

# **CALL FOR PAPERS**

## **Display Week 2021**

**Society for Information Display**  
**INTERNATIONAL SYMPOSIUM,**  
**SEMINAR & EXHIBITION**

**May 16–21**



**SAN JOSE McENERY CONVENTION CENTER**  
**SAN JOSE, CALIFORNIA, US**

**[www.displayweek.org](http://www.displayweek.org)**

## Special Topics for 2021

The Display Week 2021 Technical Symposium will place emphasis on four special topics of interest to address rapid growth in the following areas: Augmented Reality, Virtual Reality, and Mixed Reality; Machine Learning for Displays; High-Dynamic-Range Displays; and IoT Displays. Submissions relating to these special topics in the field of information display are highly encouraged.

### (1) AUGMENTED REALITY, VIRTUAL REALITY, AND MIXED REALITY (AR/VR/MR)

This special topic covers the technologies and applications in the emerging areas of Augmented Reality (AR), Virtual Reality (VR), and Mixed Reality (MR). These sessions will bring together scientists, engineers, business professionals, market analysts, and industry leaders involved in AR, VR, and MR technologies, products, applications, advanced developments, and emerging trends. AR/VR/MR topics include, but are not limited to, the following:

- AR, VR, and MR Systems and Applications
- Display Technologies for AR, VR, and MR Systems
- Spatial Sensing and Imaging Technologies
- Tracking, Localization, Mapping, and Navigation Techniques
- Computation, Graphics, and Display Processing
- Mapping and Rendering of Virtual Objects onto the Physical World
- Immersive Audio Technologies
- End-to-End System Integration and Latencies
- Inputs, Interfaces, and Interactions
- Human Factors and User Experience
- Object, Human, and Scene Capture; Reconstruction, Recognition, and Understanding
- Machine Learning Techniques Including Deep Neural Networks
- Eye Tracking, Biometrics, and User Authentication

### (2) MACHINE LEARNING FOR DISPLAYS

The evolution of new computing technologies and the availability of big data are boosting machine learning (ML) and deep learning in different fields. The special topic on ML covers the applications of machine learning in all aspects of display technologies and manufacturing. These sessions bring together display experts and ML experts to explore opportunities to solve challenging display problems with the right ML techniques. Machine Learning topics include, but are not limited to, the following:

- Techniques in Graphics, Image Processing, and Computer Vision
- Applications in Enhancing Display Technology
- For AR/VR in Developing Featured Machines
- In Display Manufacturing

- In Display Measurement
- For Human Visual Perception in Displays
- For Interactive Technology

### (3) NEW for 2021 HIGH-DYNAMIC-RANGE DISPLAYS

This special topic covers new materials and device technologies for high-dynamic-range (HDR) displays and applications. An HDR display requires high luminance ( $>1,000$  nits), deep black level ( $<0.005$  nits), and bit depth  $>10$  bits. Both miniLED backlit LCDs and dual-cell LCDs, OLEDs and microLEDs can achieve HDR, but with their own challenges. HDR display topics include, but are not limited to, the following:

- MiniLED Backlit LCDs
- Halo Reduction Techniques
- Flexible MiniLEDs for Flexible LCDs and Emissive Displays
- Dual-Cell LCDs
- High-Luminance OLEDs
- High-Luminance and Low-Power Mini/MicroLEDs
- High-Efficiency Quantum-Dot Color Conversion
- Chip-Size Effect on MicroLEDs
- Ambient Light Effect on HDR Displays
- High Ambient Contrast Ratio

### (4) NEW for 2021 IoT DISPLAYS

The Internet of Things (IoT) is an increasingly important paradigm for creating a world of connected devices, with compelling use cases in domains including health-care, logistics, energy control, and smart cities. In the IoT era, image displays including digital signage are evolving from unidirectional advertising tools to smart display/signage tools that provide bidirectional and interactive services. Smart signage, for example, collects user contexts from various sensors and wearable devices. The smart signage then changes contents on the screen according to the context information. Therefore, users can be served various personalized and targeted services. However, conventional signage systems have difficulty in connecting new sensing devices to the systems because there is no standard to connect signage systems and sensing devices. Moreover, conventional wireless communication systems for small wireless electronics devices suffer from low radiation efficiencies of miniaturized antennas implemented within less-than ideal real estate and locations (e.g., antennas are typically installed in a small bezel of the display device). Displays for IoT also need to have increased communication bandwidth in order to keep up with other media used for computing. Papers are sought to enable bidirectional image displays with topics including the following:

