

1. WELCOME

Dear Colleagues,

On behalf of the Organizing Committee, it is a great honor and pleasure to welcome you to Osaka, Japan for the 69th Annual Meeting of the Japanese Society of Microscopy (JSM) held at Hotel Hankyu Expo Park, Osaka on May 20–22 2013. As you may know, JSM was founded in 1949 and has been going strong for over 60 years.

Science and technology in microscopy has advanced greatly in recent years. We now enjoy a large variety of microscopic techniques using electrons, light, and ions, regardless of whether the probes use waves or particles. Along with these new imaging techniques, recent emphasis has also been on the control of specimen environment. From gases at atmospheric pressure to liquids, these new environmental controls will allow us to observe live specimens more accurately than before. With the recent advances in microscopy technology, new scientific and technological fields from materials science to biology are on the horizon. So for this occasion, we decided that the theme of the forthcoming meetings should be:

“Microscopy: Cutting-edge technology opening up new fields”.

During this meeting, we welcome foreign researchers/microscopists to join us in discussing their findings regarding cutting-edge techniques in modern electron microscopy at the sub-nanometer level. We are also interested in findings, especially those based on new theories, regarding high resolution imaging far beyond the theoretical resolution for light microscopy. Exhibitors are also welcome to introduce their state-of-the-art microscopy and related technology and materials.

JSM plans to publish a new journal, *Microscopy*, starting January 2013, as a replacement for the legendary *Journal of Electron Microscopy*. This new journal will be published in conjunction with Oxford University Press. The 69th Annual Meeting will celebrate the launch of this new journal.

Under the theme “Microscopy: Cutting-edge technology opening up new fields”, we expect to deliver a number of exciting programs, including oral and poster presentations by more than 800 members, special sessions (lectures by the JSM Seto Prize Winners and honorary lecturers), workshops, tutorial sessions, and exhibitions by many supporting companies involved in microscopy. A banquet will be held on the second day (May 21). We also plan a public lecture, on May 19 (Sunday), at the venue to share these exciting microscopic techniques with students and the general public, where participants will be able to observe many interesting specimens under light and electron microscopes.

Finally, I would like to emphasize that throughout Japan’s long history, Osaka has led this nation with its unique characteristics, ranging from political power and its economy to its sophisticated cultural attributes such as the Japanese tea ceremony and Bunraku puppetry. During your stay here, we hope you touch the heart of Osaka while learning about cutting edge technology in microscopy.

The Organizing Committee members of the 69th Annual Meeting of the JSM and the people of Osaka welcome you and wish you a pleasant stay.

Professor Seiji Takeda
Chairperson, 69th Annual Meeting of JSM
ISIR, Osaka University

2. Conference Period and Venue

Public Lecture

Date and Time: May 19 (Sun), 2013; 13:00–16:00 (tentative)

Venue: Hotel Hankyu Expo Park, Suita, Osaka

(http://www.hankyu-hotel.com/cgi-bin2/cms2/index_en.cgi?hid=24hhexpopark)

The lecture is for junior and senior high school students and adults, and will be given in Japanese.

Conference

Date: May 20 (Mon)–22 (Wed), 2013

Venue: Hotel Hankyu Expo Park, Suita, Osaka

Banquet

Date and Time: May 21 (Tue), 2013; 18:00

Venue: Hotel Hankyu Expo Park, Suita, Osaka

Conference web site: <http://www.microscopy.or.jp/conf2013/>

Homepage of the Japanese Society of Microscopy: <http://www.microscopy.or.jp/>

3. Schedule (tentative)

	9	10	11	12	13	14	15	16	17	18	19	hours			
5/19 (Sun)				Public Lecture											
	Set up the event venue														
5/20 (Mon)	Academic Meeting	Luncheon Seminar		Tonomura Memorial Symposium	Academic Meeting										
	Poster & Photography Competition														
	Instrumentation Exhibition														
5/21 (Tue)	Academic Meeting		General Meeting		JSM Seto Prize Winners' Lectures				Banquet						
	Poster & Photography Competition														
	Instrumentation Exhibition														
5/22 (Wed)	Academic Meeting	Luncheon Seminar		Academic Meeting											
	Poster & Photography Competition				Poster Removal										
	Instrumentation Exhibition														

4. Outline of Academic Lectures

Special Session (SS)

