Final Call for Papers

IDW '20 - The 27th International Display Workshops

December 9-11, 2020
Fukuoka International Congress Center, Fukuoka, Japan
Sponsored by
The Institute of Image Information and Television Engineers
The Society for Information Display
https://www.idw.or.jp/

FEATURES

IDW consists of workshops technically categorized into specialized fields playing important roles in information display technologies. This year one workshop will be held as a topical session. Each workshop organizes its own sessions which consist of oral presentations by invited/contributing speakers and poster presentations where detailed and fruitful discussions on each specialized R&D update are provided. Some workshops also come together to form the common sessions called "Special Topics of Interest." The workshops should be of interest to not only researchers and engineers, but also to those who manage companies and institutions in the information display community. The proceedings of IDW '20 will be provided on-site. In addition, a few months after the conference, the proceedings will be provided as an online open-access archive and each paper will be given a unique DOI (Digital Object Identifier).

CONFERENCE SITE

The city of Fukuoka is located in the northern part of Kyushu Island with a population of about 1.6 million, making it the 5th largest city in Japan. The city has been a gateway to Asia for economic and cultural exchanges with its Asian neighbors since ancient times.
Fukuoka Airport (FUK) is about an hour's flight from Kansai International Airport (KIX) and about 2 hours from both Tokyo International Airport (HND) and Narita International Airport (NRT) respectively.
From Fukuoka Airport, the JR Hakata Station, the central station of Fukuoka, is only 5 minutes by subway and is within 10 to 20 minutes of major accommodation and convention facilities. This is very convenient for visitors.
In the largest entertainment quarter in Kyushu, Nakasu, you can enjoy the fresh seafood, the Tonkotsu Ramen, Mizutaki, etc., and the Hakata specialty "Yatai".
The Fukuoka International Congress Center is located only 1.5 km from the center of Fukuoka city, Tenjin, and only about 2.5 km from JR Hakata station. This is an excellent advantage for the itineraries of conference-goers.

Please see the following websites for more information.
- Fukuoka Convention & Visitors Bureau:
  https://www.welcome-fukuoka.or.jp/english/
- Fukuoka International Congress Center:
  https://www.marinemesse.or.jp/eng/index.html

DEADLINES AND KEY DATES

Submission of Technical Summary ---------- ***August 20, 2020***
Acceptance Notification/Author's Kit Available on the Website
---------- ***September 16, 2020***
Presenter's Registration ---------- ***September 30, 2020***
Submission of Camera-Ready Manuscript --------- ***October 1, 2020***
Submission of Late-News Paper ---------- ***October 1, 2020***
Acceptance Notification of Late-News Paper ------ ***October 21, 2020***
Late-News Presenter's Registration ---------- ***October 30, 2020***

LANGUAGE

The official language is English.

Keynote Addresses

- ***The Evolution of Media Services with Diversifying Viewing Styles***
  ~Diverse Vision: the Future of Media~
  Koji Mitani (NHK)
- ***Toward "KANDO" Creation with Immersive Visual Expression***
  Kazumasa Nomoto (Sony)
- ***High Efficient GaN Based Micro LEDs for High Resolution Micro LED Displays***
  Steven Paul DenBaars (University of California, Santa Barbara)

The titles are tentative.

Special Topics of Interest

- ***AR/VR and Hyper Reality***
- ***Automotive Displays***
- ***Micro/Mini LEDs***
- ***Quantum Dot Technologies***

Paper submissions are eagerly recommended to these special topics.

Topical Session

- ***Artificial Intelligence and Smart Society***

REGISTRATION FEES

Note: The following rates are applicable to the conference held at the actual conference site.