- Energy-Efficient Invisible Antenna Integrated within a Display Panel
- Energy-Efficient Miniaturized Antennas that Can Fit into the Small Bezel of a Display

- **Energy-Efficient Display Devices and Algorithms**
- **Camera-Under-Display Technologies**
- **Visible Light Communication Technologies Integrated on an Image Display Panel**
- **Touch Technologies Compatible with On-Panel Antenna Structures**
- **Gesture-Control Technologies**
- **Presence Sensing**
- **Face-Recognition Technologies**
- **Sensor Technologies Integrated on an Image Display Panel**
- **Edge-Computing Technologies Integrated on an Image Display Panel**
- **Increased Bandwidth Technologies for IoT Displays**

## Symposium Topics

The Society for Information Display (SID) encourages the submission of original papers on all aspects of the research, engineering, application, evaluation, and utilization of displays. Paper submissions are welcome for any of the following symposium topics:

**(1) ACTIVE-MATRIX DEVICES:** Submissions are solicited covering all novel aspects of TFTs, including semiconducting materials, structures/processing, reliability, circuit design, and the application of active-matrix electronics to displays and other related systems.

- **NEW for 2021 LTPO and Novel Device Integration Strategies**
- **TFTs Made of LTPS, Oxide, Organic, and Other Semiconductors**
- **Novel TFT Circuits and Driving Technologies**
- **High-Performance Active-Matrix Displays**
- **Ultra-Low-Power Active-Matrix Displays**
- **New AMOLED Display Pixels and Backplanes**
- **Backplane Technology for MicroLEDs**
- **Emerging Active-Matrix Displays and Devices**
- **Sensors and Other Functional Devices**
- **Integrated Active-Matrix Devices**

**(2) APPLIED VISION/HUMAN FACTORS:** New display technology has driven displays to incorporate more pixels, greater contrast, higher luminance, and richer color volume, thus enabling a wide range of new visual experiences. Submissions are encouraged that discuss the benefits and tradeoffs of how these new display technologies, as well as novel uses of traditional display technology, can have a measurable impact on the visual experience. Topics in the following areas are particularly in demand: mitigating challenges by presenting comfortable and engaging 3D imagery (including autostereoscopic, AR, and VR form factors), effective use of a wider color volume to create a more

immersive and compelling experience, and approaches to take advantage of limitations of the visual system to process or transmit display data more efficiently. Papers that discuss novel methods of user interaction and HMI with display systems are also welcomed. In addition, this year we also encourage submissions in:

- **NEW for 2021 Displays for Therapy and Assistive Technologies**
- **Wide-Color-Gamut and High-Dynamic-Range Imaging**
- **Visual Comfort and Health with Display Systems (Including Links Between Myopia and Displays)**
- **Immersive Interaction**
- **Image Quality and Display Perception**
- **Human-Machine Interfaces**
- **Human Factors in Emerging Displays**
- **Human Factors of Projection Systems and Applications**
- **New Display Technologies and Storytelling, Controlling Attention**
- **Dealing with Prescriptions in Near-to-Eye Displays**

### **(3) AUTOMOTIVE/VEHICULAR DISPLAYS AND HMI TECHNOLOGIES:**

Papers for this topic shall deal with all aspects of automotive and vehicular displays and related HMI issues, including market aspects, display and lighting technologies, head-up displays, smart displays, application issues with vehicular displays, and advanced technologies for displays, touchscreens, and gestures in vehicles as well as the user experience. Contributions in the following areas are solicited:

#### **Displays**

- **EXPANDED for 2021 Avionic Displays and Applications, Including HMD, HUD, and Interaction Means**
- **Smart Vehicular Display and Lighting Technologies**
- **Interactive Technologies for Automotive Displays**
- **Application Issues with Vehicular Displays and Lighting**
- **Metrology for Automotive Displays**
- **Displays for ADAS (Advanced Driver Assistance Systems)**
- **Head-Up Displays (HUDs), Including AR, Holographic, and Night Vision**
- **Automotive and Vehicular Display Market and Technology Trends**
- **Infotainment and Passenger Entertainment Displays**
- **Projection Displays (Other than HUD) for Interior and Exterior Projection**
- **Transparent Displays (Other than HUD) for Window, Panoramic Roof, etc.**
- **Camera and Rear-Mirror Display Systems**
- **Video Interface and Display Link for Automotive**
- **Exterior Automotive Displays (Other than Projection)**
- **Displays as Interior Design Elements**
- **High-Visual-Performance Displays for Automotive**
- **Display Readability in Variable Ambient Lighting Situations**