SS-1 Tonomura Memorial Symposium

In memory of Dr Akira Tonomura, the Tonomura Memorial Symposium will be held on the first day of the meeting. Dr Tonomura obtained electron holograms and reconstructed images from them for the first time in 1968. Then, he and his colleagues developed the field-emission electron gun with both high brightness and high coherency in 1979. This field-emission electron gun is essential to observe the phase of electrons that transmit through a specimen, which makes electron holography possible. His most prominent achievement was when he experimentally verified the Aharonov–Bohm effect and the existence of vector potential. This direct observation established the fundamentals of the gauge theory. He also succeeded in observing a yet unobservable quantum phenomena by using the field-emission electron gun. His double slit experiment uniquely demonstrated the generation of an interference pattern of single electrons. Furthermore, he and his colleagues quantitatively observed the dynamic motions of electromagnetic fields in and/or near materials, such as the magnetic flux quantum, or the vortex in superconductors and magnetic fields in ferromagnetic materials. These studies are entirely beyond the design of transmission electron microscopes equipped with electromagnetic lenses designed by Dr Ernst Ruska. Dr Tonomura's achievements are not only appreciated in physics but also recently recognized as fundamental for characterizing functional materials and devices in technology and industry. [Invited speakers]

Sumio Iijima (Meijo University)

Hannes Lichte (Technische Universität Dresden)

Nobuyuki Osakabe (Hitachi)

SS-2 JSM Seto Prize Winners' Lectures

The winners of the JSM Seto Prize will give lectures, details of which will be announced later.

General Session

We invite you to submit your abstracts. Please select a category (I: Instrumentation, B: Biological & Medical Sciences, M: Materials Science) and sessions (maximum 3). The symposium sessions mostly consist of invited talks, but some symposia will also include contributed talks. For more details, please see the page for symposium sessions. The final decision is made by the Program Committee.

I. Instrumentation

1. TEM, STEM, SEM
2. STM, AFM, SPM
3. REM, LEEM, PEEM, surface phenomena
4. Other microscopy (optical microscopy, X-ray microscopy, positron microscopy, ion microscopy, atom probe, SIMS imaging, diffractive imaging etc.)
5. Analytical EM (EDS/EELS)
6. Phase problem (holography, phase retrieval, phase detection, phase plate)
7. Environmental EM, in situ observation (specimen holders, MEMS)
8. Image processing, information processing, simulations
9. Fundamental technologies (detector, electron source, column control, etc.)
10. 3D analysis (tomography)
11. Sample preparation
12. Others

B. Biological & Medical Sciences

Method:

1. :Optical imaging of live cells and molecules (confocal microscopy, multi-photon microscopy, laser microscopy, single molecule observation, etc.)
2. Method: Super-resolution optical imaging (STED, SIM, STORM, PALM, etc.)
3. 3D structures of molecules and cells by electron microscopy (2D crystal, single particle, tomography)

Subject:

4. Structures and functions of biological macromolecular assemblies
5. Cells (organelles, membranes, cytoskeleton, etc.)
6. Tissues (cell adhesion, extracellular matrix, organs, etc.)
7. Plants
8. Microorganisms (virus, bacterium, fungus, yeast, etc.)

System:

9. Disease-related (immune and hematopoietic systems, inflammation, cancer, etc.)
10. Physiological systems (nervous system, embryonic development, etc.)
11. Others

M. Materials Science

Keywords A

TEM, STEM, SEM, analytical TEM, HVEM, SPM, X-ray microscopy, in situ observation and environmental control, holography, tomography, etc.

Keywords B

Metal, semiconductor, ceramics, soft materials, bio materials, nanomaterials, magnetic materials, dielectric materials, devices, minerals, interstellar matter, surfaces and interfaces, lattice defects, phase transformation, irradiation effects, etc.

Symposium Session (S)

S-1 (English session)

[Theme] High sensitivity and high precision imaging devices

[Organizers] Program Committee Members of Instrumentation

[Synopsis] The total performance of an electron microscope depends not only on the performance of the electron microscope itself, but also the imaging device. Especially in cases where a low electron dose is required for observation, imaging devices which can efficiently use the signal of scattered electrons are expected to be developed based on single electron detection and other techniques. In this symposium, recent results and

topics in the development of new types of imaging devices will be reported from researchers in both universities and manufacturing companies. English will be the official language in this symposium.

