

SID VEHICLE DISPLAYS AND INTERFACES 2020

27th ANNUAL SYMPOSIUM & EXPO

PROGRAM

October 14-15, 2020

WEDNESDAY, OCTOBER 14, 2020

All technical content will be published at 8:00 AM EDT

EXHIBITS OPEN

Welcoming Remarks

Silviu Pala, *Automotive Display, Southfield, MI, US*

KEYNOTE ADDRESS

Future Auto Cockpit Human Experiences

John Schneider, *Director – Electrical, Software, Compute, and AI Technologies, Ford Motor Company, Detroit, MI, US*

SESSION 1: AUTOMOTIVE MARKET

Co-Chairs: Silviu Pala, *Automotive Display, Southfield, MI, US*

Michael Boyd, *Yazaki North America, Canton, MI, US*

1.1 INVITED ADDRESS:

Automotive Display Market and User Interfaces Overview

Kyle Davis, *IHS Markit, Southfield, MI, US*

1.2 INVITED ADDRESS:

Automotive Touch Screen, Touchless Control, Micro and miniLED and Smart Windows Market Forecast

Jennifer Colegrove, *Touch Display Research, Inc., Santa Clara, CA, US*

1.3 INVITED ADDRESS:

Display Industry Markets and Technologies - What Auto Display Professionals Need to Know About the Rest of the Industry

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

SESSION 2: DISPLAY AND HMI SYSTEMS

Co-Chairs: Bruce Banter, *Tech-D-P Inc., Northville, MI, US*

Drew Harbach, *Peterbilt Motors Denton, TX, US*

2.1 Reflection Properties of AR Coated Flat and AG Glass Surfaces

Dave McLean, *MAC Thin Films, Santa Rosa, CA, US*

2.2 IoT Intelligent Display Technology

Lingling Zhang, *Tianma, Shanghai, China*

2.3 Display Module with Integrated Driver of Multi-Screen

Liang Zhou, *Tianma, Shanghai, China*

2.4 High Precision Optical Bonding for Free-Form and Curved Displays

Eugen Bilcai, *Henkel KGaA, Madison Heights, MI, US*

2.5 Digitized Styling and Safety with Automotive Exterior Displays

Johnathan Weiser, Richard Nguyen, Kimberly Peiler,
OSRAM Opto Semiconductors, Novi, MI, US

2.6 New Touch Sensors Materials for Automotive Applications

Gerald Morrison, *SigmaSense, Austin, TX, US*

SESSION 3: Head-Up Displays

Co-Chairs: Ross Maunder, *FCA US LLC, Auburn Hills, MI, US*

Dan Cashen, *Continental Automotive Group, Auburn Hills, MI, US*

3.1 Diffusive Microlens Array for Head-Up Display Applications

Jerry Wu, *Dexerials Corporation, Tagajo-shi, Japan*

3.2 Human Perception Studies of Head-Up Display Ghosting

Steve Pankratz, *3M Display Materials and Systems Division, St. Paul, MN, US*

3.3 Computational Holographic Displays for 3D AR HUD Using Free-Form Optics

Hakan Urey, *CY Vision, San Jose, CA, US*

3.4 Holographic Optical Elements and Projector Design Considerations for Automotive Windshield Displays

Ian Redmond, *CERES Holographics, St. Andrews, Scotland, UK*

Sam Martin, *Texas Instruments, Dallas Texas, US*

TUTORIAL on Holography and Its Automotive Applications

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

EXHIBITOR PRESENTATIONS SESSION

Co-Chairs: Bruce Banter, *Tech-D-P Inc., Northville, MI, US*

Eric Miciuda, *Continental Corporation, Auburn Hills, MI, US*

Presentations will be available from the following Exhibitors:

