

Hybrid Event

imid 2022

The 22nd International
Meeting on Information Display
Driving Display to the Future

August 23-26, 2022
BEXCO, BUSAN, KOREA

Keynote Speakers

**Joo-Sun Choi**

President and CEO
Samsung Display Co., Ltd., Korea

**Stephen Forrest**

Professor
University of Michigan, USA

**Tomoyuki Mishina**

Doctor
NHK, Japan

**Michael Heckmeier**

EVP, Display Solutions of
Electronics Business
Merck KGaA, Germany

Important Dates

✓ Paper Submission	March 31 (Thu.) April 15 (Fri.) April 30 (Sat.)	✓ Author Registration	July 31 (Sun.)
✓ Acceptance Notification	May 31 (Tue.) June 7 (Tue.)	✓ Pre-registration	August 5 (Fri.)

ORGANIZED BY The Korean Information Display Society(KIDS)
The Society for Information Display (SID)
Korea Display Industry Association (KDIA)

The Korean Information Display Society

KIDS

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Conference Information

Format	On / Off-line Hybrid Conference
Date	August 23 - 26, 2022
Location	BEXCO, Busan, Korea & Online
Organized by	- The Korean Information Display Society (KIDS) - The Society for Information Display (SID) - Korea Display Industry Association (KDIA)
Program	- Opening Ceremony - Keynote Addresses - Tutorials / Workshops - Conference - Young Leaders Conference - Exhibition

Program at a Glance [Tentative]

	Time	211~213 (Room A)	214~216 (Room B)	217 (Room C)	218 (Room D)	311~312 (Room E)	313 (Room F)	314~315 (Room G)	316~317 (Room H)	2A Hall (1F)
Aug. 23 (Tue.)	10:00 ~ 13:00	Tutorials & Workshops								
	12:30 ~ 14:30	Lunch								
	14:30 ~ 17:30	Tutorials & Workshops								

Aug. 24 (Wed.)	Time	211~213 (Room A)	214~216 (Room B)	217 (Room C)	218 (Room D)	311~312 (Room E)	313 (Room F)	314~315 (Room G)	316~317 (Room H)	2A Hall (1F)	
	09:00 ~ 10:30	Oral Session 1									Exhibition
	10:30 ~ 10:50	Coffee Break									
	10:50 ~ 12:20	Oral Session 2									
	12:20 ~ 13:20	Lunch									
	13:20 ~ 14:50	Poster Session I									
	14:50 ~ 15:10	Break Time									
	15:10 ~ 15:40	Opening Ceremony									
	15:40 ~ 17:40	Keynote Addresses									

Aug. 25 (Thu.)	Time	211~213 (Room A)	214~216 (Room B)	217 (Room C)	218 (Room D)	311~312 (Room E)	313 (Room F)	314~315 (Room G)	316~317 (Room H)	2A Hall (1F)	
	09:00 ~ 10:30	Oral Session 3									Exhibition
	10:30 ~ 11:00	Coffee Break									
	11:00 ~ 12:30	Oral Session 4									
	12:30 ~ 14:00	Lunch									
	14:00 ~ 15:30	Poster Session II									
	15:30 ~ 15:50	Coffee Break									
	15:50 ~ 17:20	Oral Session 5									
	17:20 ~ 18:30	Break Time									
	19:00 ~ 21:00	Banquet									

Aug. 26 (Fri.)	Time	211~213 (Room A)	214~216 (Room B)	217 (Room C)	218 (Room D)	311~312 (Room E)	313 (Room F)	314~315 (Room G)	316~317 (Room H)	2A Hall (1F)	
	09:00 ~ 10:30	Oral Session 6									Exhibition
	10:30 ~ 11:00	Coffee Break									
	11:00 ~ 12:30	Oral Session 7									
	12:30 ~ 14:00	Lunch									
	14:00 ~ 15:30	Poster Session III									
	15:30 ~ 15:50	Coffee Break									
	15:50 ~ 17:20	Oral Session 8									

Tutorials

The tutorials are aimed to provide introductory courses for the newcomers to the information display technologies. The tutorials provide audience with six basic topics: OLED, QD, Backplane, AR/VR, micro LED, and Vision(color, human perception) display technologies.

