

**SID VEHICLE DISPLAYS AND INTERFACES 2018
25th ANNUAL SYMPOSIUM & EXPO
PROGRAM**

**September 25-26, 2018
Burton Manor Conference Center
Livonia, MI**

TUESDAY, SEPTEMBER 25, 2018

7:30 – 8:30 am **REGISTRATION AND REFRESHMENTS**

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

8:00 – 8:30 am **Welcoming Remarks/25th Anniversary Presentation/Local SID Chapter Awards**
Bob O'Brien, *Display Supply Chain Consultants, Ann Arbor, MI*
Silviu Pala, *Automotive Display, Southfield, MI*

8:30 – 9:15 am **KEYNOTE ADDRESS**
Voice of the Customer: Displays as a Trust Enabler
Kristin Kolodge, Executive Director of Driver Interaction and Human Machine Interface (HMI)
J.D. Power, Troy, MI

9:15 – 9:30 am **Refreshment Break**

SESSION 1: AUTOMOTIVE MARKET (9:30 – 11:00 am)

9:30 – 10:00 am **INVITED ADDRESS**
1.1 Evolving Technologies and Supply Chain in Automotive Display Segments
Brian Rhodes, IHS Markit, Southfield, MI

10:00 – 10:30 am **INVITED ADDRESS**
1.2 Automotive Touch, ADAS, Touchless Control, Smart Windows Market Forecast
Jennifer Colegrove, Touch Display Research, Inc., Santa Clara, CA

10:30 – 11:00 am **INVITED ADDRESS**
1.3 Global Display Industry Markets and Technologies
Bob O'Brien, President
Display Supply Chain Consultants, Ann Arbor, MI

SESSION 2: EXHIBITOR PRESENTATIONS (11:00 am – 12:30 pm)

12:30 – 2:00 pm **LUNCH**

SESSION 3: Poster Presentations (2:00 – 2:45 pm)

- P.1 New Grade of Automotive Optically Clear Adhesives Enable Future Applications**
Will Edmonds and Olivier Wang, *3M, St. Paul, MN*
- P.2 UV-durable, Water Repellent Coatings for Automotive Applications**
Janet Maxwell, *Daikin Automotive Innovation Center, Wixom, MI*
- P.3 UV/Moisture dual curing silicone optical bonding resins for automotive display**
Robert 吴博, *Dongguang Polomo New Materials Technology Development, Dongguan, Guangdong, China*
- P.4 Improvement the Automotive Photo Alignment Image Sticking by Optimizing the Crosslinking of Alignment Layer**
Zhongyi Wan, Jiandong Wang, Fan Tian, Xiongping Li, *Tianma Corporation, Shanghai, China*
- P.5 Polyurethane OCA Suitable for Optical Bonding with Plastic Cover Materials**
Yuke Yabuta, *BANDO Chemical Industries, Ltd., Tokyo, Japan*
- P.6 Functional Films for Vehicle Displays Application**
Nizamidin Jappar, *Kimoto Tech, Cedartown, GA*

2:45 – 3:00 pm **Refreshment Break**

SESSION 4: New Display Solutions (3:00 – 6:00 pm)

- 3:00 – 3:20 pm **Carbon Fiber TIM Thermal Solution Investigation For Maximizing System Power**
4.1
Hiroyuki Ryoson, *Dexerials Corporation, Shimotsuke, Tochigi, Japan*
Robert Wilder, *Dexerials Corporation, Detroit, MI*
Jingting Wi, *Dexerials Corporation, San Jose, CA*

Pengwei Sun and Brian Chu, *Infineon Technologies AG, El Segundo, CA*
Alfred Hesener, *Infineon Technologies AG, Munich, Bavaria, Germany*
- 3:20 – 3:40 pm **Advanced Performance a-Si TFT-LCD Display for High Standard Automotive Applications**
4.2
Baosheng Feng, Yongli Yao, Jiandong Wang, Fan Tian, Meilin Wang, Xiongping Li, *Tianma Corp., Shanghai, China*
- 3:40 – 4:00 pm **Effects of a-Si TFT's Leakage Current on Vehicle Image Sticking**
4.3
Fucheng Lv, Wenjun Dai, Jiandong Wang, Yang Yu, Fan Tian, Xiongping Li, *Tianma Microelectronics CO, Shanghai, China*

