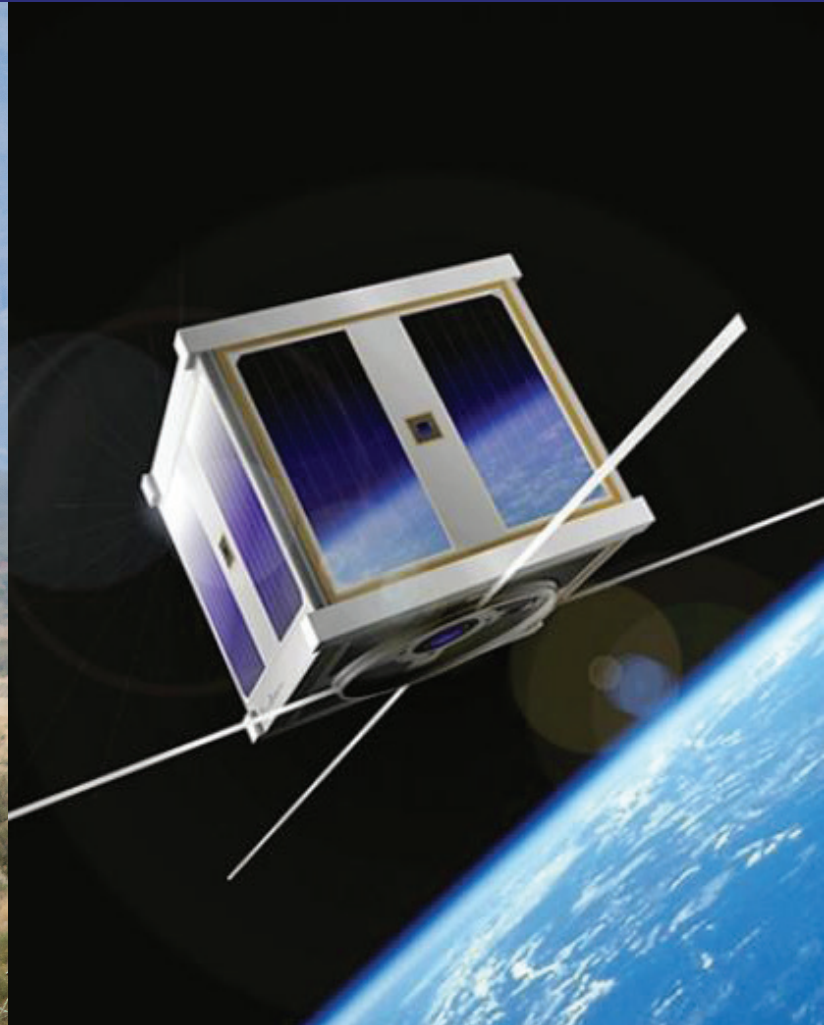


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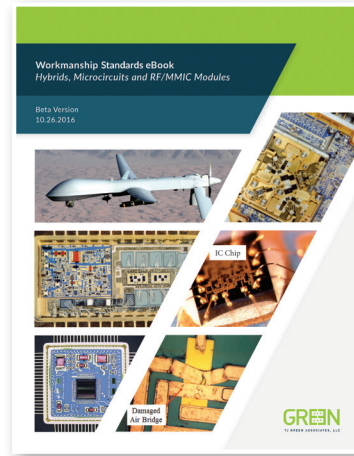
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Dear Military and Space Electronics Professionals,

On behalf of the Program Committee I would like to personally welcome everyone to this year's 22nd annual CMSE Conference and Exhibition. This is an interactive event that requires full participation from the attendees as well as the speakers and exhibitors. The idea is to promote broad discussion about grass root technical issues we all face together in this industry. So please take the time to listen, ask good questions and don't hesitate to respectfully challenge each other's ideas and technical opinions. I'd like to personally thank our sponsors and exhibitors for supporting CMSE. On a programming note an electronic copy of all the presentations will be sent via a secure link to all attendees after completion of CMSE 2018.

I look forward to speaking to each and everyone. Welcome!