	Until Oct. 30	On and after Oct. 31
Individual Member of ITE/SID/ASO*	¥45,000	¥55,000
Non-Member	¥55,000	¥65,000
Student	¥15,000	¥17,000
Life Member of ITE/SID	¥15,000	¥17,000

*ASO: Academic Supporting Organizations

The latest information is available on https://www.idw.or.jp/

PAPER SUBMISSION

INSTRUCTIONS FOR SUBMISSION OF TECHNICAL SUMMARY

Important: IDW '20 has changed the format of Technical Summary. The accepted Technical Summary can also be a Camera-Ready Manuscript for the conference proceedings. Please read the following instructions carefully.

Submit a Technical Summary in PDF format without any security options via the conference website:
https://www.idw.or.jp/authinfo.html
The authors must use the manuscript template, which is available on the conference website and follow the submission instructions given on the website and shown below. The Technical Summary will be used for review and can be a Camera-Ready Manuscript for the conference proceedings as it is, in the case that the paper is accepted. If necessary the manuscript can also be revised even after the acceptance notice. The title of the accepted papers, the authors and their affiliations, and the abstract will be published in the Final Program on the IDW web site.

I. Technical Summary Guidelines

The file must be formatted to A4-sized paper. Details of the format and guidelines are described in the template file available on the website (https://www.idw.or.jp/authinfo.html).
The maximum number of pages for the Camera-Ready Manuscript is four including text and figures/tables/photographs, and at least two pages must be completed. The following items must be included in the manuscript with (1) - (3) in one column and (4), (5) in two columns:

(1) Paper title
(2) Names of all authors with their affiliations: The name of the presenting author must be underlined. The corresponding author's e-mail address must also be given just below the authors' names.
(3) Keywords: Three to five keywords for the paper.
(4) Abstract: 35-50 words, highlighting the focus of your paper.
(5) The body of the Technical Summary: Include the following:
- (a) Introduction: Introduce the background and objectives, and describe the goal of your work.
- (b) Results: Describe specific results. Figures and tables to highlight your work should be included in this part.
- (c) Conclusion: Clearly describe the originality, novelty and impact of your work
- (d) References: List references cited in the manuscript.

II. Online Submission

Access **https://www.idw.or.jp/authinfo.html**
Please note that invited speakers will receive the submission guidelines from IDW by e-mail.
The submission procedure consists of two steps:

(1) Account registration: Please click on the link "Create an Account". You will first be requested to create your author account and register your information, including e-mail address. **An acceptance/reject notification will be sent to you via the registered e-mail address.**
(2) Submission: To start your submission, please log in to the created account and then click on the button "New Submission". Register all authors' names, affiliations, the Scope/Special Topics of Interest that mostly closely match your work, presentation preferences, the paper title and the abstract. Next, upload the Technical Summary as a PDF file. Please confirm carefully that the paper title and the author information are correct before submitting. The author information you register will be used in all the conference records: Final Programs, the index of Proceedings, and DOI data for the online proceedings, with no change. When the paper is successfully submitted, a "Your submission has been received" message will appear on the screen and you will also receive a submission confirmation e-mail.

FORMAT OF PRESENTATION

Accepted papers will be assigned for either oral or poster presentation in the most suitable session by the program committee.

(1) Oral presentations
- The time allocated to each oral presentation is usually 20 minutes including a question and answer period. Please check the program for the fixed time of each presentation.
- Oral presenters are strongly urged to attend the Author Interviews after the session (a table and power supply of AC 100 V 60 Hz are available).

(2) Poster presentations
- Poster presentations will be given in front of an individual poster on a board. A small table and power supply of AC 100 V 60 Hz are also available, with which authors can demonstrate small prototype devices or materials.
- "Short Presentation Sessions" will be held for a part of the poster sessions to introduce the posters and the presenters. The poster presenters in the sessions must give a brief (typically 3 minutes) oral-presentation with no discussion time.