- 4:00 – 4:20 pm
4.4 **Requirements on the Characterization of Optical Display Attributes for Automotive Applications**
Ingo Rotscholl, Udo Kruger, *TechnoTeam Bildverarbeitung GmbH, Ilmenau, Germany*
- 4:20 – 4:40 pm
4.5 **A-Si TFT LCDs Freeform Design for Automotive Application**
Shumian Xu, Wenjun Dai, Meilin Wang, *Tianma Micro-Electronics Group, Shanghai, China*
- 4:40 – 5:00 pm
4.6 **Advanced Compensation Technology for AMOLED Automotive Displays**
SJ Tang, *Ignis Innovation Inc., Waterloo, Ontario, Canada*
- 5:00 – 5:20 pm
4.7 **Mini-LED Enhanced High Dynamic Range LCD for Automotive Displays**
Yuge Huang, Guanjun Tan, Shin-Tson Wu, *College of Optics and Photonics, University of Central Florida, Orlando, FL*
- 5:20 – 5:40 pm
4.8 **Curved Display Metrological Challenges**
Michael Becker, Jürgen Neumeier, Martin Wolf, *Instrument Systems GmbH, Munich, Germany*
- 5:40 – 6:00 pm
4.9 **The Curved Automotive Displays; Its Materials and Process 2018**
Takeshi Mori, *SCREEN Laminatech Co., Ltd., Osaka, Japan*

SESSION 5: PANEL DISCUSSION:

New Display and Touch for Multi-Modal HMI –

Situation Awareness and Autonomous Drive Improvements (6:00– 7:15 pm)

- 7:30 – 9:00 pm Optional Dinner at Burton Manor
Additional Charge (See Registration Form)

WEDNESDAY, SEPTEMBER 26, 2018

7:30 – 8:00 am **REGISTRATION AND REFRESHMENTS**

9:00 am – 12:00 pm **TABLETOP EXHIBITS OPEN**

TUTORIAL (8:00 -8:30 am)

8:00 – 8:30 am **Spectral Factors Influencing Visibility and Appearance of Automotive Displays**
John Bullough, *Lighting Research Center, Rensselaer Polytechnic Inst., Troy, NY*

SESSION 6: METROLOGY (8:30 -10:10 am)

8:30 – 8:50 am **Color Optimization of Automotive Displays**
6.1 Bo Shi, Xiongcan Zuo, Rui Xue, Kuochang Yen, Xiaojing Qi, Junrui Zhang, *Chengdu BOE Optoelectronics Technology CO., Chengdu, China*

8:50 – 9:10 am **Border Fade Pattern for a Segmented Active Polarizer Dimmable Lens**
6.2 Brian Hayden, Paul Weindorf, Elijah Auger, *Visteon Corporation, MI*

Pedro Coutino Soto, *AlphaMicron Inc., Kent, OH*

9:10 – 9:30 am **Comprehensive Display Measurement**
6.3 Kevin Lange, *Konica Minolta Sensing Americas Inc., Ramsey, NJ*

Michael Becker, *Instrument Systems GmbH, Munich, Germany*

9:30 – 9:50 am **Understanding and Applying Standards-Based Display Testing for Camera Monitoring Systems**
6.4 Matt Scholz, *Radiant Vision Systems, Redmond, WA*

9:50 – 10:10 am **Influence of the Top Polarizer of a Vehicle Display on its Luminance, Color Gamut and Viewing Angle Performances under Variable Illumination Conditions**
6.5 Pierre Boher and Theirry Leroux, *ELDIM, Hérouville St. Clair, France*