Thomas Green,
Program Chairman

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20 KEYNOTE
18 SPEAKERS

PROFESSOR RAO R. TUMMALA is a Distinguished and Endowed Chair Professor at Georgia Institute of Technology in the USA. He is well known as an industrial technologist, technology pioneer, and educator. Prior to joining Georgia Tech, he was Director of Advanced Packaging at IBM and an IBM Fellow, pioneering such major technologies as the industry's first plasma display and the first and next two generations of 100 chip multi-chip packaging. He is the father of LTCC and System-on-Package (SOP) technologies. As an educator, Prof. Tummala was instrumental in setting up the largest Academic Center funded by NSF as NSF Engineering Research Center in Electronic Systems at Georgia Tech, producing more than 1500 engineers, with an integrated approach to research, education and industry collaborations with companies in US, Europe, Japan, Korea and Taiwan. He has published 800 technical papers and invented many technologies that resulted in over 110 patents, wrote the first modern textbook in packaging, Microelectronics Packaging Handbook (1988); the 1st undergrad textbook, Fundamentals of Microsystem Packaging (2001); and the 1st book introducing the concept of SOP, Introduction to System-on-Package (2006). He received more than 50 Industry, Academic and Professional Society awards. He is a member of NAE and IEEE Fellow.

DR. ANDUIN TOUW, BOEING is a Technical Fellow in Component Engineering and Electronics Reliability at The Boeing Company. She has a MS in Statistics from UCLA and a PhD in Reliability Engineering from University of Maryland. She is chair of the SAE SSTC G12 committee on solid state electronics and SAE G24 committee on Pb-free Risk Mitigation. She led the development of GEIA-STD-0005-2 on tin whisker risk mitigation and has developed standard approaches for managing semiconductor wear out, non-hermetic parts in space applications, use of parametric data for quality evaluation, and other technology insertion activities.

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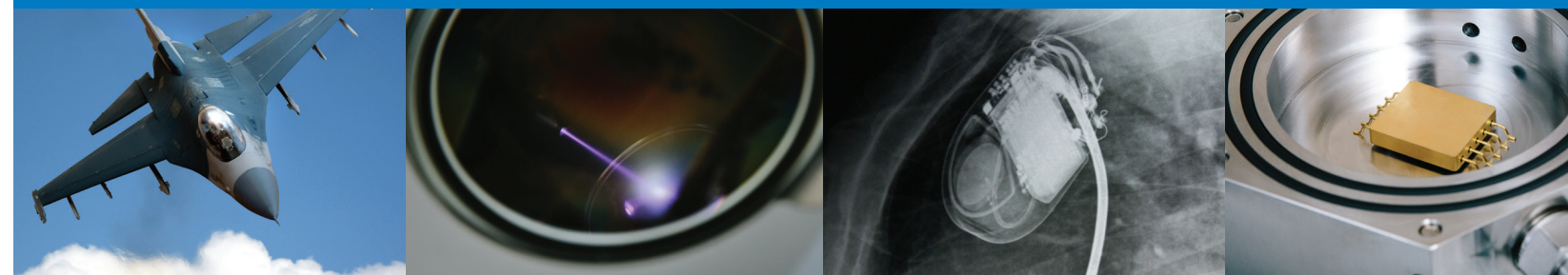
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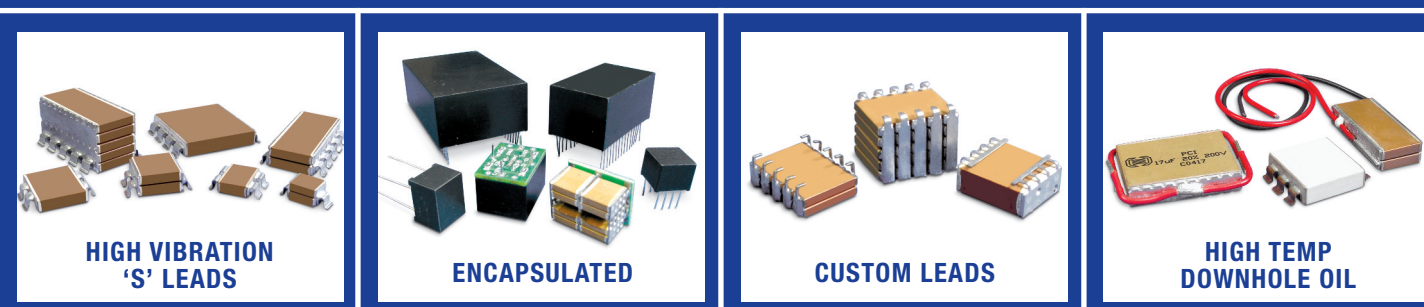
MONDAY, MAY 7