[Invited speakers]

1. Y. Tanishiro (Tokyo Institute of Technology)
2. H. R. Tietz (TVIPS)
3. Y. Kimura (Osaka University)
4. M. Storms (FEI)
5. P. Mooney (Gatan)
6. R. B. Bilhorn (Direct Electron)
7. T. Kato (Osaka University)

S-2

[Theme] Correlative and integrative light-electron microscopy

[Organizers] Yasushi Hiraoka (Osaka University)
Sachiko Tsukita (Osaka University)

[Synopsis] Light microscopy and electron microscopy have advantages and disadvantages. Disadvantages are compensated by methods that have been devised to correlate light and electron microscopic images. Further efforts have developed an integrated electron microscope system that is combined with a light microscope. This organized session aims to highlight recent advancements in electron microscopic technologies that are combined with light microscopy.

[Invited speakers]

1. Paul Matsudaira (National University of Singapore)
 2. Takaaki Kanemaru (Kyushu University)
 3. Chikara Sato (National Institute of Advanced Industrial Science and Technology)
 4. Hirohide Iwasaki (The University of Tokyo)
 5. Jiro Usukura (Nagoya University)
- and speaker(s) selected from abstracts

S-3

[Theme] Recent advances in optics and their applications for biological imaging

[Organizers] Masaru Ishii (Osaka University)
Michiyuki Matsuda (Kyoto University)

[Synopsis] During the last decade, multi-photon microscopy has launched a new era in the field of biological imaging. The near-infrared excitation laser for multi-photon microscopy can penetrate thicker specimens, enabling the visualization of living cell behaviors deep within tissues and organs without thin sectioning. Further, the minimized photo-bleaching and toxicity contributes to the visualization of live and intact specimens for extended observation periods. In this presentation, the leading researchers using this novel technology will present their latest results for visualizing and analyzing the cellular dynamics in various kinds of biological systems such as immune and cardiovascular systems and cancer biology.

[Invited speakers]

1. Takeshi Imamura (Ehime University)
 2. Satoshi Nishimura (The University of Tokyo)
 3. Kenji Kabashima (Kyoto University)
 4. Shigetomo Fukuhara (National Cerebral and Cardiovascular Center)
 5. Tomoya Katakai (Kansai Medical University)
- and speaker(s) selected from abstracts

S-4

[Theme] Methods for imaging, analysis and synthesis of dynamic biological systems

[Organizers] Takeharu Nagai (Osaka University)
Masahiro Ueda (Osaka University)
Yasushi Okada (RIKEN)

[Synopsis] Cells, the basic unit of life, are a complicated system including a large number of integrated various elements. However, the compartments for biological reactions, such as synapses, lipid rafts and focal adhesions, are tremendously small (< 1 fL) containing a countable number of biomolecules. How these reaction compartments combine to generate functional cellular systems, and how cells then combine in robust but adaptable ways to form multicellular systems, is a long-standing problem in biology. To elucidate this, it will be essential to measure the number, dynamics and reactions of biomolecules with microscopy. Moreover, it is also important to process the image data

appropriately, and extract the valuable information, to model these biological systems to further our understanding. In this symposium, three consecutive sessions will be organized to comprehensively discuss how to approach dynamic biological systems.

[Invited speakers]

Methods for detection and imaging

1. Hiroyuki Noji (The University of Tokyo)
2. Takayuki Nishizaka (Gakushuin University)
3. Katsumasa Fujita (Osaka University)
4. Tomonobu Watanabe (RIKEN)
5. Tsutomu Masujima (RIKEN)

Development and application of probes

1. Takashi Jin (RIKEN)
2. Takeharu Nagai (Osaka University)
3. Susumu Mizukami (Osaka University)
4. Akihiko Ishijima (Tohoku University)
5. Kazuhiro Maeshima (National Institute of Genetics)
6. Yasushi Okada (RIKEN)

System analysis after image acquisition

1. Shuichi Onami (RIKEN)
2. Tamiki Komatsuzaki (Hokkaido University)
3. Yuichi Taniguchi (RIKEN))
4. Masahiro Ueda (Osaka University)
5. Hiroki Ueda (RIKEN)
6. Koichi Takahashi (RIKEN)

--- Invited speakers only

S-5

[Theme] Technology of super-resolution microscopy and its application in biology

[Organizers] Sigeo Okabe (The University of Tokyo)
Shohei Yamashina (IIRS)

[Synopsis] Several different principles of super-resolution microscopy have been proposed and these principles have been applied to the resolution of nanoscale structures in biological samples. In this symposium, researchers developing super-resolution microscopy and applying this technique to the understanding of

biological phenomena will present their data and discuss the future direction of this rapidly growing field.

