



# Final Call for Papers



SOCIETY FOR INFORMATION DISPLAY

## IDW '08 - The 15th International Display Workshops

December 3-5, 2008

Toki Messe Niigata Convention Center, Niigata, Japan

Sponsored by

The Institute of Image Information and Television Engineers

The Society for Information Display

The latest information is available on <http://www.idw.ne.jp/>

### IDW '08 FEATURES

*IDW '08 will integrate thirteen workshops in specialized fields playing important roles in information display activities. Each workshop will consist of invited and contributed papers for oral and poster presentations. Detailed discussions on each specialized R&D update will be provided. The workshops should be of interest not only to researchers and engineers, but also to those who manage companies and institutions in the display community.*

#### CONFERENCE SITE

Toki Messe Niigata Convention Center is located at the mouth of the Shinano River near JR Niigata Station (20 minutes on foot, 10 minutes by bus or 5 minutes by taxi). Niigata is located in the center of the Japanese Islands and 250 km north of Tokyo.

Niigata City can be easily accessed from Tokyo by the JR Joetsu Shinkansen (100 minutes), which arrives approximately every 30 minutes.

There are direct flights from New Chitose Airport (75 minutes), Central Japan International Airport (Centrair) (60 minutes), and Osaka Airport (60 minutes) to Niigata Airport. Niigata Airport is also an international gateway with regular flights from Incheon, Shanghai, Xi'an and other international cities. It takes 25 minutes by bus from Niigata Airport to JR Niigata Station.

For more information please refer to the following websites:

Toki Messe Niigata Convention Center: <http://www.tokimesse.com/english/>  
Niigata Visitors and Convention Bureau: <http://www.nvcb.or.jp/en/>

#### Keynote Address

##### • The Rise of "Eco" Televisions: Opportunity or Challenge?

Theo J.M. Schoenmakers (Philips)

##### • QoE Based IPTV Services

Jay Kishigami (NTT)

The titles are tentative.

#### Invited Address

##### • Learning from Monet: Renown Artists and Display Design

Charles M. Falco (Univ. of Arizona)

The title is tentative.  
An additional talk is being arranged.

#### DEADLINES AND KEY DATES

Submission of Technical Summary ----- June 27, 2008

Acceptance Notification/Author's Kit available on the website

----- July 24, 2008

Submission of Camera-ready Manuscript & Abstract

----- September 10, 2008

Submission of Late-News Paper ----- September 26, 2008

Advance Registration ----- November 21, 2008

#### LANGUAGE

The official language is English.

#### REGISTRATION FEES

	by Nov. 7	after Nov. 7
Member of SID/ITE/ASO*	¥ 30,000	¥ 40,000
Non-member	¥ 40,000	¥ 50,000
Student	¥ 8,000	¥ 10,000
Life member of SID/ITE	¥ 8,000	¥ 10,000

\*Academic supporting organizations

#### EXHIBITION

The IDW '08 Exhibition, which will be held from December 3 through December 5, covers materials, components, manufacturing and measuring equipment, software systems and other related products for display devices. Please join-in and enjoy discussions at exhibitor's booths.

Contact the IDW '08 Secretariat for detailed information.

#### IDW '08 CHAIRS

General Chair  
Y. Shimodaira (Shizuoka Univ.)  
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Program Chair  
A. Mikami (Kanazawa Inst. of Tech.)  
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The Advance Program will be available in September 2008, including REGISTRATION and HOTEL INFORMATION.

# WORKSHOP OUTLINES

**LCT**

## Workshop on LC Science and Technologies

*Workshop Chair: H. Fujikake (NHK)*

This workshop will cover all aspects of liquid crystal (LC) science and technologies, ranging from fundamental material research to display and other applications. An in-depth discussion on advanced LC displays will be emphasized.

### *Topic Areas*

- 1) LC materials science (physicochemical, nano-structural and thermal studies)
- 2) Surface alignment and characterization techniques
- 3) Electro-optic effect, display mode, optical design and simulations
- 4) Processing, manufacturing, measuring and evaluation techniques
- 5) High performance display featuring excellent image quality
- 6) Flexible display and electronic paper applications
- 7) Functional devices for other various applications
- 8) LC semiconductor and organic electronics
- 9) LC photonic crystal and lasers

**AMD**

## Workshop on Active Matrix Displays

*Workshop Chair: M. Kimura (Ryukoku Univ.)*

This workshop will cover all aspects of active matrix displays.

### *Topic Areas*

- 1) Fundamental principles, new materials, device structures, fabrication processes, design technologies, evaluation methods, addressing schemes, driving circuits, video electronics, monitor controllers, signal interfaces, display technologies, novel applications, etc.
- 2) Active devices for active matrix displays: amorphous-Si TFTs, poly-Si TFTs, microcrystalline-Si TFTs, oxide-semiconductor TFTs, compound-semiconductor TFTs, organic TFTs, etc.
- 3) Display devices for active matrix displays: LCDs, OLEDs, electronic papers, FEDs, microdisplays, etc.