- Optical Components for Automotive Applications
- Optical Bonding, AR/AG/AS Coating
- Display Materials Optimized for Automotive Applications
- Motorbike and Bicycle Displays and Applications
- Modeling and Simulations

#### HMI Technologies

- **EXPANDED for 2021** Automotive User Experience (UX), User Interaction (UI), User Delight (UD)
- Human-Machine Interface (HMI) System Solutions
- HMI for, and User Experience (UX) of, Advanced Driver Assistance Systems, Automated Driving, etc.
- Multi-Modal Input and Output User Experience (UX)
- Driver Inattention (Driver Distraction)
- Application Issues with Automotive HMIs
- Customer Acceptance and Feedback on Different Technology Displays and Interfaces
- Regulations and Trends Related to In-Vehicle Interfaces

**(4) DISPLAY ELECTRONICS:** For consideration will be all aspects of circuits (integrated or otherwise) for displays, electronic components for displays and imaging devices, and image- and video-processing algorithms.

- Electronics and Image Processing for Wearable Displays
- Driving Electronics for UHD (4K x 2K) and Beyond
- Driving and Compensation Circuits for Curved Displays
- Electronics for Touch and Interactive Displays
- OLED Driving Techniques
- Display Drivers, TCONs, and New Driving Schemes
- Variable Refresh Rate Electronics and Driving Schemes
- Machine Learning for Display Electronics
- Sensors Under Display Technologies and Electronics
- Low-Power and Low-Cost Driving Techniques
- Image/Video Capture and Processing Techniques
- 3D/Depth Imaging and Augmented/Virtual Reality
- High-Dynamic-Range Driving Electronics
- Display Electronics for Foldable Displays

**(5) DISPLAY MANUFACTURING:** Papers addressing the following areas will be considered: materials, process, and equipment advancements related to the manufacture of display panels, components, and module assemblies.

- **EXPANDED for 2021** Manufacture of High-Resolution OLED and Other Emissive Display Panels, Fine Metal Mask (FMM), OLED Evaporation Systems, OLED Printing or Patterning Processes, and Thin-Film Encapsulation (TFE) Processes
- **EXPANDED for 2021** Inline Manufacturing Test, Repair, Metrology, and Quality Control
- Manufacturing-Related Advances Enabling Current and Emerging Displays Including Flexible, Foldable, Stretchable, Wearable Displays; 3D or Transparent Displays; Multi-Functional Display Architectures; etc.)

- Manufacture of AMLCD and Other Non-Emissive Displays
- Manufacture of e-Paper and Other Reflective Displays
- Manufacturing Equipment and Processes, Including Very Large Substrate Sizes
- Manufacturing Equipment for Front- and Back-End Processing Including Packaging, Encapsulation, Interconnect, Assembly, and Roll-to-Roll Processing
- Display-Module Manufacturing Including Panel and Module Assembly for All Display Technologies (e.g., AMLCD, OLED Display, e-Paper, Mini/MicroLED Display, Projection, etc.)
- Display-Component Manufacturing (e.g., Optical Films, Color Filters, LEDs, Backlights, In-Cell and On-Cell Touch Panels, Finger-Print Sensors, Covers, etc.), Including Topics Related to High Luminance and True Black, HDR Displays, and Quantum-Dot (QD)-Based Applications
- Materials for Panel and Module Manufacturing, Including Substrates, Films, Adhesives, Photo-Patternable Organic Materials (for Bank Layers or Polarization Layers, etc.), Photoresists, Sputtering or Evaporating Materials, and Consumables
- Manufacturing Productivity and Cost-Reduction Topics
- Green Manufacturing — Reducing Energy Consumption and Waste, and Strategies for Product End-of-Life Recycling and Disposal, etc.

**(6) DISPLAY MEASUREMENT:** Submissions are encouraged that address the characterization and measurements of displays and display components.