[Invited speakers]

1. Tomomi Nemoto (Hokkaido University)
2. Makio Tokunaga (Tokyo Institute of Technology)
3. Hideaki Mizuno (Katholieke Universiteit Leuven)
4. Valentin Nägerl (CNRS / Université Bordeaux Segalen)
5. Shigeo Okabe (The University of Tokyo)

--- Invited speakers only

S-6

[Theme] How will breakthroughs in material science advance the forefront of imaging techniques?

[Organizers] Hidehiro Yasuda (Osaka University)
Shunsuke Muto (Nagoya University)
Seiichi Watanabe (Hokkaido University)

[Synopsis] The scope of this symposium will focus on the advantages of imaging techniques by electron, X-ray, laser, neutron, atom, ion, and probes. How will breakthroughs in material science advance the forefront of imaging techniques? This will be discussed from an interdisciplinary point of view.

[Invited speakers]

- A. Hishikawa (Nagoya University)
Y. Takahashi (Osaka University)
T. Shinohara (Japan Atomic Energy Agency)
O. Kamimura (Hitachi, Ltd.)

Presentation: Invited and contributed talks

S-7 (English session)

[Theme] Meso-scale microscopy

[Organizers] Y. Sakamoto (Osaka Prefecture University)

[Synopsis] Meso-scale materials, which are between micro- and macro-scale, show unique physical, chemical and/or structural properties. Typical examples are the phase separation of block-polymers in soft matter systems and

well-ordered porous materials resulting from self-assembled surfactant micelles with silica oligomers. This symposium will focus on the meso-scale characterization of such unique materials.

[Invited speakers]

- Takeshi Fujita (Tohoku University)
Hiroshi Jinnai (Kyushu University)
Kazuya Kobiro (Kochi University of Technology)
Shunsuke Asahina (JEOL Ltd.)
Daliang Zhang (Jilin University, China)
Isabel Diaz (CSIC, Spain)

Presentation: Invited and contributed talks

Tutorial Sessions

T-1

[Theme] Methodology of structural analysis and interpretation by three-dimensional electron microscopy

[Planning] Division of Biostructural Analysis

[Organizers] Atuso Miyazawa (Hyogo Prefecture University)
Takuo Yasunaga (Kyushu Institute of Technology)

[Synopsis] Recently, biostructural research with electron microscopy has required 3D structural analysis such as electron computed tomography and single particle analysis, as well as visualization and interpretation of computed 3D maps. However, 3D maps have some artifacts caused by defocus, aberrations, and missing information. In addition, electron damage and low contrast can vary the spatial resolution of the maps by 0.1–10 nanometers. These artifacts can make the data difficult to interpret.

In this tutorial, we will focus on methodologies to improve data analysis, visualization, and interpretation, such as three-dimensional reconstruction and segmentation. We will discuss their principles, evaluation and attentions by professionals.

Detailed lectures will discuss the use and evaluation of applications with the following functions: 3D structural analysis, 3D visualization, segmentation, modeling, and data conversion.

[Speakers]

Unfixed

Presentation: Invited speakers only.

T-2

Tutorial (I): Basic principles, microscope operation, specimen observation and taking photographs, and treatment of digital images for light and electron microscopy

Tutorial (II): Methods for searching for cellular structures in living tissue

[Organizers] Shuji Yamashita (Keio University)

Sumio Nishikawa (Tsurumi University)

[Synopsis] These tutorial sessions have been held during the Annual Meeting of the Japanese Society of Microscopy for the last 7 years to introduce basic and new technologies for electron microscopy for biological researchers, engineers, technicians, candidates for the examination of electron microscope technologies (class 1 and 2) certified by The Japanese Society of Microscopy, and students who are currently using or would like to use electron microscopy. One of the most important aims of these sessions is to provide an opportunity for participants to communicate and to resolve their practical questions and problems.