ACCEPTANCE

The authors will be notified of the results of their Technical Summary review via e-mail. Upon acceptance of the paper, the authors must prepare a Camera-Ready Manuscript to be published in the conference proceedings. The authors can either use their Technical Summary without change or revise it if needed as a Camera-Ready Manuscript. Acceptance is subject to the following conditions:

(1) Registration of the presenter's participation in IDW '20 is required by September 30. Otherwise, the paper will be withdrawn.
(2) Each presentation requires a registration fee. Payment of registration fees must be completed by September 30.
(3) Contact the IDW secretariat if you intend to give more than one presentation.
(4) All the requisite company or governmental permission must be obtained.
(5) The registrant must be the copyright holder or have written permission from the copyright holder for any material used in the paper.
(6) The Camera-Ready Manuscript submitted to the conference proceedings must not be published in any media, including personal websites before it is presented at the conference.
(7) The maximum number of pages for the Camera-Ready Manuscript is four including text and figures/tables/photographs, and at least two pages must be completed.
(8) Note that acceptance may be withdrawn in the case of inferior Camera-Ready Manuscripts.
(9) One of the authors must give a presentation at the conference. For the poster session, at least one of the authors must present their posters during their session.

LATE-NEWS PAPERS

A limited number of late-news papers on very important new findings or developments will be accepted. Authors are requested to submit a 2-4 pages Camera-Ready Manuscript on A4-sized paper accompanied by an abstract. For the manuscript, at least two pages must be completed with text and figures/tables/photographs. Access the conference website (https://www.idw.or.jp/authinfo.html) and follow the submission instructions given there.

COPYRIGHT

The copyrights of your submitted camera-ready manuscript will be transferred to ITE and SID. The copyright terms and conditions are available on the conference website (https://www.idw.or.jp/copyright.pdf).

TRAVEL GRANTS

A limited number of travel grants will be available to full-time student presenters attending from outside Japan. Those who wish to apply for the student travel grant are requested to check the box for the student travel grant on the online application.

IDW SCOPE AND OUTLINES

International Display Workshops (IDW) includes a variety of topics and aspects of display technologies, systems, processes and applications. In particular, this year's IDW will feature the following four special topics and one topical session, which are extremely timely, as well as 16 general topics. The special topics are these recent hot topics: AR/VR and Hyper Reality, Automotive Displays, Quantum Dot Technologies, and Micro/Mini LEDs. The topical session is organized for new technology topics: Artificial Intelligence and Smart Society.
The IDW Scope includes a variety of topics of display materials and components, display devices, electronic systems, quality evaluation, interactive technologies, manufacturing processes and equipment, and applications listed below. We welcome the submission of original papers on all aspects of research, technical development, measurement systems, driving methods, data management and applications of information displays, and related technologies. We particularly encourage submissions on topics of emerging interest in the research and development communities.

SPECIAL TOPICS OF INTEREST

AR/VR and Hyper Reality

Organizing Workshops: LCT, FMC, 3D, VHF, PRJ, DES and INP

This topic will cover all aspects of technologies related to display applications closest to the end-user such as virtual reality, augmented reality (mixture of VR and the real world), and hyper reality (hyper-realistic systems). Regarding recent development of VR devices, authors of all accepted papers are highly encouraged to present their demo in the I-DEMO session.

Scopes

1) Hardware: sensors, circuits, and displays including light field camera, motion capture, holographic technology, and HMD/HUD
2) Software technique: image processing, computer vision, computer graphics, audio-visual processing, and human-computer interaction
3) Application: sensing analysis and AI, digital twin, systems for industry, mobility, medical, life, art and education
4) The human factor in AR, VR, and hyper-realistic systems

Micro/Mini LEDs

Organizing Workshops: LCT, AMD, FMC, PH and MEET

Micro/Mini LEDs have recently attracted keen attentions in their applications to information displays.
This topic will cover all aspects and issues of technologies for flat-panel displays with Micro/Mini LEDs implemented densely.

