



SID VEHICLE DISPLAYS AND INTERFACES 2024

31st ANNUAL SYMPOSIUM & EXPO

PRELIMINARY PROGRAM

September 10-11, 2024

Huntington Place, Detroit, MI

TUESDAY, SEPTEMBER 10, 2024

7:00 am – 5:00 pm **REGISTRATION OPEN**

7:00 am – 8:30 am **BREAKFAST**

8:05 – 8:15 am **Welcoming Remarks**

Michael Bork, Stellantis, Auburn Hills, MI, US

Kai-Han Chang, General Motors Global R&D, Warren, MI, US

8:15 – 9:00 am **KEYNOTE ADDRESS**

Ken Mayer, Human Factors and Interaction Design Research Supervisor R&A

Digital Vehicle Technology Engineering, Ford Motor Company, Macomb, MI, US

9:00 am – 5:00 pm **TABLETOP EXHIBITS OPEN**

9:00 – 9:20 am **REFRESHMENT BREAK (Exhibit Hall) *Break supported by***



SESSION 1: AUTOMOTIVE MARKET (Invited Addresses) (9:20 – 10:20 am)

Co-Chairs: Kai-Han Chang, General Motors Global R&D, Warren, MI, US

Silviu Pala, Automotive Display, Southfield, MI, US

9:20 – 9:40 am **INVITED ADDRESS: Status of the microLED Industry**

1.1

Eric Virey, Yole Group, Villeurbanne, France

9:40 – 10:00 am **INVITED ADDRESS**

1.2

10:00 – 10:20 am **INVITED ADDRESS**

1.3

M CITY PANEL (10:20 – 10:50 am)

EXHIBITOR PRESENTATIONS (10:50 am – 12:10 pm)

Chair: Michael Boyd, Yazaki North America, Canton, MI, US

12:10 – 1:40 pm LUNCH and TABLETOP EXHIBITS

SESSION 2: HEAD-UP DISPLAYS I (1:40 – 3:00 pm)

Chair: Bruce Banter, Tech-D-P Inc., Northville, MI, US

1:40 – 2:00 pm **Microstructured Components for Head-Up Displays (HUD)**
2.1 Katrin Christiani, temicon GmbH, Dortmund, Germany

2:00 – 2:20 pm **Windshield Holographic Film HUDs, Help Transform EVs' Cost, Safety and Delight**
2.2 Jonathan Waldern, Luminit Inc., Torrance, CA, US

2:20 – 2:40 pm **Detection of Objects Obstructing/Blocking the Reflective Displays in Automobiles**
2.3 Yeshvanth Venkatasubramanya, Harman International, Novi, MI, US

2:40 – 3:00 pm **Runtime Modeling of 2.5D Maps for Immersive 3D Navigation**
2.4 Sunghwan Choi, LG Electronics, Seoul, South Korea

3:00 – 3:20 pm REFRESHMENT BREAK (Exhibit Hall) *Break supported by*



SESSION 3: NEW DISPLAY SOLUTIONS I (3:20 – 4:40 pm)

Chair: Michael Bork, Stellantis, Auburn Hills, MI, US

3:20 – 3:40 pm **From Silicon to Screen: The Role of Semiconductors in Display Evolution**
3.1 Bing Sun, GlobalFoundries, New York, NY, US

3:40 – 4:00 pm **New High Efficiency & High Luminance Segmented Display Technology for HMI and Smart Surface Applications**
3.2 Uli Hiller, ams-OSRAM International GmbH, Regensburg, Germany

4:00 – 4:20 pm **Navigating Innovations and Trends in Automotive Displays and HMI**
3.3 Stacy (You Xiang) Wu, Omdia, Taipei, Taiwan

4:20 – 4:40 pm **Development of Vehicle-to-Pedestrian Communication (V2P) Displays**
3.4 Seo-Young Choi, KIEL Institute, Bucheon, South Korea

4:40 – 5:00 pm

REFRESHMENT BREAK (Exhibit Hall) *Break supported by*



SESSION 4: OPTICAL ADHESIVES/FILMS (5:00 – 5:40 pm)

Chair: Mark Larry, Ford Motor Co., Macomb, MI, US

5:00 – 5:20 pm

4.1

High-Stability Cadmium-Free Quantum Dot Films for Automotive Display Applications

ZhongSheng Luo, Nanosys, Milpitas, CA, US

5:20 – 5:40 pm

4.2

Nanotechnology-Enhanced Anti-Fogging and Anti-Reflection Solution for Improved Automotive Sensing

Nelli Soudakova, Dexerials America Corporation, Santa Clara, CA, US

5:30 – 7:00 pm

EXHIBIT RECEPTION

WEDNESDAY, SEPTEMBER 11, 2024

7:30 am – 12:00 pm

REGISTRATION OPEN

7:30 am – 8:00 am

BREAKFAST

9:00 am – 2:00 pm

TABLETOP EXHIBITS OPEN

8:00 – 8:15 am

Local SID Chapter Awards

Michael Bork, Stellantis, Auburn Hills, MI, US

8:15 – 9:00 am

KEYNOTE ADDRESS

Nikhil Balram, CEO, Mojo Vision

STUDENT PRESENTATIONS (9:00 – 9:30 am)