In Tutorial (I), the following lectures will be given to discuss the basic principles and techniques in light and electron microscopy: light microscopy (bright-field and phase contrast microscopy); transmission electron microscopy (TEM); scanning electron microscopy (SEM); and how to properly record and treat digital images obtained from TEM. In Tutorial (II), recent technologies for searching for fine structures in living cells will be introduced: in vivo cryotechniques (mammalian tissues); rapid freezing, freeze substitution and deep-etching method (mammalian tissues); phase contrast TEM (plant tissues); atmospheric SEM (mammalian tissues).

[Speakers]

Tutorial (I)

Kunio Toshimitsu (Nikon)

Hideo Nishioka (JEOL)

Ryuichiro Tamochi (Hitachi High-Technologies)

Tom Kouki (Jichi Medical University)

Tutorial (II)

Shinichi Ohno (Yamanashi University)

Nobuhiro Morone (Kyoto University)

Yasuko Kaneko (Saitama University)

Chikara Sato (National Institute of Advanced Industrial Science and Technology)

T-3

[Theme] Latest technology of observation and analysis using SEM

[Planning] Scanning Electron Microscopy Subcommittee

[Organizers] Sachiko Inazato (Panasonic)

Hirohide Otake (Asahi Kasei Chemicals)

[Synopsis] The mission of the SEM subcommittee is to study the latest SEM technologies. These not only include sample preparation techniques but also optimizing the observation methods for the sample. SEM can image sample surfaces at low magnification and inner structures at high magnification. SEM is a useful tool not only in research and development but also for quality control in various fields. Because of this, the evolution of SEM technology has been advancing remarkably in recent years.

For the 69th annual meeting of Japanese Society of Microscopy, the theme of this tutorial is "Latest technologies of observation and analysis using SEM". First we will introduce the history of SEM to understand the background of SEM technology. Then we will discuss new developments that are improving the resolution at ultra-low voltage and new detection systems to obtain different information signals from the sample. In addition we will introduce peripheral technologies such as 3D reconstruction using SEM, observation techniques for biomedical specimens and soft materials using cryo-techniques and high-sensitivity analysis using X-rays and SDD.

Our target is to promote the relationship between users and members of sub-committee by sharing and discussing information about SEM

technology.

[Speakers]

1. History of SEM

Ryuichiro Tamochi (Hitachi High-Technologies)

2. Application using a very low acceleration voltage

Shunya Watanabe (Hitachi High-Technologies)

TBA (JEOL)

• Undecided

3. Current state of the observation form using FIB-SEM (Atmosphere blocking, Cryo)

Keisuke Ohta (Kurume University)

Miki Tsuchiya (Hitachi High-Technologies)

Kaoru Murata (FEI)

4. Current state of the analysis using SEM (X-ray analysis, CL, EBSD etc.)

Hirobumi Morita (Oxford-instrument Compan)

Hideyuki Takahashi (JEOL)

T-4

[Theme] Principles and applications of electron holography

[Planning] Tonomura FIRST Project

[Organizers] Nobuyuki Osakabe (Hitachi, Ltd.)

Daisuke Shindo (Tohoku University and RIKEN)

[Synopsis] The aim of Tonomura FIRST project is to develop a “holography electron microscope” capable of observing quantum phenomena in the macroscopic world. Utilizing the information on atoms and molecules, not only will it contribute to the progress of cutting-edge advancements in materials science, life science and environmental technologies, it will also contribute to the development of the fundamental science by opening up a new field in the quantum world. Understanding all things begins from seeing and observing. The electron microscope has made it possible for humankind to observe microscopic worlds, and each time a new instrument is developed our understanding of nature, technologies and industries progresses. Now, development of a holography electron microscope having the world’s highest resolution is underway.

First, this tutorial will cover the principles

and applications of electron holography, which is presented by professors and researchers who are at the forefront of research. Second, experts and engineers, directly engaged in the development of a holography electron microscope (FEI, JEOL, Hitachi), will introduce the latest development status. In this tutorial we aim at further progress of electron holography and expanding activities of its community especially among young scientists and engineers.

[Speakers]

(Introduction to Tonomura FIRST Project)

Nobuyuki Osakabe (Hitachi, Ltd.)