Scopes

1) Materials, devices, opto-electrical designs and manufacture of discrete Micro/Mini LEDs
2) Materials, devices, opto-electrical designs and manufacture of Micro LEDs monolithically implemented onto panels
3) Emissive Micro/Mini LED displays
4) Passive-matrix displays (PMDs) with a discrete Micro/Mini LED on each pixel
5) Active-matrix displays (AMDs)
6) LCDs with Mini LED backlighting
7) Assembly implementation of Mini LEDs directly beneath LCD cells
8) Optical designs for diffuse propagation of backlight emitted from Mini LED
9) Driving methods for local dimming by backlighting Mini LED arrays
10) Novel applications of Micro/Mini LED-based displays

Automotive Displays

Organizing Workshops: LCT, FMC, OLED, 3D, VHF, PRJ, DES and INP

The significance of visual interface has been increasing in automobiles. This topic will cover all aspects of display technologies used in or outside of automobiles, including the following scopes.

Scopes

1) OLED/LCD display and projection-display technologies for car interior use
2) Head-up displays, augmented reality, and intelligent cockpit for automobiles
3) Image and information processing for automotive displays
4) Materials/components/device structures suited to automobiles
5) Adaptive headlight system, and projection type signals for other road users
6) Vision and human factors for automobiles and other transport systems

Quantum Dot Technologies

Organizing Workshops: FMC, PH, OLED and MEET

This topic will cover all aspects of science and technologies of Quantum Dot (QD) and Quantum Rod (QR), ranging from materials research, device structure and properties, to device applications, manufacturing and high color gamut displays using QD/QR.

Scopes

1) Materials and properties for display or lighting
2) Novel Device structure and properties (QDCF, QLED, etc.)
3) New Device applications (Lighting, BLU, Display, etc.)
4) Device manufacturing processes (Inkjet, Roll to Roll, Photolithography, etc.)
5) High color gamut technology using QD/QR

TOPICAL SESSION

Artificial Intelligence and Smart Society

Recently, artificial intelligence becomes a common technology, and it will be a key concept of smart society in the future, which is called Industry 4.0 and Society 5.0, where the cloud and edge are excellently connected. In this scope, the relationship between information displays, artificial intelligence, and smart society will be discussed. Some respective researchers will be invited as invited speakers, and some contributions from researchers being interested in these topics are welcomed.

AWARDS

IDW Best Paper Award, IDW Outstanding Poster Paper Award and IDW Demonstration Award

The award committee of IDW will select the most outstanding papers and demonstrations from those presented at IDW '20. The winners will be announced on the IDW website.

SHORT PRESENTATION

The poster presenters in the e-Paper and the Projection and Large Area Displays sessions are required to make a short presentation.

EXHIBITION

The IDW '20 Exhibition covers display devices and all related matters. To make an exhibition, please contact the IDW '20 Secretariat.

TOPICS OF IDW SCOPE

3D/Hyper-Realistic Displays

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

Topic Areas

1) Stereoscopic, autostereoscopic, holographic, volumetric, head-mounted and other 3D/hyper-realistic display systems
2) Immersive, interactive and VR display technologies
3) 3D/hyper-realistic image interaction systems for Augmented Reality (AR)
4) Image capturing and information detection systems such as Multiple cameras, light-field camera, depth camera, 3D scanner, and others for 3D/hyper-reality and interaction
5) Human brain sensing technologies and systems for hyper reality and interaction
6) Multi-spectral imaging
7) New output devices or systems for 3D/hyper-reality and interaction
8) Algorithms for image coding, 2D to 3D conversion, multi-viewpoint representation and other image processing for 3D/hyper-realistic display systems
9) Digital archive systems for cultural heritages, medical images and others using 3D/hyper-realistic image systems
10) Human factor and evaluation of 3D/hyper-realistic display techniques and systems
11) Pictorial cue

Active-Matrix Displays

This topic will cover all aspects of active matrix displays.