- Characterization of Perceptible Display Phenomena
- Optical Characterization of Display Materials and Components and Their Effects on System Optical Performance
- Optical Characterization and Measurement of High-Dynamic-Range and Wide-Gamut Displays
- Solid-State-Lighting Metrology and Characterization
- Advances in Display Measurements Standards
- Measurement Methods for Near-to-Eye Displays for AR, VR, and Other Applications
- Optical Characterization and Measurement of Light-Field and 3D Displays
- Calibration and Verification of Instrumentation
- Display Testing and Calibration in Mass Production

**(7) DISPLAY SYSTEMS:** The Display Systems Subcommittee is soliciting original papers on display systems, as well as related devices and techniques, including the following:

- **EXPANDED for 2021** Display Systems and Components
- **EXPANDED for 2021** Augmented Reality, Virtual Reality, Mixed Reality, and Other Near-To-Eye and Table-Top Display Systems; Novel Components and/or Novel System Integration, Including Microdisplays, Projection Optics, and Viewing Optics



(e.g., Waveguides, Light Guides, Diffractive, Reflective); Related Visual Perception Problems for the Novel Systems

- **EXPANDED for 2021** Dual-Cell LCD
- **EXPANDED for 2021** Novel Displays, Components, and Image Processing
- **EXPANDED for 2021** Large-Area-Display Technologies: Cinema Displays, Direct-View LED Walls, Digital Signage
- **EXPANDED for 2021** Projection Head-Up Displays for Automotive, Aviation, and Other Applications
- **EXPANDED for 2021** Mobile Displays
- **EXPANDED for 2021** Transparent Displays
- **EXPANDED for 2021** Ultra-Low-Power Displays
- **EXPANDED for 2021** SDR/HDR/Display Backlight Unit (BLU), Frontlight Unit (FLU), and Optical Components
- **EXPANDED for 2021** Light-Guide Plate Design for Automotive Lighting and Illumination
- **EXPANDED for 2021** 3D, Autostereoscopic, Light-Field, Volumetric, Holographic, Aerial Displays and Components
- **EXPANDED for 2021** Projector: Design, Manufacturing, Applications, and Novel Architectures
- **EXPANDED for 2021** Projection Systems, Arrays, Subsystems, Components, and Projection Mapping
- **EXPANDED for 2021** Immersive Display Systems, Dome Displays, and Cave Displays
- **EXPANDED for 2021** Standards and Guidelines Related to the Design or Evaluation of Display Systems

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#### **(8) EMERGING TECHNOLOGIES AND APPLICATIONS:**

Papers are solicited for the topics of (i) Novel and Emerging Display Technologies and (ii) Novel Display Applications including, but not limited to, all of the following:

- **NEW for 2021** Novel Applications of Mini and Micro LEDs
- **NEW for 2021** Novel Applications of Flexible, Foldable, and Free-Form Displays and Supporting Electronics
- Application of Meta-Surface and Meta-Optics in Novel Displays
- Advanced Optics and Tunable Active Optic Technologies for Enhanced Vision, Near-to-Eye Displays, and Holography
- Display and Sensor Combinations for Unique Applications (e.g., medical)
- Applications of Artificial Intelligence (AI) and Machine Learning (ML) for Enhancing Imaging, Healthcare, Wellness, and Manufacturing
- Smart Displays and Novel Uses of Embedded Technologies
- Novel Uses of Display Technology for Non-Display Applications
- Multi-Modal Display User Interfaces (e.g., Auditory Displays)
- Display Software Applications (e.g., Image Enhancement)
- Novel Applications

- **Wearable Display Applications and Novel Uses of Near-to-Eye Displays**
- **Medical and Clinical Applications Including Imaging, Diagnostics, Therapy, Remediation, and Quality of Life**
- **Avionics, Military, Automotive, and Ruggedized Display Applications**
- **Applications of Mobile Displays (Smartphones, Tablets, e-Readers, etc.)**
- **New Digital Cinema, Entertainment, Gaming, and TV Applications**
- **Smart Lighting/Solid-State Lighting Applications**
- **Applications of Kiosks, Signage, Transparent, and Tiled Displays**
- **Environmentally Friendly (Green) Display Applications**
- **3D, Stereoscopy, and Holography Display Applications**
- **Novel Ubiquitous Display Applications**
- **Displays for IoT Solutions**
- **Applications of Touch and Distributed Displays**

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#### **(9) EMISSIVE, MICROLED, AND QUANTUM-DOT DISPLAYS (EMQ):**

Advances in materials, processes, designs, and functions of emissive displays, including EL and PL quantum-dot displays, quantum-dot materials, microLED displays, microLED processing, LED displays and video walls, inorganic EL displays, field-emission lamps, field emitters, perovskite materials, and phosphors, are sought. Smart-pixel and smart-display topics are also requested with a focus on the integration of microLEDs, detectors, sensors, micro ICs, and other unique functionalities into emissive displays to create highly integrated semiconductor information displays (HISIDs) to enable outstanding interactive and immersive experiences in new form factors.

