February 5-8, 2018
Big Island, Hawaii

The Best of Today, A Preview of Tomorrow

Monday, February 5th

**Designates Distinguished Speaker*

TIME	LOCATION	
12:00p-5:30p	Foyer	**REGISTRATION**
		Plenary Session **Chair: Chuck Bauer, Ph.D., TechLead Corporation**
2:00p-2:35p	Lehua/Hau	**From Weapons to Wirebonds: How Global Security Drives Innovation, Supply, and Demand** Martin Goetz, Northrop Grumman Corporation
2:35p-3:10p		**Enabline Information Age through Advanced Packaging Technologies and Electronic Materials** Rozalia Beica, Dow Chemical
3:10p-3:45p	Lehua/Hau	**The Latest Material Technologies For System in Package** *Osamu Suzuki, Namics Corporation
3:45p-4:00p	Courtyard	**Refreshment Break**
4:00p-4:35p	Lehua/Hau	**Management of Complexity in Research and Development** *Verena Hein, 4academy
4:35-5:10p	Lehua/Hau	**Selected Highlights From the 2017 iNEMI Roadmap and Projects to Address Identified Gaps** Bill Bader, iNEMI
5:30p-6:30p	Breezeway	**WELCOME RECEPTION**

Tuesday, February 6th

TIME	LOCATION	Session 1 - Automotive Systems & Hardware Chair: *Kirsten Weide-Zaage, Ph.D., University of Hannover	LOCATION	Session 2 - Materials & Reliability Chair: K. N. Chiang, Ph.D., National Tsing Hua University
8:30a-9:00a	Lehua/Hau	**A Flowers of Sulfur Corrosion Chamber For Testing Electronic Hardware** *Prabjit Singh, Ph.D., Larry Palmer, IBM Corporation; Haley Fu, iNEMI; Dem Lee, Jeffrey Lee, iST-Integrated Service Technology, Inc.; Karlos Guo, Jane Li Lenovo, Limited Corporation; Simon Lee, Geoffrey Tong, The Dow Chemical Company; *Chen Xu, Nokia	Milo	**Intermetallic Compound Formation and Mechanical Property of Sn-Cu-xCr/Cu Lead-Free Solder Joint** Bang Junghwan, Dong-Yurl Yu, Yong-Ho Ko, Min-Su Kim, Hiroshi Nishikawa, Chang-Woo Lee Korea Institute of Industrial Technology
9:00a-9:30a	Lehua/Hau	**Long-Term Isothermally Aged Concerns for SAC Lead-Free Solder in Harsh Environment Applications** *John Evans, Ph.D., Auburn University	Milo	**Reliability Engineering Techniques for Consumer Products** *John Cooper, P.E. CRE, MSEE, Ops A La Carte, LLC
9:30a-10:00a	Lehua/Hau	**Enhanced Driver Safety With Advanced Vision Systems** *Dwight Howard, Delphi Automotive, LLC	Milo	**Using Cpk and Cpk Confidence Intervals to Evaluate Stencil Printing** *Ron Lasky, Ph.D., P.E., Chris Nash, Indium Corporation
10:00a-10:15a	Courtyard	**REFRESHMENT BREAK**		
10:15a-10:45a	Lehua/Hau	**"New Automotive" - Considerations for Reliability, Robustness and Resilience for CMOS Interconnects** *Verena Hein, X-FAB AG; Hélène Frémont, Ph.D., Université de Bordeaux *Kirsten Weide-Zaage, Ph.D., University of Hannover;		
11:00a-11:45a	Lehua/Hau	**Symposium Keynote I :** **Honda's New Mobility System Development Challenge;** **Key Functions and Devices for Intelligent Mobility System** Yoshiaki Sakagami, Honda Chair: Yasumitsu Orii, Ph.D., NAGASE Group		
11:45a-12:45p	Breezeway	**LUNCH BREAK**		
		Session 3- Inspection & Test Techniques Chair: *Dag Andersson, Ph.D., Swerea IVF AB		**Session 4- Cleaning Technologies** Chair: *Raiyo Aspandiar, Ph.D., Intel Corporation