(Introduction to electron holography)

Daisuke Shindo (Tohoku University, RIKEN)

(Basics of electron holography phase imaging)

Toshiaki Tanigaki (RIKEN)

(Magnetic fields visualized in electron holography)

Hyun Soon Park (RIKEN)

(Electrostatic potential observed in electron holography)

Tsukasa Hirayama (JFCC)

(Development of holography electron microscope)

TBA (FEI)

(Development of holography electron microscope)

Yukihito Kondo (JEOL)

(Development of holography electron microscope)

Hiroyuki Shinada (Hitachi, Ltd.)

[Presentation] Invited speakers only

Kanmuri Workshop (OT)

OT-1

The Kazato Prize Lecture Meeting

Public Interest Incorporated Foundation, Kazato Research Foundation

[Synopsis] The winners of the Kazato Prize (one of the research grant programs of the Foundation) will give lectures about their research.

The Kazato Prize is awarded to researchers up to 45 years in age, who have produced excellent scientific achievements in the fields of 1) research and development of electron microscopes and

related instruments and 2) research using these instruments in medicine, biology, physics, chemistry, materials science, nanotechnology, and others.

Two special lectures will also be given. One is from the Ministry of Education, Culture, Sports, Science and Technology (MEXT) on the science and technology policies of the government. The other is a keynote lecture on a special scientific topic by an established scientist.

The Foundation has been holding these lectures since the 2007 fiscal year to broadly publicize the grant activities of the Foundation. The keynote lecturer and the Kazato Prize lecturers will deliver easy-to-understand lectures for the audience.

We sincerely hope that many people, ranging from members of the Japanese Society of Microscopy to the general public, will participate at the meeting and enjoy the lectures.

[Scheduled lecturers]

Special lecturers: 2, 6th (FY 2012) Kazato Prize winners: 2

(The lecturers and lecture titles will be determined in Feb. 2013)

Workshop (WS)

Please inform the logistics support of the 69th Annual Meeting of the JSM (E-mail: 69jasm@academicbrains.jp), if you would like to hold a workshop.

Luncheon Seminar (L)

Luncheon seminars will be held at 12:00 on May 20th (Mon) and 22nd (Wed). Please inform the logistics support of the 69th Annual Meeting of the JSM (E-mail: 69jasm@academicbrains.jp), if you would like to hold one.

5. Application for Lectures

Applications for lectures are accepted through your direct login to the Annual Meeting portal site (<http://www.microscopy.or.jp/conf2013/>). The abstract submission procedures are described in Sec. 6. The official language is Japanese, but English abstracts and presentations will also be accepted.

(1) Qualification for application and number of lectures

Applications for lectures are accepted at any time regardless of the number and membership is not required to apply.

The symposium sessions mostly consist of invited talks only, but contributed talks are also available. For more details, please see the page for symposium sessions.

Applications for membership are accepted at any time. If you are non-member, please refer to the Homepage of the Japanese Society of Microscopy.

(2) Abstract submission period

January 15 (Tue) – February 12 (Tue), 2013

(3) Presentation style

Contributed talks are either oral or poster presentations, however lectures at the symposium are oral presentations only.

Oral presentations: One projector is available in each room.

Poster Sessions: Specifications for poster board: 210 cm vertically × 100 cm horizontally

Specifications for exhibitions: 170 cm vertically × 100 cm horizontally

(4) Notification of abstract acceptance

After the decision of the Program Committee, all the presentation titles will be indicated on the conference homepage.

(5) Instructions for presentation sessions and presentation style

Regarding presentation sessions (general and symposium sessions) and their style (Oral/Poster), the Committee will meet applicants' requirements as much as possible. However, in case of not meeting requirements, we hope you will understand the situation.

(6) Presentation time

1. Oral presentations at the general sessions: 15 min including discussion

2. Poster presentation: Please display posters throughout the meeting period.

3. Oral presentations at the symposiums: Will be determined by the organizers of relevant sessions.

(7) Outstanding Poster Award (available for members only)

Will be chosen by the Selection Committee during the meeting.

Outstanding Poster Award will be given at the banquet.

6. Abstract Submission

Please submit abstracts via the Annual Meeting portal site (<http://www.microscopy.or.jp/conf2013>). Three types of abstracts [text only, text & figure/table (large), and text & figure/table (small)] can be submitted.

[Page limitation]

Title: less than 80 characters (not 80 words)

Authors: less than 15 people

Affiliations: less than 15 institutions

Text only: less than 1800 characters

Text & Figure/Table (Small): less than 1200 characters & Figure/Table

Text & Figure/Table (Large): less than 1000 characters & Figure/Table

[Figure/Table]

JPEG or GIF

If figures and tables are both used, please combine them together as a single image.