- **NEW for 2021** Unconventional Displays and Alternative Applications of Emissive Display Technologies
- **MicroLED Applications and Processing (Devices, Metrology, Materials, and Manufacturing)**
- **Colloidal Quantum-Dot/Nanoparticle Applications and Processing (Components, Devices, Materials, and Manufacturing)**
- **Colloidal Quantum-Dot/Nanoparticle Electroluminescence**
- **Perovskites, Phosphors, Plasma, Field-Emission, and Inorganic EL Displays**
- **Smart Pixels, Smart Displays, and Highly Integrated Semiconductor Information Displays (HISIDs)**

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#### **(10) FLEXIBLE DISPLAYS AND E-PAPER:**

The subcommittee seeks submissions on all aspects of flexible, e-Paper, and wearable display technologies, including flexible, stretchable, bendable, foldable, or rollable display devices (OLED, MicroLED, electrophoretic, MEMS, cholesteric LCD, electrowetting, and other emissive and reflective display devices) and system-level integration of such devices and printed

electronics based on organic and inorganic materials. Advances in flexible-display materials (substrates, transparent conductors, TFTs, encapsulation, barrier layers, and adhesives), printing and novel deposition techniques, manufacturing methods (R2R, bonding, and lift-off), electro-optical effects, sensor technologies and sensor interfaces, driving techniques including ultra-low-power operation, device performance and reliability, ergonomics, and applications for emerging flexible, paper-like, wearable, or stretchable display technologies are also sought.

- **EXPANDED for 2021 Bio/Medical and Ultra-Low-Power Applications of Flexible/Wearable Displays and e-Papers**
- Flexible OLED, MicroLED, QD-LED, and Other Emissive Materials, Displays, and Devices
- Electronic Papers including LCD, EPD, MEMS, and Other Non-Emissive or Emissive Displays and Devices
- System-Level Integration for Flexible, Wearable, Bendable, and Stretchable Display Devices
- Materials and Devices for Textile/Fiber Displays and Electronics
- Flexible Sensors and Wearable Displays
- Flexible Display Components and Materials Including Substrates, Films, Adhesives, Encapsulation, and Barriers
- Organic and Other Solution-Based TFTs, Flexible Active-Matrix Backplanes
- Integration, Packaging, Testing, and Reliability of Flexible Displays and e-Paper
- Flexible-Display Manufacturing of and Equipment for Printed Electronics
- Applications and Ergonomics of Integrated Flexible Electronics
- Flexible and Stretchable Hybrid Electronics
- Materials and Devices for Novel Mechanical UI/UX Technique

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## (11) INTERACTIVE DISPLAYS AND SYSTEMS:

**Interactive Displays** address sensing and interactivity that are *fundamentally integrated* into a display. Examples include:

- **EXPANDED for 2021 Optical Imaging through the Display**
  - Camera under Display for Photo/Video Capture and Fingerprint Sensing
    - Optical System Innovations
    - Image Restoration Algorithms
- Displays with Directly Integrated Output Capabilities:
  - **EXPANDED for 2021 Fingerprint, including Optical, Capacitive, and Ultrasonic Mechanisms**
  - Sensor-in-Pixel (SIP) Techniques, Including Optical and Force Sensors
    - Touch/Force/Stylus
    - Strain/Flex
    - Proximity/In-Air Gesture

- Health and Physiological Monitoring, Including Pulse/Ox, ECG
- Environmental, Including UV Exposure
- Integrated Microphones

### • Displays with Directly Integrated Output Capabilities

- Haptic/Tactile (Including Electrostatic and Vibrotactile Approaches)
- Integrated Speakers

## Touch Controllers, Sensors, Materials, and Processes

involve novel state-of-the-art techniques for sensing touch on a display, with quantitative characterization and discussion of their performance. Topics include:

- Touch Controllers and Electronics (Especially Those Integrated with Other Components Such as the Display Driver)
- Touch Electrode Sensor Design and Geometry
- Transparent Conductors and ITO Alternatives (Metal Mesh, Nanowires, etc.)
- Patterning Methods for Touch Sensors
- Integration Methods with the Display (Direct Lamination/Optical Bonding)
- Substrates (Including Novel Glasses, Flexible Films)
- Investigations of Touch-Sensor Visibility
- Special Considerations for Automotive Applications

**Novel Sensors** that are based on display industry materials or manufacturing techniques and that have a clear path to integration with a display are of interest.