**FMC**

## Workshop on FPD Manufacturing, Materials and Components

*Workshop Chair: Y. Ukai (Sony)*

This workshop will cover technology trends and flat panel displays (FPDs) from the perspective of manufacturing, materials, components and systems.

### *Topic Areas*

- 1) Trends in FPD materials, components and systems
- 2) Technical trends in panel construction
- 3) Optical materials and systems
- 4) Color filter materials
- 5) Lighting materials, components and systems
- 6) Materials for processes
- 7) Equipment for processes and measurements
- 8) Ecology, 3R (Recycle, Reduce and Reuse)

**PDP**

## Workshop on Plasma Displays

*Workshop Chair: K. Nunomura (Pioneer)*

This workshop will cover all aspects of science, technologies and applications of plasma display panels.

### *Topic Areas*

- 1) Fundamental mechanisms
- 2) Panel configurations
- 3) Materials, components and fabrication processes
- 4) Driving techniques, signal processing and image quality

**PH**

## Workshop on EL Displays and Phosphors

*Workshop Chair: Y. Nakanishi (Shizuoka Univ.)*

This workshop will include a discussion on current topics in EL displays (ELDs), LEDs and phosphors, and will also deal with phosphor application, phosphor screens for CRTs, plasma displays (PDPs), field emission displays (FEDs) and other emissive displays.

### *Topic Areas*

- 1) Inorganic ELDs (materials, process, devices, drive circuits, etc.)
- 2) LEDs (materials, devices, panels, lighting, etc.)
- 3) Phosphors (for CRTs, PDPs, FEDs, VFDs, LEDs, etc.)

**FED**

## Workshop on Field Emission Display and CRT

*Workshop Chair: M. Takai (Osaka Univ.)*

The following topics will be covered in this workshop.

### *Topic Areas*

- 1) Fundamental mechanisms and configurations
- 2) Modeling and simulation
- 3) Materials, components and fabrication processes
- 4) Field emission physics and characteristics
- 5) Driving technologies and signal processing
- 6) Picture quality, reliability and lifetime
- 7) Applications
- 8) Miscellaneous topics related with field emitters
- 9) Entire field of CRT

**OLED****Workshop on  
Organic LED Displays***Workshop Chair: T. Inoue (TDK)*

This workshop will cover all aspects of science and technologies of organic LED displays, ranging from materials research and basic device physics to display and other applications.

**Topic Areas**

- 1) Material (Dyes and Polymers) for organic LED displays
- 2) Problems related with electrodes and interfaces
- 3) Device physics and efficiency
- 4) Display applications
- 5) Fabrication processes
- 6) Active and passive matrix circuits and systems
- 7) Reliability and lifetime
- 8) Miscellaneous topics related with organic LED displays
- 9) Fundamental mechanisms and configurations of organic LEDs and organic TFTs
- 10) Organic TFTs for organic LED displays
- 11) Light-emitting transistors
- 12) Organic LED for lightings

**3D****Workshop on  
3D/Hyper-Realistic Displays  
and Systems***Workshop Chair: I. Yuyama (Utsunomiya Univ.)*

This workshop will cover several current topics encompassing 3D/hyper-realistic displays, systems and other related technologies.

**Topic Areas**

- 1) Stereoscopic, holographic and other 3D display technologies and systems
- 2) Immersive, interactive and VR display technologies and systems
- 3) New applications using 3D/hyper-realistic displays
- 4) 3D image coding, 2D to 3D conversion, multi-viewpoint representation and other 3D/hyper-realistic image processing
- 5) Human factor and evaluation of 3D/hyper-realistic display techniques and systems

**VHF****Workshop on Applied  
Vision and Human Factors***Workshop Chair: H. Isono (Nippon Inst. of Tech.)*

This workshop will cover all aspects of vision, human factors and image quality related with displays, such as the followings.

**Topic Areas**

- 1) Display image quality: models, metrics and evaluation methods
- 2) Characteristic display requirements regarding image quality: luminance, contrast, gray-scale, color, resolution, sharpness, viewing angle, etc.
- 3) Spatio-temporal image artifacts on displays and their improvements
- 4) Display measurements relevant to human factors
- 5) Display ergonomics and their standards
- 6) Legibility and usability issues for text displays or electronic papers
- 7) Actions and behaviors that are consequences of visually displayed information
- 8) Visual quality and optometric factors in virtual displays

**LAD****Workshop on Projection and  
Large-Area Displays,  
and Their Components***Workshop Chair: Z. Tajima (Mobara Atecs)*

This workshop will cover current topics in projection and large-area displays, and their components.