12:45p-1:15p	Lehua/Hau	**IPC-1782 Standard for Traceability of Critical Items Based on Risk** *Cameron Shearon, Shearon-Consulting		Milo	**Cleanliness Testing for Process Acceptability** *Mark McMeen, Jonnie Johnson, Collin Langley, STI Electronics; *Mike Bixenman, DBA, David Lober, Kyzen Corporation
1:15p-1:45p	Lehua/Hau	**The Development of Test Methodologies for Determining the Formulations and Mechanical Properties of Lead Free Nano Solder** Sammy Shina, Ph.D., P.E., Irtiza Akhtar, UMASS Lowell		Milo	**Evaluation of No-Clean Flux Residues Remaining after Secondary Operations** *Phil Isaacs, Jennifery Porto, IBM Corporation; *Terry Munson, Foresite, Inc.
1:45p-2:15p	Lehua/Hau	**Advances in Computer Tomography (3D) for Demanding Electronics Applications** *Keith Bryant, Yxlon International GmbH		Milo	**Ion Chromatography Component Specific Cleanliness Testing for Process Acceptability** *Mike Bixenman, DBA, Dave Lober, Kyzen Corporation; *Mark McMeen, Collin Langley, STI Corporation
2:15p-2:45p	Lehua/Hau	**Recent Applications of Fourier Domain Imaging of Microelectronic Devices** Janet Semmens, Sonoscan, Inc.		Milo	**Problems with R.O.S.E. Testing using Today's Fluxes** *Todd Rountree, *Steve Stach Austin American Technology Corporation
2:45p-3:00p	Courtyard	**REFRESHMENT BREAK**			
		Session 5- Advanced Materials Chair: *Ron Lasky, Ph.D., P.E., Indium Corporation			
3:00p-3:30p	Lehua/Hau	**Oxygen Vacancy Migration in MLCCs** *Dock Brown, CRE, DfR Solutions			
3:30p-4:00p	Lehua/Hau	**Intermetallic Information of SN Solder on Cu-XNI for a Harsh Enviroment Composite Solder Paste** Stephanie Choquette, Ph.D., Iowa State University; Iver Anderson, Ph.D., Ames Laboratory (USDOE)			
4:00p-4:30p	Lehua/Hau	**Resistivity Stain Analysis of Graphene - Based Ink Coated Fabrics for Wearable Electronics** *Martine Simard-Normandine, Ph.D., S. Ferguson, MuAnalysis Inc.; K. Manga, Q.-B. Ho Grafoid			
4:30p-5:15p	Lehua/Hau	**Low Melt Solder Applications and Reliability Panel** **Moderator:** Ron Lasky, Ph.D., P.E., Indium Corporation **Panelists:** Iver Anderson, Ph.D., Ames Laboratory *John Evans, Ph.D., Auburn University *Dwight Howard, Delphi Automotive *Todd Roundtree, Austin American Technology Corporation *Prabjit Singh, Ph.D., IBM Corporation			

Wednesday, February 7th

TIME	LOCATION	Session 6- Interposer & Packaging Technology Chair: Osamu Suzuki, Namics Corporation		LOCATION	Session 7- Advanced Processes & Packaging Chair:*Martine Simard-Normandine, Ph.D., MuAnalysis Inc.
8:30a-9:00a	Lehua/Hau	**Disparities in Packaging Technologies and the Alternative Methods for Assembly: The AREA Consortium Roadmap** *David Vicari, Universal Instruments		Milo	**Development of High Reliability Photosensitive Polymide for RDL of FO-WLP** Masao Tomikawa, Ph.D., Toray Industries
9:00a-9:30a	Lehua/Hau	**Highly Accurate Wiring Fabrication Technologies By Plasma Dry Processes for 3D-IC and Fan-Out Packaging** Yasuhiro Morikawa, ULVAC, Inc.		Milo	**Challenges in Material Selection for SiP Applications** Sze Pei Lim, Andy Mackie, Ph.D., Kenneth Thum, Indium Corporation
9:30a-10:00a	Lehua/Hau	**Process, Geometry and Stack Related Reliability of Thick AlCu-Metal-Tracks** *Kirsten Weide-Zaage, Ph.D., University of Hannover; *Verena Hein, X-FAB AG		Milo	**Robotic Soldering of Lead Free Alloys** Thomas Truman, Kar Lin Chia, Ban Leong Choo, Sooi Jin Lee, Cynthia Tan Sok Luang, Ming Siew Tan, Kelvin Ho Ngee Boon, Venture Corporation Limited
10:00a-10:15a	Courtyard	**REFRESHMENT BREAK**			
10:15a-10:45a	Lehua/Hau	**Smart Access to Small Lot Manufacturing For Systems Integration** *Dag Andersson, Ph.D., Swerea IVF AB		Milo	**Impact on Water Cooled Heatsink Design from SMT Component Movement During Reflow** Joe Fuller, Intel Corporation
11:00a-11:45a	Lehua/Hau	**Symposium Keynote II:** **Integrated Intelligent Transportation And Key Enablers** *Dwight Howard, Delphi Automotive, LLC Chair: *Dock Brown, CRE, DfR Solutions			
11:45a-12:45a	Breezeway	**LUNCH BREAK**			
		Session 8- Advanced Packaging & Processes Chair: *Viktoria Rawinski, Ersa GmbH			

12:45p-1:15p	Lehua/Hau	**Influence of Electroless Pd Plating Thickness on Solder Ball Joint Reliability** *Yoshinori Ejiri, Takehisa Sakurai, Yoshinori Arayama, Yoshiaki Tsubomatsu, Kiyoshi Hasegawa, Hitachi Chemical Co., Ltd.
1:15p-1:45p	Lehua/Hau	**Fabrication of 2D and 3D Inductors for DC-DC Converters Integrated on Glass Interposer** Vincent Lafage, Ph.D., Dominique Drouin, Yann Beilliard, Laboratoire Nanotechnologies Nanosystemes (LN2) Université de Sherbrooke
1:45p-2:15p	Lehua/Hau	**Design and Reliability Assessment of Stacked Fan-Out Packaging** Pao Hsiung Wang, Ph.D., An Huang, Kuo-Ning Chiang, Department of Power Mechanical Engineering, National Tsing Hua University
2:15p-2:45p	Lehua/Hau	**Uniformity Consideration in Capacitively Coupled Plasma Part I** Jack Zhao, Ph.D., Nordson March
2:45p-3:00p	Courtyard	**REFRESHMENT BREAK**
		Session 9- Advanced Process Chair: *Keith Bryant, Yxlon International GmbH
3:00p-3:30p	Lehua/Hau	**Deposit Properties of New Electroless Au/Pd/Au Process for Fine Line Application** Tatsushi Someya, Katsuhisa Tanabe, C. Uyemura & Co., Ltd.
3:30p-4:00p	Lehua/Hau	**Etching Behaviors of Galvanic Coupled Metals in PCB Applications** Jae-Ho Lee, Ph.D., Hongik University
4:00p-4:30p	Lehua/Hau	**Pb-Free Solders and Other Joining Materials for Potential Replacement of High-Pb Hierarchical Solders** Iver Anderson, Ph.D., Ames Laboratory (USDOE), Stephanie Choquette, Iowa State University; Kathlene L. Reeves and Carol Handwerker, Purdue University
4:30p-5:00p	Breezeway	**MAI TAI BAR AND NETWORKING**

Thursday, February 8th

TIME	**LOCATION**	**Session 10- Heterogeneous Integration** Chair: *Eddie Kobeda, Ph.D., Nypro, A Jabil Company
8:30a-9:00a	Lehua/Hau	**Heterogeneous and Homogeneous Package Integration Technologies at the Device and System Levels** *Rao Tummala, Ph.D., Georgia Institute of Technology
9:00a-9:30a	Lehua/Hau	**Packaging MEETS Heterogeneous Integration Driving Direction for Advanced System in Packages** Jürgen Wolf, P.E., Fraunhofer IZM
9:30a-10:00a	Lehua/Hau	**A Study on the Novel Anchoring Polymer Layer (APL)** *Kyung Paik, Ph.D., KAIST
10:00a-10:15a	Courtyard	**REFRESHMENT BREAK**
10:15a-11:00a	Lehua/Hau	**iNEMI Project on Process Development of BiSn-Based Low Temperature Solder Pastes - Part II: Characterization of Mixed Alloy BGA Solder Joints** *Raiyo Aspandiar, Ph.D., Shunfeng Cheng, Bill Hardin, Scott Mokler, Ph.D., P.E., Jagadeesh Radhakrishnan, Kok Kwan Tang, Intel; Haley Fu, iNEMI; Jimmy Chen, Cooper Bussmann; *Richard Coyle, Ph.D., Nokia; *Morgana Ribas, Alpha Assembly Solutions; Brook Sandy-Smith, Anny Zhang, Indium Corporation; Mark Krmpotich, Microsoft Corporation; Greg Wu, Rantec Power Systems; Wilson Zhen, IBM Procurement China Limited; Qin Chen, Eunow; Sophia Feng, Celestica
11:00a-11:45a	Lehua/Hau	**Symposium Keynote III:** **Cost Effective Solutions for SiP and Miniaturized Modules** Dongkai Shangguan, Ph.D., Flex Chair: *Dwight Howard, Delphi Automotive, LLC
12:00p		**Conference Concludes**
6:00p-9:00p	Pool Side	**Private Luau**