Topic Areas

1) Active-matrix displays technology related to liquid crystals, organic/inorganic light-emitting diodes, electrophoresis, electrochromism, field emission, micro-electro mechanical systems
2) Active devices including oxide TFTs, organic TFTs, silicon-based TFTs, CNT-FETs, transition-metal dichalcogenide FETs, Dirac-cone based devices (graphene, silicene, BN, MoS_2, etc.) and solution-processed devices
3) Issues in high-resolution/large-area active matrix display and devices including array and circuit design technologies, addressing schemes, systems, fundamentals, device physics, structures, processes, new materials, evaluation methods, reliability and mechanical testing
4) Novel emerging active-matrix displays and devices
5) Innovative applications of active-matrix devices.

Display Electronic Systems

This topic will cover general issues for display electronic systems.

Topic Areas

1) Driving methods, circuits, and systems
2) Video and still image processing including deinterlacing, scaling and, elimination of artifacts and blur
3) High quality color reproduction systems including high dynamic range and wide color gamut systems
4) High-fidelity systems such as professional use and master monitors
5) Exploration of future standards such as post-HDTV
6) Video interface technologies including data transmission and storage
7) Novel display systems including mobile/auto applications
8) Cooperative operations of functional components
9) Circuit technologies including high speed and low power driving
10) High image quality display systems, wide color gamut, and color reproduction.
11) Image processing algorithm for super-resolution, coding

e-Paper

This topic will cover all aspects of electronic paper ranging from materials science and devices to human factors and various applications for the future.

Topic Areas

1) Advancement of various display technologies for e-Paper to enhance colors, brightness and contrast ratio
2) Novel functional materials and components
3) Driving method
4) Human interfaces suitable for e-Paper from paper-like displays to tablet PCs
5) Various applications of e-Paper such as e-Books, e-Document, and IoT
6) Discussion of the social impact of e-Paper
7) Evaluation method taking account of human factors

Emissive Technologies

This topic will cover all aspects of science, technologies, and applications of phosphor, such as phosphor screens for electronic displays, lighting source, and other emissive devices, and will also deal with those for FEDs, ELDs and PDPs.

Topic Areas

1) Fundamental mechanisms and configurations
2) Modeling and simulation
3) Materials, components and fabrication processes
4) Field emission physics and characteristics
5) Inorganic ELDs (materials, process, devices, drive circuits, etc.)
6) LED (materials, devices, panels, lighting, etc.)
7) Phosphors for CRTs, PDPs, FEDs, VFDs and LEDs
8) Driving technologies and signal processing particularly embedded to emissive devices.
9) Picture quality, reliability and lifetime
10) Applications of CRTs, PDPs, FEDs and ELDs

Flexible Electronics

This topic will cover all aspects of flexible/stretchable electronics, including material science, device physics, fabrication processes, and application systems for next-generation technology.

Topic Areas

1) Novel flexible/stretchable devices in display and non-display fields
2) Flexible/stretchable mechanism and strategy
3) Flexible/stretchable substrate innovation (plastic film, metal foil, ultra-thin glass sheet, textile, paper, etc.) and encapsulation
4) High-performance flexible/stretchable display principles
5) Fabrication methods especially for flexible/stretchable devices (printing techniques, roll-to-roll process, transfer techniques, etc.)
6) Tolerance evaluation for bending and stretching deformation
7) Revolutionary device applications (bendable, foldable, stretchable, roll-up screen, hanging, wearable, wrapping usages, etc.)

Human Factor

This topic will cover all aspects of vision and human factors related to information displays, such as visual ergonomics and requirements, image quality, display measurements, as well as new display applications and ergonomics.

