

**SID VEHICLE DISPLAYS AND INTERFACES 2018**  
**25<sup>th</sup> 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/25<sup>th</sup> 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 and Servey Bolotov, *Dexerials Corporation, Shimotsuke, Tochigi, Japan*  
Robert Wilder, *Dexerials Corporation, Detroit, MI*  
Jingting Wu, *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: Featured Speaker Followed by Open Audience Interaction**

- 6:00– 7:15 pm            **Design of Automation Behavior and Interfaces in Support of Human-Machine Teaming**  
Dr. Nadine Sarter, *University of Michigan, Ann Arbor, MI*
- 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 – 11:40 am)**

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 am   **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**  
Steve Pankratz, *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**  
John VanDerlofske, *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*