Chair: Bob O'Brien, Display Supply Chain Consultants, Ann Arbor, MI, US

SESSION 5: METROLOGY & TOUCH (9:30 – 10:30 am)

Chair: Jerzy Kanicki, University of Michigan, Ann Arbor, MI, US

9:30 – 9:50 am

5.1

Correcting AR HUD Image Distortion at the Final Assembly Stage

Bret Stonebridge, Radiant Vision Systems, Redmond, WA, US

9:50 – 10:10 am

5.2

Enhancing Interface Usability: Widget Selection Parameters, MacOS and Windows Design Guidelines, and Research Data

Shiyu Fu, University of Michigan, Ann Arbor, MI, US

10:10 – 10:30 am **Optimized Workflow for Fast and Precise ISO 15008 Contrast Evaluation under Ambient Light**
5.3
Alexander Voelz, TechnoTeam Bildverarbeitung GmbH, Ilmenau, Germany

10:30 – 10:50 am **REFRESHMENT BREAK (Exhibit Hall) *Break supported by***



PANEL DISCUSSION: AI and How It Is Shaping Display Interfaces of the Future (10:50 – 11:20 am)

Moderator: Bob O'Brien, Display Supply Chain Consultants, Ann Arbor, MI, US

SESSION 6: HEAD-UP DISPLAYS II (11:20 am – 12:40 pm)

Chair: Drew Harbach, Peterbilt Motors Co., Argyle, TX, US

11:20 – 11:40 am **Perceived Brightness Comparison of High and Low Chromaticity Head-Up Displays**
6.1
Joe Pullukat, NSI, Troy, MI, US

11:40 am – 12:00 pm **Cyclodisparity's Impact on 3D Displays and HUD Usability**
6.2
Michael Bork, Stellantis, Auburn Hills, MI, US

12:00 – 12:20 pm **Three-Dimensional Augmented Reality Head-Up Display**
6.3
Goksen Yaralioglu, CY Vision, San Jose, CA, US

12:20 – 12:40 pm **Automotive HUD Dynamic Backlight with DLP Products Phase Light Modulator Technology**
6.4
Sam Martin, Texas Instruments Incorporated, Dallas, TX, US

12:40 – 2:00 pm **LUNCH and TABLETOP EXHIBITS**

SESSION 7: NEW DISPLAY SOLUTIONS II (2:00 – 3:20 pm)

Chair: Kai-Han Chang, General Motors Global R&D, Warren, MI, US

2:00 – 2:20 pm **An Invisible Display with High-Definition and High Texture Fidelity**
7.1
Zhiyuan Zhang, Tianma Micro-Electronics Group, Shanghai, China

2:20 – 2:40 pm **Balancing Cost and Quality Goals with Full-Array Local Dimming Displays**
7.2
John Phillips, Faurecia IRYStec Inc., Montréal, Quebec, Canada

2:40 – 3:00 pm **An Automotive Touch and Display Driver Integration IC with Embedded Local Dimming**
7.3
Cheng-Chih Hsu, Himax, Hsichu, Taiwan

3:00 – 3:20 pm **Revolutionizing Automotive Displays and Lighting with Advanced MicroLED Technology**
7.4
Reza Chaji, VueReal, Waterloo, ON, Canada

3:20 – 3:40 pm **REFRESHMENT BREAK (Exhibit Hall) *Break supported by***



SESSION 8: DISPLAY SYSTEMS: COATING, BONDING AND GLASS (3:40 pm – 4:40 pm)

Chair: Michael Koch, DENSO, Southfield, MI

3:40 – 4:00 pm **Black Dimming for Panoramic Smart Sunroof**
8.1
Chih-Haw Wang, BenQ Materials Corp., Taoyuan, Taiwan

4:00 – 4:20 pm **Lamination of Holographic Optical Element Within an Automotive Windshield: Design, Production Trial and Display Performance**
8.2
Janice Tardiff, Ford Motor Company, Dearborn, MI, US

4:20 – 4:40 pm **The Most Sustainable Dynamic Glass for Automotive Glazing and Instrumentation Applications**
8.3
Andrew Loxley, eLstar Dynamics, Eindhoven, The Netherlands

4:40 – 5:00 pm **REFRESHMENT BREAK (Exhibit Hall) *Break supported by***



SESSION 9: DISPLAY SYSTEMS: LIGHTING (5:00 pm – 6:00 pm)

Chair: Eric Miciuda, Continental Corp., Auburn Hills, MI, US

5:00 – 5:20 pm **Dynamic Edge Enhancement Method**
9.1
Ucheol Lee, Visteon, Van Buren Township, MI, US

5:20 – 5:40 pm **Full Area Local Dimming (FALD) Dynamic Halo Mitigation Method**
9.2
Paul Weindorf, Visteon, Van Buren Township, MI, US

5:40 – 6:00 pm **Digital LED: A Cost-Effective and Energy-Efficient Solution for Next-Generation Automotive Displays**
9.3
Ivan-Christophe Robin, ALEDIA, Echirolles, France