

# SID VEHICLE DISPLAYS AND INTERFACES 2020

27<sup>th</sup> 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#### 2.2 WITHDRAWN

#### 2.3 WITHDRAWN

#### 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 Maunders, *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
- Dexerials Corporation
- ELDIM
- IHS Market
- Incom
- Instrument Systems Optische Messtechnik GmbH
- Iwatani Corporation of America
- Iwatani
- Konica Minolta Sensing Americas
- Kyocera Display
- Lumineq
- MAC Thin Films, Inc.
- Optics Balzers AG
- Optofidelity
- Optronic Laboratories, Inc.
- Panasonic
- Radiant Vision Systems
- SigmaSense
- Tanvavs
- TechnoTeam Vision USA
- Texas Instruments
- TouchNetix Limited
- 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

Jonathan Huggins, *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 WITHDRAWN

5.7 WITHDRAWN

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