**Novel Interaction Systems and Techniques** that the systems support must be extremely novel or impactful to be considered.

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**(12) LIQUID-CRYSTAL TECHNOLOGY:** Papers are sought on advances in the development of liquid crystal, including electro-optical effects, materials, applications, and devices.

- Flexible, Rollable, and Conformable LCDs
- High Image Quality/Super High Resolution
- Fast-Response-Time and Color-Sequential LCDs
- High-Dynamic-Range and High-Ambient-Contrast LCDs
- Wide-Color-Gamut and QD-Enhanced LCDs
- LC for Automotive Displays
- LC for AR/VR Applications
- Smart Windows
- Display Enhancement
- LC-Based Spatial Light Modulators and Optical Elements
- LC Alignment Technologies
- New LC Materials
- Use of LC Technologies in Sensing Applications
- LC for Nonvisible Wavelength Applications

**(13) ORGANIC LIGHT-EMITTING DIODES:** Papers are sought on materials, display designs, and performance of small-to-large-area OLED panels. Papers that discuss the progress and challenges for OLED display performance and manufacturing issues are of particular interest. Furthermore, papers on OLED signage and OLED lighting solutions are welcome.

- **New AMOLED Display Pixels and Backplanes**
- **OLED TV — Mobile and Large-Area Applications**
- **Novel OLED Materials and Architectures Enabling Emerging OLED Displays**
- **Active- and Passive-Matrix OLED Display Technology**
- **Emerging OLED Displays**
- **OLED Device and Materials Fundamentals**
- **Injection and Transport Mechanisms, Molecular Engineering, and Device Structure**
- **OLED Stability and Degradation Mechanisms**
- **OLED Encapsulation Structure**
- **Foldable, Rollable, and Stretchable OLED**
- **OLED Applications for Lighting**
- **OLED Manufacturing**
- **OLED Systems Packaging, Integration, and Cost Reduction**

## Abstract/Technical Summary Format and Paper Submission Requirements

**General Note:** The selection-rejection decision for a paper is based on its originality, quality, relevance, and completeness.

### TWO OPTIONS FOR PAPER SUBMISSION (Read carefully)

Two options are available for authors who wish to submit papers. Option 1 is designed to streamline the process and allows authors to submit an initial version of their paper in a format that is already appropriate for final submission, instead of submitting the traditional abstract/summary format. If their papers are selected, authors do not need to do anything further, but have the option of submitting a final revised paper, if they wish. Option 2 is the traditional process of submitting a 4-page Technical Summary for review, with the final paper being submitted later after notification of acceptance.

#### OPTION 1

Please follow the instructions and templates available on [www.scomminc.com/pp/pcm/sid.htm](http://www.scomminc.com/pp/pcm/sid.htm) to help in the preparation and submission of the 4-page technical paper. If your paper is selected, this submission will be used as the final Symposium Digest paper unless

a revised version is submitted by March 15, 2021. Note that content-wise, the submission must contain the abstract and the information listed in the bullet points (1) – (7) below under Option 2.

#### OPTION 2

The instructions below outline the submission requirements and can be used instead of Option 1, above. If your paper is accepted, you will receive further instructions for filing your final submission by March 15, 2021. Below are the requirements for Option 2:

**Page Headers:** Please place the first author's name and the title of the paper on the top of each page of the submission.

**Abstract:** Your submitted 35–50 word abstract, highlighting the key details of your paper, will be published in the Program if your paper is accepted. The abstracts will be edited to accommodate the program format.

**Keywords:** Include a minimum of three keywords.

**Technical Summary:** The summary must not exceed 4 pages in length. Material beyond four pages will not be considered in the evaluation of the paper.