**Topic Areas**

- 1) Projector, embedded Projector and projection TV using microdisplays
- 2) Microdisplay technology for projection
- 3) Optics and video signal processing for projection
- 4) Optical components (light source, illumination, screen, lenses, etc.) for projection
- 5) Algorithm and image processing for large screen displays
- 6) Digital cinema
- 7) Large-area display systems

**EP****Workshop on  
Electronic Paper***Workshop Chair: M. Omodani (Tokai Univ.)*

This workshop will cover all aspects of electronic paper, rewritable paper, and paper-like display.

**Topic Areas**

- 1) Display methods for Electronic Paper
- 2) Materials, components, and fabrication processes
- 3) Driving techniques
- 4) Human-interface on Electronic Paper
- 5) Discussion on concepts of Electronic Paper
- 6) Electronic book and Electronic newspaper
- 7) Other applications of Electronic paper

**MEMS****Workshop on  
MEMS for Future Displays  
and Related Electron Devices***Workshop Chair: M. Nakamoto (Shizuoka Univ.)*

This workshop will cover all aspects of science and technologies of MEMS for future displays, imaging devices, and related electron devices, ranging from materials research and basic device physics to display and other applications.

**Topic Areas**

- 1) Displays, imaging devices and other optical and electron devices using MEMS (NEMS)
- 2) Optical MEMS such as optical scanners, optical switches, optical mirrors, optical space modulators, optical filters, etc.
- 3) Sensors and actuators for electromagnetic wave, infrared rays, ultraviolet rays, X-rays, visible rays, supersonic wave, hearing, touching, smell, taste, etc.
- 4) Materials, components and fabrication processes
- 5) Fundamental mechanisms and configurations
- 6) Miscellaneous topics related to MEMS displays

*Workshop Chair: H. Okumura (Toshiba)*

This workshop will cover all aspects of electronic systems including hardware as well as software on all kinds of displays.

### Topic Areas

- 1) Video processing including deinterlace, scaling, and elimination of artifacts and blur
- 2) High quality color reproduction including high dynamic range and wide color gamut
- 3) High-fidelity systems such as master monitors
- 4) Exploration of future standards such as post-HDTV
- 5) Video interface technologies including data transmission and storage
- 6) Novel display systems including mobile/auto applications
- 7) Cooperative operations of functional components
- 8) Circuit technologies including high speed and low power driving

### IDW Best Paper Award and IDW Outstanding Poster Paper Award

IDW will present "IDW Best Paper" and "IDW Outstanding Poster Paper" awards. The awards committee of IDW will select the most outstanding papers from those presented at IDW '08. The award winners will be announced on the IDW website and given a plaque after the conference.

### Invited Talks

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| <ul style="list-style-type: none"> <li>• <b>Liquid Crystal Alignment on Patterned Structure</b><br/>Masanori Ozaki (Osaka Univ.)</li> <li>• <b>Oxide TFT Backplane Technologies for AMOLED: Recent Development &amp; Technical Issues</b><br/>Yeon-Gon Mo (Samsung SDI)</li> <li>• <b>Power Reduction of LCTVs with an Adaptive Dimming Technique for Standard TV Programs</b><br/>Tomokazu Shiga (Univ. of Electro-Commun.)</li> <li>• <b>Ultra-Large Area Film Display by Plasma Tube Array Technology</b><br/>Manabu Ishimoto (Shinoda Plasma)</li> <li>• <b>Recent Progress of Nitride Phosphors</b><br/>Hajime Yamamoto (Tokyo Univ. of Tech.)</li> <li>• <b>FED for Cars</b><br/>Shigeo Ito (Futaba)</li> <li>• <b>OLED Technologies for Future TV Application</b><br/>Takatoshi Tsujimura (Kodak Japan)</li> </ul> | <ul style="list-style-type: none"> <li>• <b>New Materials and New Device Structures for High Performance OLEDs</b><br/>Shwan Son (LG Chem)</li> <li>• <b>Perceived Depth and Size of Real Object and the 2D Image</b><br/>Hirohiko Kaneko (Tokyo Inst. of Tech.)</li> <li>• <b>Measurement Standard for Flat Panel Displays</b><br/>Joe Miseli (Sun Microsystems)</li> <li>• <b>Super-Slim Laser TV with Newly Developed Laser Light Sources</b><br/>Hiroaki Sugiura (Mitsubishi Electric)</li> <li>• <b>Electrowetting-Based Displays for Portable Multi-Media Devices</b><br/>Johan Feenstra (Liquavista)</li> <li>• <b>Recent Molecular Nano Device Progress</b><br/>Iwao Ohdomari (Waseda Univ.)</li> <li>• <b>The Dynamic Resolution of Video Display Systems</b><br/>Michiel A. Klompenhouwer (Philips Res. Labs.)</li> </ul> |
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The titles are tentative.  
Additional invited talks are being arranged.