Please include the captions in the figures and tables.

Color figures are acceptable.

Maximum size of the figure is 600 pixels (vertically) × 500 pixels (horizontally).

[Font]

Please follow the instructions on the website regarding italics, bold-face font, superscript, subscript, etc.

[Browser]

The following browsers are recommended:

Internet Explorer after Ver. 7.0

Chrome after Ver. 4.0

Safari after Ver. 3.0

Firefox after Ver. 3.0

7. Photography Competition

Your participation in our Photography Competition is encouraged! Please submit your applications online only. The winning entries may be published by the Japanese Society of Microscopy (JSM) for non-profit.

(1) Criteria for photographs

Advanced microscope photographs from scientific and technical standpoints, as well as artistic or unique microscope photographs are invited. Any form of microscope photographs are eligible as long as they are based on microscopy. A combination of a variety of techniques is also acceptable.

However, the following photographs are not eligible:

- Award-winning photographs from other photography competitions
- Award-winning photographs from other associations
- Photographs that have appeared in any academic journal

(2) Applicant eligibility

Registered participants of the 69th Annual Meeting of the JSM (membership is not required.).

(3) Application period

January 15 (Tue) - February 12 (Tue), 2013, 5pm (JST).

(4) Announcement of Awards

Winning entries will appear in the Proceedings and will be exhibited during the Meeting.

(5) Prize for participation

All participants will get a prize for participation.

(6) Selection of excellent photographs

Winners will be selected by a public vote by participants based on a broad set of criteria — such as quality, scientific and technical values, and artistic character — and other comprehensive qualities. Awards for excellent photographs of the 69th Annual Meeting will be presented at the social gathering. Names of the winners will appear on the homepage of the JSM website.

(7) Application method

Please submit your entry online through the application page of Photography Competition on the website for the 69th Annual Meeting of the JSM:

- Please submit photographs along with their titles, names of authors and affiliations, the subjects photographed and their conditions. Each should have a caption of no more than 300 characters explaining the value of the photograph in terms of science, technique, and artistry. Photographs without captions may be rejected.
- The maximum size of each image is 600 pixels vertically × 500 pixels horizontally. Please submit photographs online in the same format as they will be exhibited at the competition venue. If a discrepancy is found between submitted photographs and exhibited ones, applicants may be disqualified.

- Please ensure that the title, name of author and affiliation matches the data submitted on the website.
- Colors charts and photographs are acceptable.
- If submitting more than one photograph, please repeat the submission process for each photograph.
- Character limits

Title: less than 80 characters (not 80 words)

Author: less than 15 people

Affiliation: less than 15 institutions

Caption: less than 300 characters

Image acquisition conditions: less than 100 characters

8. Registration

Please register via the following conference website.

<http://www.microscopy.or.jp/conf2013/>

Registration period:

Early registration: until April 12 (Fri), 2013

Regular registration: April 13 (Sat) – April 26 (Fri), 2013

After April 26 (Fri), 2013, registration will only be accepted at the venue.

Method of payment: Either credit card or postal transfer

If you have selected credit card payment at the time of application, the payment can be settled automatically once your registration is completed.

Please note that all the input data cannot be changed if you have selected credit card payment.

Please note that the statement of description on the credit card statement will be "IAP CONFERENCE SERVICE".

If credit card payment is not available, please select postal transfer and write "desire to pay at the venue on the day of entry" in the remarks column.

Participation Fees

		Early registration until April 12, 2013	Regular registration April 13 – April 26, 2013
Member		¥9,000	¥10,000
Support	Biophysical Society of Japan	¥9,000 ¹	¥10,000 ¹
Non-member		¥14,000 ¹	¥15,000 ¹
Student	Japanese Society of Microscopy	¥2,000	¥5,000
	Non-member Student	¥8,000 ²	¥9,000 ²

Banquet

		Early registration until April 12, 2013	Regular registration April 13 – April 26, 2013
Member		¥7,000	¥8,000
Support	Biophysical Society of Japan	¥7,000 ¹	¥8,000 ¹
Non-member		¥8,000 ¹	¥9,000 ¹
Student	Japanese Society of Microscopy	¥3,000 ²	¥4,000 ²
	Non-member Student	¥4,000 ²	¥4,000 ²