1300 - 1700	Session A Moisture in Microelectronics...Physics and Chemistry of Volatile Species in Hermetic Devices	Thomas J Green <i>TJ Green Associates LLC</i> Robert Lowry <i>Electronic Materials Consultant</i>
	Session B Mission Assurance for Small Satellites – Balancing Cost, Risk and Uncertainty (i.e., More Risk)	Michael Swartwout <i>Saint Louis University</i>

TUESDAY, MAY 8

0700 - 0800	BREAKFAST AND REGISTRATION	
0800 - 1200	Session A Advanced Integrated Circuit Packaging and Reliability Issues	Richard Rao <i>Microsemi Corp.</i>
	Session B Attributes and Challenges of Polymer Electrolytic Capacitors in High Reliability Applications	Mitch Weaver <i>AVX Corporation</i>
1300 - 1700	Session A Passive Components and Integration for Power and RF Modules	P. Markondeya Raj <i>Georgia Tech – Packaging Research Center</i>
	Session B Copper Wirebonding – A Technology Review	Mukul Saran <i>Texas Instruments</i>

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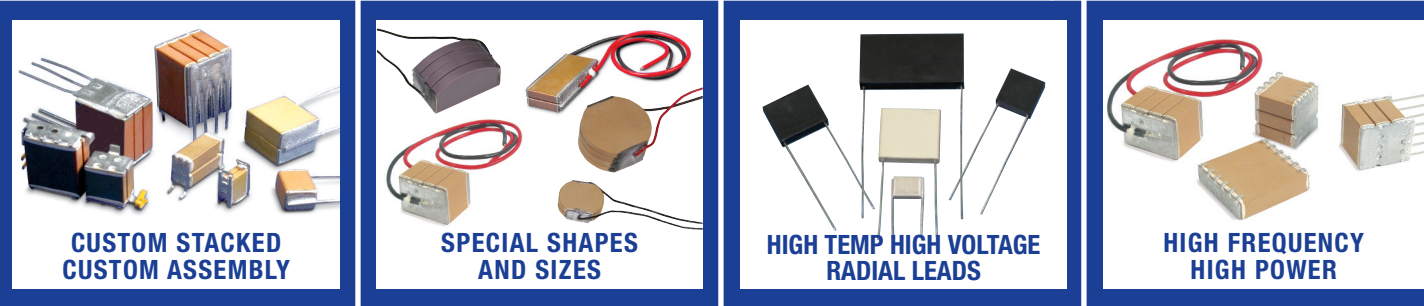
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2018 PRESENTATION SCHEDULE

WEDNESDAY, MAY 9
EXHIBITOR HOURS: 1100 - 1900

0800 - 0810	Welcome/Intro	
0810 - 0840	Keynote Packaging and Heterogeneous Integration During and Post Moore's Law Era	Prof. Rao R. Tummala <i>Georgia Institute of Technology</i>
Session Chair - Paul Enquist, Xperi Inc.		
0840 - 0905	1.0 iPhone X - Steve Jobs' iPhone	Dr. Bill Cardoso <i>Creative Electron</i>
0905 - 0930	1.1 DPA Techniques for Next Generation Packaged Components	Trevor Devaney <i>Hi-Rel Laboratories</i>
0930 - 0955	1.2 Considerations for 3-D Multi-Chip Modules for High Reliability Applications	Joseph Castaldo <i>Data Device Corporation</i>
0955 - 1010	COFFEE BREAK - SPONSORED BY EXXELIA	
1010 - 1035	1.3 Freebird "Evolution of Rad Hard GaN Power Technologies" Update 2018	Jim Larrauri <i>Freebird Semiconductor Corporation</i>
1035 - 1100	1.4 Highly Integrated RF and Digital Architectures	Lorne Graves <i>Mercury Systems</i>
1100 - 1125	1.5 3D X-ray Analysis for Advanced Package Failures	Cheryl Hartfield <i>Carl Zeiss SMT</i>
1125 - 1150	1.6 Counterfeit Mitigation Testing on FPGAs using Advanced Electrical Testing Algorithms	Joe Holt <i>Integra Technologies LLC</i>
1150 - 1345	LUNCH - IN EXHIBITS AREA	
Session Chair - Sultan Ali Lilani, Integra Technologies LLC		
1345 - 1400	1.7 Applications of MIP Decapsulation in Device Quality Control and Failure Analysis	Jiaqi Tang <i>JIACO Instruments B.V., the Netherlands</i>
1400 - 1415	1.8 Introduction of Copper Alloy Bonding Wire for the High Rel Industry	William Crockett <i>Tanaka</i>
1415 - 1540	1.9 Copper Wirebond Panel Discussion Session Moderators: Sultan Ali Lilani, Integra Technologies LLC; Jeff Jarvis, US Army AMRDEC, Robert Varner, Troy 7, Inc. and Mukul Saran, Texas Instruments	
1540 - 1555	COFFEE BREAK - SPONSORED BY EXXELIA	