### IDW '08 OVERSEAS ADVISORS

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# PAPER SUBMISSION

## INSTRUCTIONS FOR SUBMISSION OF TECHNICAL SUMMARY

Submit a Technical Summary via the conference website;

<http://idw.ee.uec.ac.jp/authinfo.html>

in PDF or Microsoft Word.

Follow the submission instructions given on the website and shown below. If you have any difficulties with online submission, please send a Paper Application Form and a Technical Summary by June 27, 2008, to the IDW '08 Secretariat. The Paper Application Form is available on the conference website. The Technical Summary will be used only for the evaluation and will not be published.

### I. Technical Summary Guidelines

The file should be formatted as A4-sized pages. A sample file is available on the website.

One or two pages of text in **one column**, with additional pages for figures/tables/photographs. It should include the following items:

- (1) **Paper title**
- (2) **Names of all authors with their affiliations:** The name of the presenting author should be underlined.
- (3) **Abstract:** 50 words or less, highlighting the focus of your paper.
- (4) **Presentation style:** Indicate if you wish to have your paper considered for oral or poster presentation.
- (5) **Workshop:** Indicate the closest matching workshop.
- (6) **Body of the Technical Summary contains:**
  - (a) **Background and Objectives:** Introduce the state of the art of the subject and describe the goal of your work.
  - (b) **Results:** Describe specific results. Illustrations to highlight your work are encouraged.
  - (c) **Originality:** Clearly describe what are new and/or emphasized points.
  - (d) **Impact:** Discuss the significance of your work and compare your findings with previously published works.
  - (e) **References:** List references covering projects in related areas.
  - (f) **Prior Publications:** The paper must be an original contribution. If you have published or presented material on similar work, explain how the present material differs.

Follow guidelines on writing:

- (1) **Use standard English font sets** such as **Times New Roman**, **Times**, **Arial**, and **Helvetica** for your entire Technical Summary. In addition to these font sets, **Symbol**, **Wingdings**, and **ZapfDingbats** are strongly recommended for typing any math functions and Greek characters.
- (2) Place figures/tables/photographs **after the text** to prevent layout disorder when reviewing.
- (3) **A less than 1 MB** file size is recommended. Your network gateway may have a limitation on uploading file size.
- (4) Include the presenting author's name and title of the paper in the header line in each subsequent page.
- (5) Put the page number on the right side in the header line.

### II. Online Submission

Access <http://idw.ee.uec.ac.jp/authinfo.html>

The submission procedure consists of three steps:

- (1) **Questions to Authors:** Select the number of authors, affiliations, and maximum number of affiliations for one author.
- (2) **Paper Title & Author Information:** Input the paper title, names of all authors, all affiliations, and presenting author information. Please understand that the title may be edited by the program committee.  
**An acceptance notification will be sent to you via the e-mail address which you indicated on the web.**
- (3) **Confirmation & Submission:** Please take time to review the paper title and the author information carefully as mistakes cannot be rectified after upload.  
Select a file type and a file name of the Technical Summary to submit to our server. When the file is successfully uploaded, a "FINISH" message will appear on the screen and you will also receive a submission confirmation e-mail.

## TRAVEL GRANTS

A limited number of travel grants will be available to full-time student presenters attending from outside Japan. Check the travel grant application box in step 1 of the online submission mentioned above.

## MAILING

IDW '08 Secretariat

c/o Bilingual Group Ltd.

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E-mail: [idw@bilingualgroup.co.jp](mailto:idw@bilingualgroup.co.jp)

## ACCEPTANCE

You will be notified of the results of your Technical Summary review via e-mail by July 24, 2008. Upon acceptance of the Technical Summary, authors must prepare a camera-ready manuscript to be published in the conference proceedings. The template of the manuscript will soon be available on the conference website. It will be four pages in length and in a two-column format. Acceptance is subject to three conditions: (1) the paper shall comply with IDW copyright rules; (2) the paper shall not have been presented prior to publication; (3) and the manuscript and application forms must be submitted by September 10, 2008.

## LATE-NEWS PAPERS

A limited number of late-news papers reflecting important new findings or developments may be accepted. Authors are requested to submit a 2-page camera-ready manuscript on A4-sized pages accompanied by an abstract no later than September 26, 2008. Access to the conference website: <http://idw.ee.uec.ac.jp/authinfo.html>

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If you have any difficulties with the online submission, please contact the IDW '08 Secretariat.



**IDW '08**



**The 15th International Display Workshops**

**December 3-5, 2008**

**Toki Messe Niigata Convention Center, Niigata, Japan**

Secretariat: c/o Bilingual Group Ltd.

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