Workshops

The workshop is aimed to provide fundamental principles and up-to-date progresses of cutting-edge information display technologies. At IMID 2022, a series of pre-conference workshop programs are focusing on the advanced research and technologies for flexible & stretchable large area displays.

Young Leaders Conference

Young Leader Conference will be arranged for 2 Sessions.

- **YLC 1:** YLC Session I is open to young scientists who would like to share and discuss their research achievement. Young Scientists are carefully chosen through our technical program committee and recommended for this session. All participants will take this unique opportunity to hear their recent research result. Please join our Young Leader Conference.
- **YLC 2:** YLC Session II is open to students who would like to share and discuss their research results. After oral presentations, outstanding presenters among all YLC applicants will be selected by committees based upon their research originality and technical significance.

Extended Paper Submission: April 30, 2022 (Sat.)

All authors are required to upload their paper (Only 1 Page) through the online paper submission system (<https://imid2022.genimice.com/>). Please prepare your paper in PDF format for the submission. The paper template can be downloaded from our website (http://www.imid.or.kr/2022/online_paper_submission.asp).

Acceptance Notification: June 7, 2022 (Tue.)

Notification of Acceptance will be sent via e-mail to the corresponding authors and speakers. The submitted paper will be evaluated based on technical merits by peer reviewers. The accepted paper might be reassigned to an oral or a poster presentation of appropriate topical session by our technical program committee.

Registration for Authors: July 31, 2022 (Sun.)

At least one author of each accepted papers must complete his/her registration and pay the registration fee by July 31 (Sun.), 2022 otherwise; the papers will be withdrawn from the proceedings publication.

Conference Scope

01. Special Session I:

AI & Computational Technologies for Display

- All aspects of AI computational technology for display design/manufacturing/measurement; human vision perception; numerical algorithm; OLED device simulation; Prediction of material/electrical/ optical/mechanical properties of display; Enhancement of image quality.

02. Special Session II:

Display with Free Form Factors

- Flexible, foldable, rollable, and stretchable display technologies, including deformable display materials (substrates, transparent conductors, TFTs, barrier layers); novel processes and manufacturing methods (printing, novel deposition techniques, R2R, lift-off); electro-optical effects; driving techniques and designs for deformable electronic devices; and device performance and reliability for all deformable display technologies.

03. Special Session III:

Hyper Realistic Display for Metaverse

- Display technologies including materials, manufacturing processes, panels, devices and components of immersive and highly realistic experiments, especially for metaverse applications; high-pixel-density displays, human factors and visual experiences for realistic displays (super high resolution 2D displays, 3D displays, micro displays for AR/VR/MR), pixel structures, optic system/components, driving techniques/circuits/ICs, sensors, system integration, contents generation, and quality evaluation.

04. Active-Matrix Devices

- Micro & nano-crystal silicon, oxide, oxynitride, metal halide, organic, and carbon nanomaterials based TFTs; quantum dot, perovskite, chalcogenides, 2D layered materials, and other emerging semiconducting materials and gate dielectric materials for TFTs; solution processed & printed TFTs; new structures/processes and novel application of TFTs; active-matrix devices for LCD, OLED, LED, QLED, and micro displays; novel and high performance active-matrix devices and system-on-panel (SOP); backplane technologies for emerging displays.

05. Applied Vision/Human Factors

- Measurement methods based on both human vision and physical properties; autostereoscopic, AR, and VR form factors, etc; effective use of a display capability to create a more immersive and compelling experience; approaches to

take advantage of limitations of the visual system to process or transmit display data more efficiently; novel methods of user interaction and HMI with display systems.

06. AR/VR/MR and 3D Display Optics

- Display technologies for AR/VR/MR systems; Near-to-eye display (NED) technologies; spatial tracking, localization, mapping, and navigation techniques; end-to-end system integration and latencies; inputs, interfaces, and interactions; human factors and user experience considerations; mapping and rendering of virtual objects onto the physical world; object, human, and scene capture; reconstruction, recognition, and understanding; biometrics and user authentication; AR/VR/MR applications; measurement and performance evaluation for AR/VR/MR systems.