- | | |
|-----------------------------------|-------------------------------|
| - AGC Plasma Technology Solutions | - Lumineq |
| - Dexerials Corporation | - MAC Thin Films, Inc. |
| - ELDIM | - Optics Blazers AG |
| - IHS Market | - Optronic Laboratories, Inc. |
| - Incom | - Panasonic |
| - Instrument Systems Optische | - Radiant Vision Systems |
| Messtechnik GmbH | - SigmaSense |
| Iwatani Corporation of America | - Tanvavs |
| - Keiwa | - TouchNetix Limited |
| - Konica Minolta Sensing Americas | - TT Vision USA |
| - Kyocera Display | - Westboro Photonics |

THURSDAY, OCTOBER 15, 2020

All technical content will be published at 8:00 AM EDT

EXHIBITS OPEN

Local SID Chapter Awards

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

Silviu Pala, *Automotive Display, Southfield, MI, US*

KEYNOTE ADDRESS

Voice of the Consumer | Technology and Mobility Clarity Today and Tomorrow

Kristin Kolodge, *Executive Director of Human-Machine Interface (HMI) and*

Driver Interaction at J.D. Power

SESSION 4: DISPLAY METROLOGY

Co-Chairs: Kimberly Peiler, *OSRAM Opto Semiconductors, Inc., Novi, MI, US*

Vyacheslav Birman, *Continental Corporation, Auburn Hills, MI, US*

4.1 Understanding and Achieving Reproducible Sparkle Measurements for an Automotive Specification

Ingo Rotscholl, *TechnoTeam Bildverarbeitung GmbH, Ilmenau, Germany*

4.2 Measuring MicroLEDs for Color Non-Uniformity Correction

Mike Naldrett, *Radiant Vision Systems LLC, Redmond, Washington, US*

SESSION 5: NEW DISPLAY SOLUTIONS

Co-Chairs: David Lambert, *Panasonic, Farmington Hills, MI, US*

Jerzy Kanicki, *University of Michigan, Ann Arbor, MI, US*

5.1 Supervising (Automotive) Displays to Safeguard Camera Monitor System

Benjamin Axmann, *Mercedes-Benz Cars Group Research,*

Future Technologies, Boeblingen, Germany

5.2 Customized Local Dimming Algorithm and BLU for Automotive Application towards Low Power Consumption and High Visual Quality

Maxim Schmidt, *Institute of Microelectronics,*

Saarland University, Saarbrücken, Germany

5.3 Automotive Smart Surfaces: Conformable HDR Displays and Smart Windows to Activate Almost Any Surface

Paul Cain, *FlexEnable, Cambridge, UK*

5.4 The Functional Safety Designs of Vehicle Display Driver ICs

Cheng-Chih Deno Hsu, *Himax Technologies, Hsinchu City, Taiwan*

5.5 Automotive Dual Cell microZone™ LCD Development

Paul Weindorf, *Visteon Corporation, Van Buren TWP, MI, US*

- 5.6 **A Low-Power Transflective TFT-LCD Based on IGZO TFT**
Lou Tenggang, *Tianma Micro-Electronics Group, Shanghai, China*
- 5.7 **A MicroLED Device with 0mm Border**
TengGang Lou, *Tianma Micro-Electronics Group, Shanghai, China*
- 5.8 **Enabling Features of VueReal MicroLED Technology for Automotive Applications**
Rexa Chaji, *VueReal Inc, Waterloo, Ontario, Canada*
- 5.9 **New Challenges and Testing Solutions for Flexible Vehicle Displays & Interfaces**
Eisuke Tsuyuzaki, *Bayflex Solutions, Alameda, CA, US*
- 5.10 **New Material Solutions for Automotive Displays. Interfaces, and Applications**
Volker Plehn, *SABIC, Wixom, MI, US*
- 5.11 **An Alternative to OLED with Full-Array Local Dimming in Automotive Displays**
Logan Cummins, *Texas Instruments, Dallas, TX, US*

PANEL DISCUSSION

Moderator: Bob O'Brien, *Display Supply Chain Consultants, Ann Arbor, MI, US*
Display and Interfaces for Autonomous Drive Including ADAS
Participants: Members of government, academia, industry

Live Q&A with Panelists and Moderator at 11AM EDT