**(1)** Include the names of all authors with their affiliations, addresses, telephone numbers, and e-mail addresses. Please underline the name of the presenter when there are two or more authors.

**(2)** Also indicate whether the presenter is a student.

**(3) Objective and Background:** Briefly describe the goals and intent of your project and provide background factors that led to the new results..

**(4) Results:** Describe the specific results that will be presented at the 2021 Display Week Symposium. Please provide a technical description of how the results were achieved. Sufficient detail (quantitative and/or graphical data) should be included so the Program Committee can properly evaluate your submission.

**(5) Impact:** Discuss the significance of your work and compare your findings with previously published work.

**(6) References:** List a few main references covering projects in related areas. We are requesting that authors use the Vancouver citation style.

**(7) Prior Publications:** Generally, Symposium papers must be original contributions. If your organization has published or presented material on similar work in English, please explain how the present material differs. The only exception to this rule is that papers submitted to the Emerging Applications subcommittee need not be original.

#### SUBMISSION PROCESS FOR BOTH OPTIONS

**Once the abstract/technical summary is completed, all authors are required to upload it to**

[www.scomminc.com/pcm/sid/sid.cfm](http://www.scomminc.com/pcm/sid/sid.cfm)

Additional information must be provided on the online submission form. Authors must:

- (A) Enter the full title of the paper.
- (B) Enter the name of the contact author and e-mail.
- (C) List all the authors and include their contact information as requested on the form.
- (D) Place the abstract in the allotted space on the form.
- (E) Enter the keywords in the space provided.
- (F) Check the appropriate box for student travel grant requests.
- (G) Indicate whether your paper is invited.
- (H) Indicate if you wish to have your paper considered for oral or poster presentation, if you have a preference.
- (I) Indicate the closest matching symposium topic from the list included in this Call for Papers along with the appropriate special topic if appropriate.
- (J) Attach a PDF of your technical summary.
- (K) Click on submit.

If you need further assistance, please contact either Bill Klein at [wklein@pcm411.com](mailto:wklein@pcm411.com) or Samantha Tola at [stola@pcm411.com](mailto:stola@pcm411.com).

## Author Timeline

The deadline for receipt of technical summaries/abstracts is December 21, 2020 (February 11, 2021, for Late-News Abstracts/Summaries). Notification of acceptance will be emailed by February 16, 2021 (March 1 for Late-News Abstracts/Summaries). Authors of accepted papers will be directed to an online "Author's Kit" with instructions for the preparation of the paper to be published in the Symposium Digest. The paper shall consist of 4 pages, including all illustrations, and is due no later than March 15, 2021. **Note:** If a revised paper is not received by March 15, the initial summary and abstract submitted will be published in the Symposium Digest.

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## Speaker Responsibilities

All costs associated with your participation at Display Week as a speaker will be at your own expense (including travel, housing, registration fee, etc.).

## Display Week 2021 Features

- Technical Symposium
- Special Topics
- Poster Session
- Keynotes
- Invited Papers
- Distinguished Papers
- Author Interviews
- Short Courses
- Technical Seminars
- Awards Banquet
- Annual Awards Luncheon
- People's Choice Awards
- Exhibition
- Exhibitors' Forum
- I-Zone
- Business Conference
- Women in Tech Panel
- CEO Forum
- Job Fair



## Student Travel Grants

A limited number of student travel grants, up to \$1000 each, will be made available to student presenters of accepted papers. A student travel grant must be requested upon submission of abstracts by checking off the appropriate box on the online submission site. A questionnaire will automatically be generated. Please complete the questionnaire. Only students who submit the questionnaire will be eligible to receive a student travel grant. The deadline for the submission of abstracts is December 21, 2020; February 11, 2021, for Late-News Abstracts/Summaries.

## Deadlines and Key Dates

Abstracts/Summaries .....Dec. 21, 2020  
Late-News Abstracts/Summaries.....Feb 11, 2021  
Accept/Reject Letters .....Feb. 16, 2021  
Late-News Accept/Reject Letters.....Mar. 1, 2021  
Revised Digest Paper Submission .....Mar. 15, 2021  
Display Week 2021 .....May 16–21, 2021  
Sunday Short Courses .....May 16, 2021  
Monday Technical Seminars .....May 17, 2021  
Exhibition/Exhibitors' Forum/I-Zone ..May 18–20, 2021  
Symposium .....May 18–21, 2021