- 3D and realistic display systems including (auto-) stereoscopic, (super-) multi-view, volumetric, holographic, aerial, hyper-realistic displays; 3D or holographic contents generation including 3D image capture, 2D-3D contents conversion and machine learning; user-interaction with 3D displays; 3D image formats and standards; 3D image compressions; measurement and performance evaluation for 3D displays; techniques for realistic and immersive experience; human factors; optical technologies for various display systems and devices including LCD and OLED.

07. Display Electronics and Systems

- Advanced algorithms for display driving technology such as AI; display system and peripheral designs; touch interface electronics; TFT circuits (driving methods and circuits for display devices and systems); driver ICs; image signal processors; display interface technologies; driving electronics of touch panels; image quality enhancement methodologies and systems; neuromorphic systems; all novel integrations of displays into specialized devices as well as system-level aspects of electronic displays.

08. Display Manufacturing and Processes

- Thin and thick film deposition, lithography, etching, cleaning, printing, coating and various plasma technologies; process & equipment technologies for new and emerging displays including flexible & wearable applications; manufacturing issues of breakthroughs in the displays such as performance, cost reduction, high throughput and flexibility; material issues in display process, including synthesis or deposition of emerging materials; process & equipment technology for display circuits and interfaces; process & equipment for printed electronics including display and sensors fabrication.

09. Emerging Materials and Devices for Display Technology

- Emerging display materials and device architectures such as 2-dimensional (2D) materials, organic/inorganic perovskite materials, perovskite quantum dot, graphene quantum dot, 2D layered material quantum dot, light-emitting devices, and metamaterials/metasurfaces made thereof. XR display and devices (virtual reality, augmented reality, extended reality, hologram, 3D display, etc). Transparent conducting electrode materials for display (Silver nanowire, metal mesh, graphene, conducting polymers, etc). Display elements or systems tailored to wearable and human-interfacial applications. Biomedical applications such as phototherapies or photo-biomodulation; electronic shelf labels or signages; automotive or aviation display applications; medical-grade high-contrast/high-definition displays, and/or interactive display applications.

10. LC Technologies and Electro-Optic Materials

- High image quality/resolution/dynamic range LCDs; QD-enhanced LCDs; automotive LCD applications; LC for AR/VR and 3D displays; molecular design/synthesis/new LC materials; LC alignment and characterization; LC elastomers and stimuli-responsive materials; LC for EL/PL components; LC for conformable displays; smart window applications; optical design and simulations; optical films for displays; foldable/stretchable films; LC photonic crystals and lasers; LC semiconductors; LC-based sensor; LC lens; up/down conversion LC materials; LC materials for GHz/THz wave modulation; nano-patterning LC template.

11. Lighting Materials and Applications

- New development of lighting materials including hybrid lighting technologies; solid-state lighting and LED/OLED, back-light units (BLUs); phosphors, quantum dots and other color-conversion techniques for lighting applications; light extraction optics; heat dissipation, standardization and certification; photometry, driver IC, novel lighting convergence technologies for ocean/agricultural/medical/IT/bio/smart/automotive applications.

12. Medical/Bio-integrated Optoelectronic Materials and Devices

- Skin-attachable or implantable soft materials, devices, and display; bio-integrated or bioinspired optoelectronics; implantable medical devices with display; digital healthcare devices and robotics; human-interactive sensors or actuators; biocompatible or biomimetic materials; transient electronics; 3D optoelectronic scaffolds; integration processing strategies to address the profound mismatch between biology and

optoelectronics; biomimetic functionalities such as bio-resorption, self-healing, multifunctional responsiveness, breathability, and recyclability.