Topic Areas

1) Visual requirements for display performance: luminance, contrast, grayscale, color, resolution, frame rate, viewing angle, etc.
2) Display image format for better visual experience, such as UHD TV
3) Analysis and improvement of image quality on displays, such as HDR, high-quality color reproduction, wide gamut, or moving image artifacts
4) Evaluation of image quality, such as subjective evaluation of new displays, or quality-improvement methods
5) Display measurement methods relevant to human factors
6) Ergonomics of new display applications, such as AR/VR systems, automotive visual systems, 3D displays, LED backlights, etc.
7) Visual ergonomics, such as visual fatigue, eye strain, legibility/usability, or actions/behaviors related to visually displayed information
8) Physiological/psychophysical factors and biometrics
9) Sensory/perceptual/visual illusions

Interactive Technologies

Touch panel technology continues to evolve. Camera systems are often employed in auto-stereoscopic displays. Sensing and displaying 3D positions in space literally open a new dimension for a truly intuitive human interface. This topic covers all aspects of input technologies related to displays, ranging from materials, devices, application systems to discussions on how we interact with various systems.

Topic Areas

1) Out-cell, On-cell and In-cell touch panels
2) Touch panel materials, devices, production processes and systems
3) Image sensors
4) Adaptive and personalized interfaces
5) Input systems for augmented reality
6) Human-computer interaction and other emerging interactive technologies

Liquid Crystal Science and Technologies

This topic will cover all aspects of liquid crystal (LC) science and technologies, including LC material science, device technology, fabrication processes, evaluation method, and new technologies for display, photonics, and sensing applications.

Topic Areas

1) Physicochemical studies of LC materials
2) Nano-structural LC alignment and devices including blue phase
3) Surface alignment processes and characterization techniques
4) Electro-optic effects, display modes, optical design and simulations
5) Fabricating, manufacturing, measuring and evaluation techniques
6) High performance displays featuring excellent image quality including 8K-LCD technologies
7) Wide color gamut LCDs using QD or other new technologies
8) LC technologies for flexible displays, sunlight readable displays and low power electronic papers
9) Optical functional devices for non-display applications including LC lens, sensor, smart window and beam steering
10) LC semiconductors and organic electronics
11) LC photonic crystals and lasers
12) LC technologies for 3D / holographic displays

Manufacturing, Process and Equipment

This topic will cover technology trends and aspects of electronic displays from the perspective of manufacturing and printing fabrication processes.

Topic Areas

1) Fabrication methods of displays
2) Manufacturing process: photolithography, coating and printing technologies, soft lithography, roll-to-roll process, and transfer techniques for high precision and large area
3) Measurement and evaluation equipments

Materials and Components

Displays are sustained by a wide spectrum of advanced materials and components. In this topic, new materials and components for display systems, modifications and improvements of the existing systems are treated.

Topic Areas

1) Novel materials and components technologies in automotive, avionics, shipboard, transparent, signage, simulator, and other display systems
2) Technology trends in panel structure and display systems
3) Optical components, devices or systems, and color filter technologies
4) LED/micro-LED/OLED/emissive source materials: quantum-dot, electro-optic devices and materials
5) Display lighting materials/components and fabrications, including light directing films
6) New developments in backlight unit (BLU), frontlight unit (FLU) and lighting fixtures components
7) Innovative technologies on material and component for 3D (stereoscopic, volumetric, holographic, light field) displays, AR/VR, flexible electronics, ultra-high resolution, EPD, MEMS/MEOMS, sensing, and interaction

MEMS

This topic 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
2) Optical MEMS such as optical scanners, optical switches, optical mirrors, optical space modulators, optical filters, etc.
3) Sensors and actuators
4) Materials, components and fabrication processes
5) Fundamental mechanisms and configurations

OLED Displays and Organic Devices

This topic will cover all aspects of science and technologies of OLED, ranging from materials research and basic device physics to display including backplane technologies and other applications.