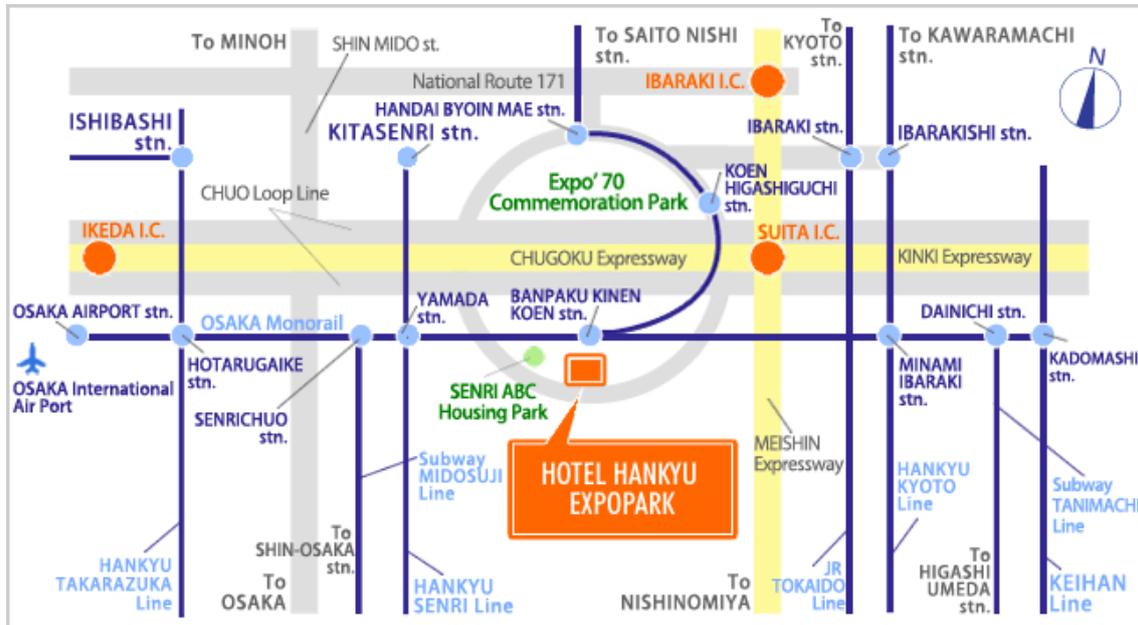
¹ No participation fee is required for the invited speakers, even if they are not JSM members.

² Please present your student identification card (photo ID) or its copy at the reception if you are a student.

*Proceedings by subscription shall be given at the venue of the Conference.

9. Day-care room

We plan to have a day-care room at the conference site.



From Umeda and Shin-Osaka Stations

Take the Midosuji subway line to the Senri Chuo Station and change to the Osaka Monorail bound for Kadoma-shi or Saito-nishi. Alight at Banpaku Kinen Koen Station and walk for five minutes to Hotel Hankyu Expopark.

From Osaka International Airport

Take the Osaka Monorail and alight at Bampaku Kinen Koen Station. Walk five minutes to Hotel Hankyu Expopark.

From Kyoto Station

-Take the JR Tokaido Honsen line and alight at Ibaraki Station. Hotel Hanku Expopark is 10 minutes by bus or taxi.

-Take the Hankyu Kyoto Line and transfer to the Osaka Monorail bound for Osaka International Airport. Alight at Banpaku Kinen Koen Station and walk five minutes to Hotel Hankyu Expopark.

From Kansai International Airport

-Take the Mankai Line to Namba Station and change to the Midosuji subway line to Senri Chuo Station. Then change to the Osaka Monorail bound for Kadoma-shi or Saito-nishi. Alight at Banpaku Kinen Koen Station and walk five minutes to reach Hotel Hankyu Expopark.

-Take the bus to Itami Airport/Osaka Airport, and then change to the Osaka Monorail bound for Kadoma-shi or Saito-nishi. Alight at Banpaku Kinen Koen Station and walk five minutes to Hotel Hankyu Expopark.

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Instruments & Methods

Y. Yakai

Biomedical Science

K. Namba (Osaka University)

Materials Science

H. Yasuda (Osaka University)

Public Lecture for the Citizen

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(Instruments & Methods)

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