13. Micro-LEDs

- Advances in LED-based displays; epitaxial and chip processes for micro-LED pixels; the materials and manufacturing process technologies for transfer printing and bonding; phosphor and quantum dot materials for color conversion; frontplane modules; active and passive driving methods for backplanes; flexible and miniaturization technologies; flexible patterns and micro-LEDs in stretchable applications; and active device integration for bio-medical and automotive applications.

14. Multisensory Technology for Display and Beyond

- Camera under Display for Photo/Video Capture and Fingerprint Sensing; Sensor-in-Pixel (SIP) Techniques, Including Optical and Force Sensors, Touch and UI/UX sensor components; integration technology; touch gesture & motion controls; interactive in feedback actuators; next-generation tactile sensors and actuators; soft haptics for interactive display; soft actuators and applications; human-interactive sensors, other sensor technologies.

15. OLED Frontplanes

- OLED materials; device physics and characterization for high-performance OLEDs; enhancement of out-coupling efficiency; improvement of optical properties of OLEDs; device stability and degradation analysis; organic and inorganic interfaces in OLEDs; OLED electrodes; OLED manufacturing; OLED patterning process; solution-processed OLEDs; white OLEDs for displays; encapsulation materials and processes; environmental reliability; novel applications.

16. Quantum Dots

- Synthesis and characterization of quantum dots; optical and electrical properties of quantum dot materials; quantum dot-based photo-/electro-luminescence devices; quantum dot-based energy conversion devices and systems; various optical and electrical applications using quantum dots.

Awards

The Award Committee will select award winners from among the presenting authors of oral presentations and posters based on the quality of the presentation at the conference. Please submit your paper for the chance to win an award!

Name of Awards	Grade	Numbers	Prize (per paper)
Merck Award		1 Person	KRW 15,000,000
Merck Young Scientist Award		1 Person	KRW 5,000,000
KIDS Awards	Gold	2 Papers	KRW 4,000,000
(Sponsored by LG Display	Silver	2 Papers	KRW 2,000,000
& Samsung Display)	Bronze	2 Papers	KRW 1,000,000
UDC Innovative Research Award		1 Paper	KRW 15,000,000
UDC Pioneering Technology Award		1 Paper	KRW 15,000,000

※ The number of awards is subject to change depending on result of the review.

※ Best Poster Awards will be selected by an on-site review.

Important Note

- KIDS Awards are applicable to the papers submitted during the regular submission period (**Deadline: March 31 April 15 April 30, 2022**).
 - To be included in the candidates of UDC Awards, each author should upload a full paper(at least 4 page or more) through the paper submission on the online system within the submission deadline.
 - The final winner of UDC Awards will be selected by the KIDS Award Committee through final presentation review.
 - If you would be the final awardee, it is recommended to submit your paper to JID (Journal of Information Display). JID is now indexed in the Science Citation Index Expanded (SCIE).
- ※ Papers previously published in another conference proceedings or journal (or scheduled for publication prior to IMiD) will not be accepted as awards' candidate.



IMiD 2022 Special Exhibition

The IMiD 2022 Special Exhibition will run in conjunction with the conference program and offer the exhibition opportunity to interested companies and organization as shown below. The exhibition creates an unparalleled opportunity to promote your products and service face-to-face to attending delegates from all around world.

If you want more information about exhibition, please visit http://www.imid.or.kr/2022/exhibition_guideline.asp

Information for Special Exhibition

Exhibition Title	IMiD 2022 Display Future Technology Road Show
Exhibition Schedule	August 24 (Wed.) – 26 (Fri), 2022 / 3 days
Venue	2A Hall, Exhibition Center I , BEXCO, Busan, Korea
Program	Special Exhibition (Exhibitor's Booth), Exhibitor's Technology Seminar Booth, Recruiting Booth
Exhibition Items	1) Materials and components related to electronic display (Glass, Color Filter, BLU, Polarizer Film, Drive IC, OLED Material, LCD Materials, Touch Panel Materials, etc.)
	2) Instrument for electronic display (Measuring Instrument, Test System, Equipment for Manufacturing Electronic Parts and Components, Simulator, etc.)