Topic Areas

1) Materials for organic devices (OLED, OTFT, OLET, QLED)
2) Device physics and related phenomena of organic devices
3) Backplane technologies for OLED applications
4) Fabrication processes for organic devices
5) Miscellaneous topics related with organic devices
6) Fundamental mechanisms and configurations of organic devices
7) OTFT for OLED displays
8) Organic light-emitting transistors (OLET)
9) Quantum-dot light-emitting devices (QLED)
10) OLED for lightings
11) Flexible organic materials and devices for OLED

Oxide-Semiconductor TFT

Recently, research and development on metal-oxide semiconductors have been carried out worldwide. Currently, a-IGZO TFTs have already been mass produced for use in AM-LCDs and AM-OLEDs. This special topic will cover all aspects of science and technologies for oxide-semiconductor TFTs including hybrid circuits with other semiconductor TFTs.

Topic Areas

1) Materials, device physics, illumination instability, degradation, fabrication processes, and production equipment
2) Display backplanes for LCD, OLED, QLED, perovskite-related LED, micro/mini LED, electrochromic, electrophoretic displays and e-Paper, circuits, and embedded systems
3) Flexible devices, transparent electronics, sensors, and other applications

Projection and Large Area Displays

This topic will cover all aspects of science, technologies and applications of projection, large area displays and the components.

Topic Areas

1) Projectors (conventional, pico, embedded, laser scanning, projection TV)
2) Intelligent display (wearable, near-eye, AR&VR, applications)
3) Microdisplay (LCOS, MEMS, HTPS) technologies for projection
4) Optics and optical components (light sources, screens, lenses, mirrors, films, etc.) for projection
5) Algorithms for image processing and artifact mitigation for projection and large area displays
6) Applications such as digital cinema, 3-D projection, 3-D measurement, signage, interior illumination, medical health care, and vehicle display systems including head-up display, intelligent cockpit, and adaptive headlight
7) Large-area displays, tiled-displays, and projection mapping systems
8) Sensing applications (ToF, LIDAR, Machine Vision, etc.) in projection technology

User Experience and Cognitive Engineering

This topic will cover all aspects of social studies, cognitive science, and human-computer interaction that aim to open new use scenarios of displays.

Topic Areas

1) Ethnography and social studies
2) Survey and analysis of user needs
3) Cognitive experiments and design of displays
4) Novel interaction techniques and interactive applications
5) Computer-supported cooperative work (CSCW) using displays
6) Digital reading applications and educational software
7) Entertainment computing and media art

Invited Talks

- **Development of Ultra-narrow Border LCDs using Transparent Polyimide Substrates**
  Yosuke Hyodo (Japan Display)
- **High Contrast Ratio FFS-based LCD Switchable to a Stronger Privacy Mode**
  Kohji Murata (SHARP)
- **Liquid Crystals New Frontier; LiDAR Uses?**
  Akihiro Mochizuki (i-CORE Tech.)
- **Ferroelectric Liquid Crystal Pixel Arrays with 1×1-μm pixel Pitch for Electro-holography**
  Shintaro Aso (NHK)
- **Multi-modal Flexible Sensor Sheets**
  Kuniharu Takei (Osaka Prefecture Univ.)
- **Analysis of Neutral-Plane Splitting for Foldable Displays Using Digital Image Correlation Method**
  Masatomo Hishinuma (Japan Display)
- **Optical-Property Measurement and Visual Perception for Automotive 3D HUD**
  Seo Young Choi (KILT)
- **Commercialization of Hyperfluorescence(TM); A Game Changing Technology of OLED**
  Junji Adachi (Kyulux Inc.)
- **State of the Art and Future Trends in Media Art Technoogies**
  Yoichi Ochiai (Univ. of Tsukuba)

The titles are tentative. Additional invited talks are being arranged.