10:10 – 10:20 am **Refreshment Break (Tabletop Exhibits Open)**

SESSION 7: Touch/Driver Interface (10:20 am – 12:00 pm)

10:20 – 10:40 am **Touch and Display Integration for Human Interfaces in Automotive Vehicles**
7.1 Petr Shepelev, *Synaptics Inc., San Jose, CA*

10:40 – 11:00 am **Linear Correlating Infrared Touch Screens**
7.2 Rob McCulloch, Guy Duxbury, Albert David, *A D Metro, Ottawa, Ontario, Canada*

11:00 – 11:20 am **Bringing Conformable Plastic OLEDs to Car Interiors – Benefits and Manufacturing**
7.3
Simon Jones, *FlexEnable Ltd., Cambridge, UK*

11:20 am – 11:40 pm **Localized Haptic Feedback under Flexible Displays for Vehicle Mechanical Button Replacement**
7.4
Mesut Eraslan, Mukulyarma Penmatcha, *Flex Innovation Labs, Milpitas, CA*

11:40 – 1:30 pm **LUNCH**

SESSION 8: HUD (1:30 pm – 2:50 pm)

1:30 – 1:50 pm **EviyOS® Technology for Automotive Exterior Projection**
8.1
Kevin Kruse, *OSRAM Opto Semiconductors Inc., Novi, MI*

1:50 – 2:10 pm **Mass Production of Holographic Transparent Components for Automotive Applications**
8.2
Ryder Nesbitt, *Luminit LLC, Torrance, CA*

2:10 – 2:30 pm **Head UP Display Challenges Lead to New Solutions**
8.3
John VanDerlofske, *3M, St. Paul, MN*

2:30 – 2:50 pm **Opportunities and Challenges to Achieve a Cluster-less Vehicle Through the Use of a HUD Only Implementation**
8.4
Joseph Pullukat and Shinichi Tanaka, Applications Engineering Department
NS International, Ltd., Troy, MI

SESSION 9: OPTICAL ADHESIVES/FILMS (2:50 pm – 5:10 pm)

2:50 – 3:10 pm **Room Temperature Curable Liquid Optically Clear Adhesives for Automotive Display**
9.1
Brandon Swatowski and Makoto Yoshitake, *Dow Chemical, Midland, MI*

3:10– 3:30 pm **Development of Novel Optical Bonding Process for Free-Form, 2.5D, and 3D Displays**
9.2
Tomoyuki Toyoda, Masakatsu Wakairo, Jingting Wu, *Dexerials America Corporation, San Jose, CA*

3:30– 3:50 pm **Direct Laminated Reflective Polarizer Film: Improving Vehicle LCD Display Quality**
9.3
Steve Pankratz *3M, St. Paul, MN*

- 3:50– 4:10 pm
9.4
Evaluation of Cover Glass Surface Treatment Options for Auto Interior Displays
Antoine Lesuffleur and Cheng-Chung Li, *Corning Incorporated, Corning, NY*
- 4:10– 4:30 pm
9.5
Ultra-Thin Cu-Doped Ag for Flexible Transparent Electrodes Featuring High Transmission and Stabilities
Chengang Ji, 2017 Award Recipient, *University of Michigan, Ann Arbor, MI*
- Cheng Zhang, Qingyi Cui, Zhong, Zhang, L. Jay Guo, *University of Michigan, Ann Arbor, MI*
- Heyan Wang and Zhengang Lu, *Harbin Institute of Technology, Harbin, China*
- Jianhua Wu and Yue Yan, *Beijing Institute of Aeronautical Materials, Beijing, China*
- 4:30– 4:50 pm
9.6
oDLC Coatings on Infotainment Displays
Paul Markoff Johnson, *Intevac, Inc., Santa Clara, CA*
- 4:50– 5:10 pm
9.7
Active Circular Polarizer OLED E-Mirror
Paul Weindorf, Qais Sharif, Elijah Auger, Brian Hayden, *Visteon Corporation, MI*
- Pedro Coutino Soto, *AlphaMicron Inc., Kent, OH*