Exhibition Fee (10% VAT will be added to the price listed below)

Application Deadline	KIDS/KDIA Membership		KIDS/KDIA Non-Membership	
	Independent Booth (Space Only/6M*6M)	Prefabricated Booth (Standard / 3M*3M)	Independent Booth (Space Only/6M*6M)	Prefabricated Booth (Standard / 3M*3M)
Early-Bird (By April 30, 2022)	KRW 3,200,000	KRW 1,300,000	KRW 5,200,000	KRW 1,700,000
Advance (By June 30, 2022)	KRW 4,200,000	KRW 1,500,000	KRW 6,400,000	KRW 2,000,000
Regular (From July 1, 2022)	KRW 4,800,000	KRW 1,650,000	KRW 7,200,000	KRW 2,200,000

Benefit for Exhibitor	1) 1 Conference Free Regular Registration per 1 booth (For the University participating as Exhibitor, Choose between 1 Conference Free Regular Registration or 2 Conference Free Student Registration) 2) Exhibitors Introduction in the special exhibition directory book. 3) Web banner linked with the official website of IMiD 2022. 4) Exhibition Entry Fee 10% Discount for the company participated in IMiD 2021. 5) Exhibition Entry Fee KRW 200,000 Discount (as honorarium) for the company presenting at Exhibitors' seminar booth. (First come, First served basis)
How to Apply	1) Fill in the application form. 2) Send the application with business license by Email or FAX. 3) Receive the invoice form by the IMiD 2022 secretariat office. 4) Pay the deposit (It must be paid by May 31, 2022 / 50% of total amount). 5) Pay the balance (It must be paid by August 1, 2022)
Application Deadline	1) Early-bird Application: April 30 (Sat.), 2022 2) Advance Application: June 30 (Thu.), 2022 3) Regular Application: After July 1 (Fri.), 2022 ※ Applicants can be rejected if all spaces have been reserved out.

Sponsorship

Our Organizing Committee of IMID 2022 welcomes sponsors from interested companies and institutions. We have a range of sponsorship packages designed to suit all your needs. Each allows you to showcase your products and services where the top marketing decision-makers and influencers network. All sponsorship categories are filled on first-come, first-serve basis. The Sponsorship prospectus can be downloaded from our website (<http://www.imid.or.kr/2022/sponsorship.asp>).

How to Apply

Please download the Sponsorship Application form, fill out and e-mail or fax it to the IMID 2022 Secretariat (imid2@k-ids.or.kr / +82-42-472-7459) by July 1, 2022.

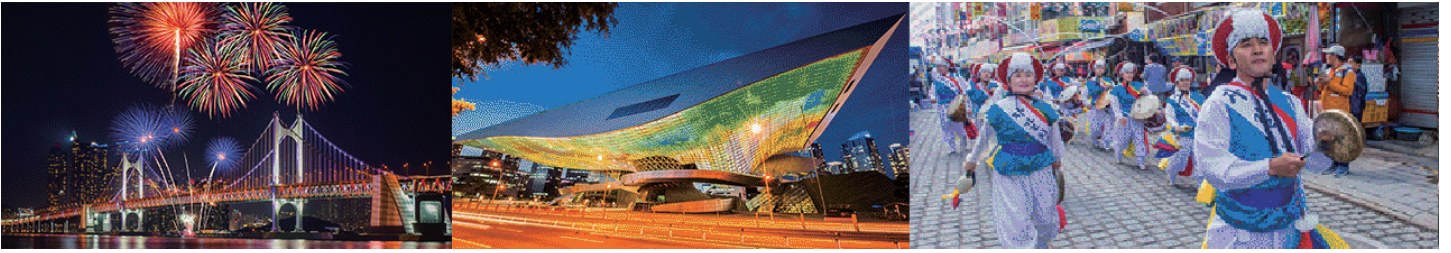
Pay the contribution deadline within a month from invoice issue date.

Please send the receipt to the secretariat for confirmation of full payment.

Benefits	1. Banquet	2. Lanyard	3. Mask	4. Promotion Video on log-in Page for Online Conference	5. Watermark logo on Online Conference Site
	KRW 25,000,000	KRW 10,000,000	KRW 10,000,000	KRW 10,000,000	KRW 10,000,000
Free Registration	12 Persons	4 Persons	4 Persons	4 Persons	4 Persons
Horizontal Banner in Keynote Session	O	O	O	O	O
Logo on Program Book, Official Website, E-Newsletter, Screen at Session Room	O	O	O	O	O
Congratulatory Talk	O	X	X	X	X
Video Advertisement on Wide Screen at the Banquet	O	X	X	X	X
Logo Advertisement in Registration Desk	O	O	O	O	O
Top-down Banner	O	X	X	X	X
Exhibition Booth	1 Booth	1 Booth	1 Booth	1 Booth	1 Booth
E-Booth	O	O	O	O	O
Promotion Video on E-Booth	O	O	O	O	O
Logo on Online Conference Site	O	O	O	O	O

Benefits	6. Pen	7. Photo Wall	8. Fill out Desk	9. Vertical Banner in Exhibition Hall	10. Message Board	11. Ad. on Program Book
	KRW 5,000,000	KRW 5,000,000	KRW 3,000,000	KRW 2,000,000	KRW 2,000,000	KRW 1,000,000
Free Registration	2 Persons	2 Persons	1 Person	X	X	X
Horizontal Banner in Keynote Session	O	O	O	X	X	X
Logo on Program Book, Official Website, E-Newsletter, Screen at Session Room	O	O	O	O	O	O
Congratulatory Talk	X	X	X	X	X	X
Video Advertisement on Wide Screen at the Banquet	X	X	X	X	X	X
Logo Advertisement in Registration Desk	O	O	O	O	O	O
Top-down Banner	X	X	X	X	X	X
Exhibition Booth	X	X	X	X	X	X
E-Booth	O	O	O	O	O	O
Promotion Video on E-Booth	X	X	X	X	X	X
Logo on Online Conference Site	O	O	O	O	O	O

About Busan



Located at the southern tip of the Korean peninsula, Busan is the second largest metropolis in Korea. It is home to the country's longest river, longest beach, and most significant port. Its geography includes a coastline featuring superb beaches and scenic cliffs, mountains that provide excellent hiking and extraordinary views with hot springs scattered throughout the city. Busan enjoys four distinct seasons and a temperate climate that never gets too hot or cold. For these reasons, Busan is becoming a world-class city for tourism and culture and a hot spot destination for international conventions.

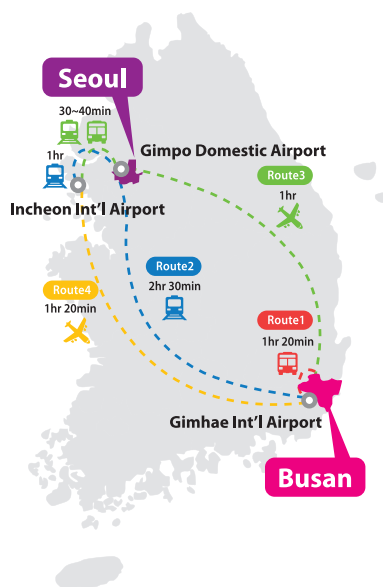
Venue : BEXCO, Busan



BEXCO, a landmark in the global maritime city of Busan, is a facilitator of a successful business that has a vast wealth of knowledge and expertise.

The center implements a differentiated operation strategy based on its many years of successfully attracting and hosting highly acclaimed, large scale international events. BEXCO prides itself on being a world-leading exhibition and convention center that offers incomparable value to its clients. We are looking forward to seeing you in BEXCO, Busan.

Transportation



[Route 1] Gimhae(Busan) Int'l Airport → BEXCO

[Route 2] Incheon Int'l Airport → Busan Station(KTX) → BEXCO

[Route 3] Incheon Int'l Airport → Gimpo Domestic Airport → Gimhae(Busan) Domestic Airport → BEXCO

[Route 4] Incheon Int'l Airport → Gimhae(Busan) Int'l Airport → BEXCO

Hybrid Event

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