OVERSEAS ADVISORS

Brian H. Berkeley	(Highlight Display, USA)	Kei May Lau	(Hong Kong Univ. of S&T, Hong Kong)
Achin Bhowmik	(Starkey Hearing Techs., USA)	Chung-Chun Lee	(BOE Tech. Group, China)
Janglin Chen	(ITRI, Taiwan)	Kalluri R. Sarma	(Honeywell Int., USA)
Norbert Fruehauf	(Univ. of Stuttgart, Germany)	Helge Seetzen	(TandemLaunch, Canada)
Jin Jang	(Kyung Hee Univ., Korea)	Baoping Wang	(Southeast Univ., China)
Yong-Seog Kim	(Hongik Univ., Korea)	Larry F. Weber	(Consultant, USA)
Hoi-Sing Kwok	(Hong Kong Univ. of S&T, Hong Kong)	Bo-Ru Yang	(Sun Yat-Sen Univ., China)

WORKSHOPS AND CHAIRS

All of the IDW topics will be organized by following workshops and Topical Sessions.

LCT	LC Science and Technologies	: Koichi Miyachi (JSR)
AMD	Active Matrix Displays	: Kazumasa Nomoto (Sony)
FMC	FPD Manufacturing, Materials and Components	: Hirotsugu Yamamoto (Utsunomiya Univ.)
PH	Inorganic Emissive Display and Phosphors	: Yoichiro Nakanishi (Shizuoka Univ.)
OLED	OLED Displays and Related Technologies	: Taishi Tsuji (Nippon Steel Chem. & Material)
3D	3D/Hyper-Realistic Displays and Systems	: Masaru Tsuchida (NTT)
VHF	Applied Vision and Human Factors	: Yoshie Imai (Mitsubishi Elec.)
PRJ	Projection and Large-Area Displays and Their Components	: Satoshi Ouchi (Hitachi)
EP	Electronic Paper	: Keisuke Hashimoto (E Ink Japan)
MEET	MEMS and Emerging Technologies for Future Displays and Devices	: Masayuki Nakamoto (Shizuoka Univ.)
DES	Display Electronic Systems	: Haruhiko Okumura (Toshiba)
FLX	Flexible Electronics	: Yukiharu Uraoka (NAIST)
INP	Touch Panels and Input Technologies	: Nobuyuki Hashimoto (Japan Women's Univ.)
AIS	Artificial Intelligence and Smart Society	: Mutsumi Kimura (Ryukoku Univ.)

SPECIAL TOPICS OF INTEREST AND FACILITATORS

AR/VR	AR/VR and Hyper Reality	: Satoshi Ouchi (Hitachi), Takayuki Fujiwara (Hitachi)
AUTO	Automotive Displays	: Kazumoto Morita (Chuo Univ.)
mLED	Micro/Mini LEDs	: Tohru Honda (Kogakuin Univ.), Hiroko Kominami (Shizuoka Univ.)
QDT	Quantum Dot Technologies	: Toshiaki Ikuta (JNC)

CHAIRS

General Chair
Reiji Hattori (Kyushu Univ.)
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Executive Chair
Shin-ichi Uehara (AGC)
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Program Chair
Kazuhiko Hara (Shizuoka Univ.)
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Kobayashi-Uchiike-Mikoshiba Prize

Kobayashi-Uchiike-Mikoshiba Prize shall be conferred by the International Display Workshops (IDW) General Incorporated Association Board of Directors upon a person with both an outstanding record of accomplishments in any of the IDW fields of interest and an outstanding contribution to the IDW. The accomplishments that are being honored shall have contributed importantly to the advancement or application of engineering, science and technology, bringing the realization of significant value to society. Further details will be announced on the following page.
https://rijikai.idw.or.jp/?page_id=576

I-DEMO for All Oral and Poster Presenters

I-DEMO (Innovative Demonstration Session) offers an opportunity for an interdisciplinary technical demonstration and discussion in wider area for longer time with rich and stable power environment. We highly encourage a wide variety of demonstrations from leading edge hardware to state-of-the-arts software technique as well as entire display systems.

Further details about I-DEMO including the deadline and registration method will be announced on the following page.
https://www.idw.or.jp/idemo.html

ITE IDW '20 SID SOCIETY FOR INFORMATION DISPLAY

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