Session Chair - Mike Cozzolino, Raytheon Company		
1555 - 1620	2.0 A Novel RoHS Compliant K~4000 X7R Dielectric Compatible with 80%Ag/20%Pd Internal Electrodes for High Reliability PME MLCC Applications	Anton V. Polotai <i>MRA Laboratories, Inc</i>
1620 - 1645	2.1 Cracking Problems and Mechanical Characteristics of PME and BME Ceramic Capacitors	Alexander Teverovsky <i>NASA</i>
1645 - 1710	2.2 Miniaturization of PME Ceramic Capacitors for Space and Defense Applications	Maud Fabre <i>Exxelia Group</i>
1710 - 1735	2.3 Multi Layer Ceramic Capacitors for Space Level Applications utilizing Base Metal Electrodes	John Marshall <i>AVX Corporation</i>
1735 - 1800	2.4 Evaluation of Automotive Grade Ceramic and Tantalum Chip Capacitors for Space Applications	Michael Sampson & Jay Brusse <i>NASA</i>
1800 - 2000	WELCOME RECEPTION	

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20 PRESENTATION 18 SCHEDULE

THURSDAY, MAY 10
EXHIBITOR HOURS: 1000 - 1400

0800 - 0830	Keynote Role of Standardization in 21st Century Mil-Aero Electronics	Dr. Anduin Touw <i>The Boeing Company</i>
Session Chair - Ron Demcko, AVX Corporation		
0830 - 0855	To Be Announced	
0855 - 0920	3.1 MIL-STD-981 "Space Level or Not?"	Mike Cozzolino <i>Raytheon Company</i>
0920 - 0945	3.2 COTS Developments in Hi-Rel Applications	Scott Harris <i>Vanguard Electronics</i>
0945 - 1010	3.3 Root Cause Analysis of SMT RF Inductors, Exhibiting Resonance Failures	Aaron Dermarderosian <i>Raytheon Company - Space and Airborne Systems</i>
1010 - 1025	COFFEE BREAK	
1025 - 1050	3.4 Specialized Design and Verification Methods Break Performance Limits of Catalog Magnetics	Victor Quinn <i>Exxelia Group</i>
1050 - 1115	3.5 Attributes and Challenges of Polymer Electrolytic Capacitors in High Reliability Applications	Mitch Weaver <i>AVX Corporation</i>
1115 - 1140	3.6 Advanced Packaging Technology to Attach Electrical Surface Mount Components Directly to Electrical Connectors	Kevin Foreman <i>Quell Connector</i>
Session Chair - Tim Flaherty, Golden Altos		
1140 - 1205	4.0 Tin Whisker Growth from Sn-In-Ag Solder	Lyudmyla Panashchenko <i>NASA</i>
1205 - 1335	LUNCH - IN EXHIBITS AREA	
1335 - 1400	4.1 DLA's Generalized Emulation of Microcircuits (Solution for Microcircuit Obsolescence)	Jennifer Willette <i>SRI International</i>
1400 - 1425	4.2 Trust in FPGAs: Assurance in your Supply Chain	Steven McNeil <i>Xilinx, Inc.</i>
1425 - 1450	4.3 Long Term Storage of EEE-components for Space Applications	Anastasia Pesce <i>European Space Agency</i>
1450 - 1505	COFFEE BREAK	

