - November 2, 2005
at
SABO KAIKAN
Tokyo, Japan

Important Deadlines

Pre-Registration: September 20, 2005
Post Deadline Papers: October 11, 2005
Hotel Accommodations: October 1, 2005

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Registration Deadline: Sep. 20, 2005 Hotel reservation Deadline: Oct. 01, 2005

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1F, 3F 4-27-5, Taito, Taito-ku, Tokyo 110-8757 JAPAN

TEL: 03-6730-3230 E-Mail: tourdesk50-tjc@gp.knt.co.jp

Sex: Dr. Mr. Ms.

First Name

Check: Office Home

Country

Tel

Fax

(Appropriate box)

| | | |
|--------------------------|----------------------------------|---------------------|
| | After Sep. 21, 2005 | |
| 5,000yen | <input type="checkbox"/> General | 50,000yen |
| 10,000yen | <input type="checkbox"/> Student | 8,000yen |
| 6,000yen × _____ copy(s) | | Sub Total(A) |

| | | |
|---|---------------|--------------------------|
| 2nd choice Hotel Code | # of rooms | Check-in date |
| | _____ room(s) | _____, ____ |
| _____ (single charge(500yen) } × _____ room(s)= | | Sub Total(B): JPY |

If a room partner is required, please fill in your room partner's name:

Ms. _____ Family Name _____ First name _____

Sub Total (A) + (B) = JPY

Amount of JPY _____ on _____ (date).

Banking Corporation, Marunouchi Branch
 Nippon Tourist Co., Ltd., Corporate Branch, Kanda
 Deposit 46300

For domestic attendees
 三井住友銀行 東京
 口座名: 近畿日本ツ
 口座番号: (普)NO.

(For overseas attendees) Please charge the above total to my credit card.

VISA Master Card American Express Diner's Club

 _____ (in block letters)

Month) _____ (Year) _____

Please type or print your name and affiliation which you wish to display on your tag

I agree to the conditions set forth in this application form and circular.

Signature: