

MAIN PROGRAM

- ✓ Opening Ceremony
- ✓ Keynote Addresses
- ✓ Tutorials / Workshops
- ✓ Exhibition
- ✓ Regular Sessions (Oral & Poster presentation)
- ✓ Young Leaders Conference
- ✓ Focused Session

KEY DATES

-  **Paper Submission**
March 31 (Sun.)
-  **Acceptance Notification**
May 31 (Fri.)
-  **Pre-registration**
June 10 (Mon.) - August 2 (Fri.)

ORGANIZING COMMITTEE

- General Chair** Prof. Hyun Jae Kim (Yonsei Univ., Korea)
- General Co-chair** SID Rest of Asia Regional VP Hyun Jae Kim
- Executive Chair** Prof. Jun Yeob Lee (Sungkyunkwan Univ., Korea)
- Executive Co-chair** Prof. Yong-Young Noh (POSTECH, Korea)
- Technical Program Chair** Prof. Chang-Jae Yu (Hanyang Univ., Korea)
- Exhibition Chair** Prof. Dae-Gyu Moon (Soonchunhyang Univ., Korea)
- General Secretary** Prof. Yoonseuk Choi (Hanbat Nat'l Univ., Korea)
- Technical Program Secretary** Prof. Suk-Ju Kang (Sogang Univ., Korea)
Prof. SooYeon Lee (Seoul Nat'l Univ., Korea)
- Promotion Secretary** Dr. Nam Sung Cho (ETRI, Korea)

EXHIBITION

Exhibition Title	IMID 2024 Display Future Technology Road Show
Exhibition Schedule	August 21 (Wed.), 09:00-17:00 August 22 (Thu.), 09:00-17:00 August 23 (Fri.), 09:00-12:00
	** Exhibitor Luncheon will be held on August 23 (Fri.).
Venue	Event Hall (1F), ICC Jeju, Jeju, Korea
Program	Special Exhibition (Exhibitor's Booth), Recruiting Booth

ABOUT JEJU



Located southwest of the Korean Peninsula, Jeju Island is a popular tourist destination among domestic and international travelers alike for its beautiful and pristine natural scenery.

Jeju Island is a unique place worldwide, holding the honors of the natural science area such as UNESCO World Biosphere Reserve [2002], UNESCO World Natural Heritage Site [2007] and UNESCO World Geoparks Network [2010]. Jeju Island also consists of all elements for global natural sight theme, including island, volcano, waterfall, beaches, national park, cave and forest.

Also, Jeju is the best place for conference due to its excellent accessibility. Being located at the center of Northeast Asia, there are direct flights to Jeju from hub airports of the major cities in Northeast Asia. For domestic flight, more than 200 flights are available each day (round-trip).

IMID 2024 VENUE 'ICC JEJU'

IMID 2024 will be held at the International Convention Center Jeju (ICC JEJU) in Jeju, an island designated as a UNESCO World Natural Heritage site. ICC JEJU is located in the Jungmun Tourist Complex with the cobalt-blue Northern Pacific stretching on the south and towering Mt. Hallasan in the north. Spreading over an area of more than 5,000m², the world-class convention center is a 7-story building. Artfully blending tourist resources and convention facility, this resort-style convention center is fully equipped for international meetings of any scale and provides professional logistic support in events hosting. We are looking forward to seeing you in ICC JEJU, Jeju, Korea.

1st Call for Paper

imid.or.kr



IMiD 2024

The 24th International Meeting on
Information Display

SHARE DISPLAY. SHARE LIFE.

August 20-23, 2024 | ICC Jeju, Jeju, Korea



Paper (1 page) Submission Deadline
March 31 (Sun.)

Organized by **KIDS** 한국정보디스플레이학회 **SID**

Sponsors **JEJU** 제주국제컨벤션센터 **CVB** **MERCK** **LG Display**

SAMSUNG DISPLAY **UNIVERSAL DISPLAY CORPORATION**

KONICA MINOLTA **ADMESY** **솔루스 첨단소재** Solus Advanced Materials

DONGJIN 동진메이커 **DUPONT** **EVERchemTECH** **OSCAR**

WELCOME MESSAGE

On behalf of the organizing committee of the 24th International Meeting on Information Display (IMID 2024), I would like to sincerely appreciate your kind attention to IMID 2024, which will be held at ICC Jeju in Jeju, Korea from August 20 to 23, 2024.

IMID 2024 is an annual conference that began in 2001, organized by the Korean Information Display Society (KIDS) and endorsed by the Society for Information Display (SID). The IMID has become a premier conference sharing knowledge in the information display. The number of paper presentations and participants is growing year by year.

- IMID 2021 : 20 countries and regions, 687 papers

- IMID 2022 : 20 countries and regions, 757 papers

- IMID 2023 : 19 countries and regions, 862 papers

IMID 2024 will include prestigious keynote addresses, invited talks, regular sessions (oral & poster presentations), tutorials & workshops, young leaders conference (YLC), and women in display (WID). You will be also able to see the latest display products from global companies all around the world at IMID 2024 exhibition. We sincerely hope that all of our participants take this opportunity to have deep and profound discussions on every field of information display and also make lasting friendship with new future colleagues and outstanding researchers around the world.

The venue of IMID 2024, Jeju Island is a worldwide unique place as UNESCO world natural heritage site. Jeju Island also provides all elements for global natural sight themes, including islands, volcanos, waterfalls, beaches, national parks, caves and forests.

We are really looking forward to seeing you all in Jeju, Korea.

Sincerely,



Hyun Jae Kim

General Chair of IMID 2024

CONFERENCE SCOPE

01. Special Session I: 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.

02. Special Session II: High Resolution Frontplane Technologies for XR

- Materials, manufacturing processes and devices for high-pixel-density display frontplanes for XR; Image quality and processing for high-pixel-density display frontplanes for XR; Human factors and visual experiences for high-pixel-density display frontplanes for XR (LCD, OLED, Micro-LED, Quantum dot, other emerging display type); Pixel structures, optics, and driving techniques, system integration, reliability, and cost-reduction efforts, content generation, and processing for high-pixel-density display frontplanes for XR.

03. Active-Matrix Devices

- Micro & nano-crystal silicon, amorphous and crystalline 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; novel low temperature fabrication and annealing technology 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; emerging application of TFTs.

04. AI & Computational Technologies for Display

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

05. Applied Vision/Human Factors

- Research for display devices based on both human vision and physical properties; general display, autostereoscopic, AR/VR form factors, automotive, transparent 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 interactions.

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

- Advanced technologies for AR/VR/MR and 3D display; near-to-eye display and head-up display; stereoscopic, light-field, volumetric, and holographic displays; optics for AR/VR/MR and 3D display; image/scene capture, conversion, and machine learning for content generation; spatial computing; image formats, compressions, and standards; user interaction and low-latency techniques for immersive experience; measurement and performance evaluation; novel applications.

07. Display Electronics and Systems

- Advanced algorithms for display driving technology such as AI; display system and peripheral designs; circuits and algorithms for microdisplays; 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, measurement/inspection and various plasma technologies; process & equipment technologies for new and emerging displays including flexible & wearable applications; display manufacturing issues of breakthroughs 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; measurement/inspection techniques/application for display manufacturing process.

09. Emerging Materials and Devices for Display Technology

- Emerging display materials and device architectures such as metamaterials, metasurfaces, 2-dimensional (2D) materials, perovskite materials, quantum dot and so on; Emerging display materials for XR display and devices (virtual reality, augmented reality, extended reality, hologram, 3D display, etc). High index low loss materials and active materials for display; Structural color filter for display; Transparent conducting electrode materials for display; Emerging display materials for automotive or aviation display applications, interactive display applications.

10. LC Technologies and Electronic/Optical 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 Chemistry; LC alignment and characterization; LC elastomers and stimuli-responsive materials; LC for EL/PL components; LC for conformable displays; smart window applications; LC Physics; 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; LC materials for biomedical application.

11. Light-Emitting Materials and Applications

- New development of lighting materials and hybrid lighting technologies: solid-state lighting and color-conversion materials including LED/OLED, phosphors, quantum dots, perovskites, ultra-wide bandgap materials for lighting and display applications; light extraction optics; standardization/certification; photometry; novel lighting convergence technologies for ocean/agricultural/medical/IT/bio/smart/automotive/eye-glass applications.

12. Medical/Bio-integrated Optoelectronic Materials and Devices

- Skin-attachable/implantable/wearable soft materials, devices, and display; bio-integrated/bio-inspired optoelectronics; implantable/wearable medical or bio-photonic devices with display; digital healthcare devices, sensors, and robotics; human-interactive micro/nano-manufactured sensors, actuators, or transducers; bio-compatible/bio-mimetic materials; transient electronics; 3D optoelectronic, bio-mimetic, or bio-fabricated scaffolds; integration processing strategies to address the profound mismatch between biology and optoelectronics; bio-mimetic functionalities such as bio-resorption, self-healing, multifunctional responsiveness, breathability, and recyclability.

13. Metrology & Inspection Technologies for Display

- Novel research of metrology and inspection technology for display industry; process metrology of OLEDs, LEDOs, QD-display, OLED and LCD devices manufacturing; high and enhancement resolution optical imaging system; artificial intelligence techniques for MI industry; electrical measurement technology of TFT; advanced thickness and fine critical dimension MI technologies; 3D&2D profile measurement systems; oxide material properties measurement techniques; new visual inspection technology.

14. Micro-LEDs

- Advances in LED-based displays; epitaxial and chip processes for micro-LED pixels; the materials and manufacturing process technologies for transfer printing, bonding, repair and inspection; phosphor, quantum dot and perovskite materials for micro-LED color conversion; micro-LED display panel; active and passive driving methods for micro-LED displays; miniaturization technology for flexible and stretchable applications; and active device integrated micro LED module for bio-healthcare and automotive applications.

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. Soft Sensors and Actuators for Interactive Display

- Flexible and/or stretchable active/passive materials for sensors and actuators; soft organic, inorganic, or hybrid materials with capacitive, piezoelectric, piezoresistive, triboelectric, and/or ferroelectric properties; stimuli (e.g., stress, electric field, light, heat, chemical, etc.)-responsive soft materials; emerging materials and devices for human-machine-interfaces; touch gesture & motion sensing technologies; next-generation tactile sensors and actuators; soft haptics for interactive display; soft sensors on display; soft actuators on display; human-interactive technologies.

17. Quantum Dots

- QD fundamentals, including synthesis and characterization of QDs, optical and electrical properties of QDs; QD display technologies, including QD-based color conversion for LCDs, micro-LEDs, QLEDs; QD-based energy conversion devices and systems; QD photodetectors; high-resolution and fine patterning of QDs; emerging QDs, including perovskite QDs, graphene QDs and more.