1505 - 1530	4.4 Legacy System Sustainment- CCA / Sub-system COTS Counterfeit Inspection & Risk Mitigation	Aaron Dermarderosian <i>Raytheon Company - Space and Airborne Systems</i>
1530 - 1555	4.5 When Will Hydrogen Bring Down Your Components?	Robert Lowry <i>Electronics Materials Consultant</i>
1555 - 1620	4.6 Low Temperature Direct Bond Technology for Reliable High Performance 2.5 and 3D Military and Space Electronics	Paul Enquist <i>Xperi</i>
1620 - 1645	4.7 ES Components Acquisition of Vishay Siliconix Hermetic Product Portfolio, Including All MIL-PRF-19500 and MIL-PRF-38535 Devices; Portfolio Strategy for the Future	Don Larson <i>ES Components</i>
1645 - 1710	4.8 Military & Space Electronics Reliability without Military Component Specifications	Leon Hamiter <i>Components Technology Institute Inc.</i>
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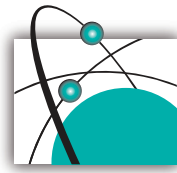
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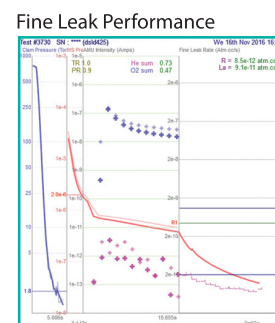
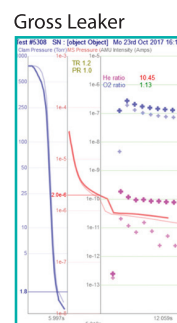
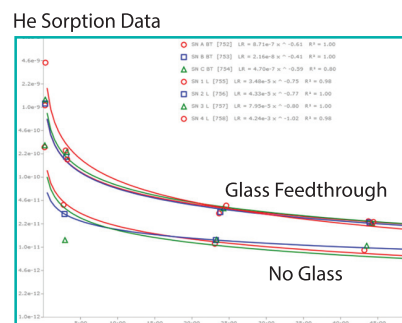
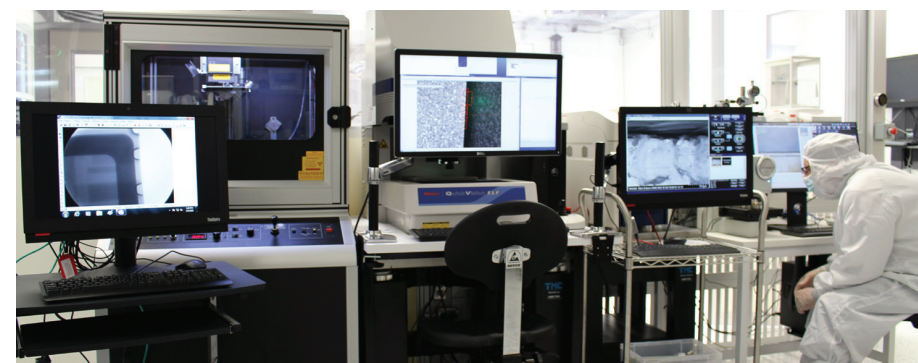
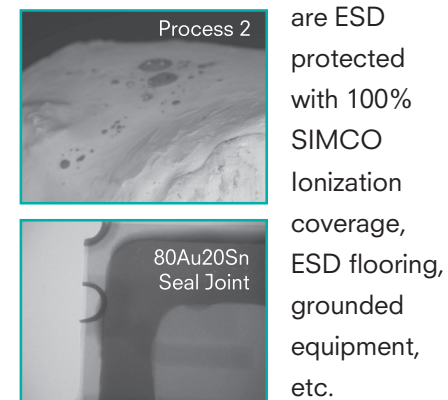


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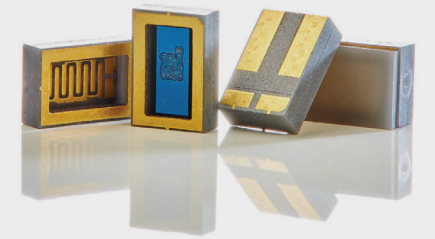
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