IMAPS New England
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Session A SURFACE MOUNT TECHNOLOGY 9:00 a.m. to 12:00 noon
Session Chair: Michael G. Jansen (SMTA); Lucent Technologies, Westford, Massachusetts

“A Practical Guide to Achieving Lead-Free Electronics Assembly”
David Suraski dsuraski@aimsolder.com; AIM Specialty Materials, Cranston, Rhode Island

“Massachusetts Lead Free Consortium”
Sammy Shina sammy_shina@uml.edu; University of Massachusetts, Lowell, MA

“Lead Free Reflow Process Control”
Karl Fischbeck Karl.Fischbeck@ecd.com; Electronic Controls Design, Milwaukie, OR

“2D Off-line X-ray Inspection in the SMT Production Line: Working Towards the Zero-Defect Goal”
Jon Dupree j.dupree@feinfocus.com; FeinFocus

“Productivity Enhancement through Machine Optimization”
Michael S. Sivigny msivigny@eagle-eyed-one.com; Eagle-Eyed One Sales & Service, Hudson, NH

Session B THICK FILM & LTCC TECHNOLOGY 9:00 a.m. to 12:00 noon
Session Chair: David Ross; BTU International, North Billerica, Massachusetts

“A Case Study of Lead-free Thick Film Conductors with Lead-containing and Lead-free Solders”
Peter Bokalo pbokalo@4cmd.com; Heraeus Incorporated Circuit Material Division, West Conshohocken, PA

“Ceramic Resistors and capacitors Embedded in organic Printed wiring boards”
Diptarka Majumdar Diptarka.Majumdar@usa.dupont.com, William Borland, John J. Felten, Lynne E. Dellis, Saul Ferguson, Alton B. Jones, Richard R. Trayler, Mark S. Lux, Marc Doyle; DuPont Microcircuit Materials, Research Triangle Park, NC

“New Low Cost Surge Resistive Inks”
Michail Moroz morozm@ferro.com, Aziz Shaikh shaikha@ferro.com.; Rob Hodder hodderr@ferro.com; Ferro Electronic Material Systems, Vista, CA

“Mixed Metal, Low Loss Green Tape™ Systems for Military, Automotive and Wireless Applications”
Daniel I. Amey, Michael A. Smith, Kenneth E. Souder, Timothy P. Mobley, Christopher R.S. Needes; DuPont Microcircuit Materials, Research Triangle Park, NC

“Advances in Low Temperature Co-Fired (LTCC) for Ever Increasing Microelectronic Applications”
Steve Annas steve.annas@kyocera.com; Kyocera America, Beaverton, OR

Session C MEMS TECHNOLOGY & APPLICATIONS 9:00 a.m. to 12:00 noon
Session Chair: Dr. Ken Gilleo; Cookson Electronics, Foxboro, Massachusetts

“Developments in Projection Welding for Hermetic Sealing”
Thomas E. Salzer tomes@verizon.net; Hermetic, Inc. Bedford, MA

“Performance of PBGAs for robust MEMS packaging”
Kevin A. Bruff kbruffp@wpi.edu, Thomas F. Marinis*, Joseph W. Soucy* and Ryszard J. Pryputniewicz rjp@wpi.edu; Worcester Polytechnic Institute, Mechanical Engineering Dept., CHSLT-NEST, Worcester MA; * Draper Laboratory, Electronic Packaging, Cambridge, MA

“Design and analysis of a MEMS humidity sensor”
Houri Johari hourij@wpi.edu, Cosme Furlong, and Ryszard J. Pryputniewicz rjp@wpi.edu; Worcester Polytechnic Institute, Mechanical Engineering Dept., CHSLT-NEST, Worcester, MA

“Experimental modal analysis using MEMS accelerometers”
Ronald Kok rkok@wpi.edu, Cosme Furlong and Ryszard J. Pryputniewicz rjp@wpi.edu; Worcester Polytechnic Institute, Mechanical Engineering Dept., CHSLT-NEST, Worcester, MA

“ACES methodology for determination of mechanical properties of materials”
R. J. Pryputniewicz rjp@wpi.edu, T. F. Marinis*, J. W. Soucy*, and C. Furlong; Worcester Polytechnic Institute, Mechanical Engineering Dept., CHSLT-NEST, Worcester MA; * Draper Laboratory, Electronic Packaging, Cambridge, MA
Session D POSTER PAPERS 9:00 a.m. to 3:30 p.m.
Session Chair: Dr. Tom Marinis; Draper Laboratory, Cambridge, Massachusetts

“On-site Hydrogen Generator Eases Supply Challenges for UHP”
Dave Wolff dave.wolff@protonenergy.com, and John Speranza; Proton Energy Systems, Wallingford, CT

“Yield Management in Multilayer Ceramic Production”
Antonius J. Schless Tschless@midasvision.com; Midas Vision Systems, Foxboro, MA

“Optoelectronic measurements and computational modeling of a nanoindentation process for MEMS”
Cosme Furlong cfurlong@wpi.edu, Adam M. Siegel, Peter Hefti and Ryszard J. Pryputniewicz;
Worcester Polytechnic Institute, Mechanical Engineering Dept., CHSLT-NEST, Worcester, MA

“Investigation of laser microwelding for microelectronics and packaging”
Wei Han weihan@wpi.edu and Ryszard J. Pryputniewicz;
Worcester Polytechnic Institute, Mechanical Engineering Dept., CHSLT-NEST, Worcester, MA

“Development of an advanced optoelectronic system for applications in microelectronic packaging and MEMS”
Michael J. Melson mmelson@wpi.edu, Seth M. Hardy, Cosme Furlong and Ryszard J. Pryputniewicz;
Worcester Polytechnic Institute, Mechanical Engineering Dept., CHSLT-NEST, Worcester, MA

“Die thinning wax mounting process enhancement”
Jennifer Wallace elitheiceman2@hotmail.com; Wentworth Institute of Technology, Roxbury, MA

“Fluxless solder reflow using Formic Acid Vapor”
Ryan T. Marinis rmarinis@wpi.edu, Thomas F. Marinis*, and Ryszard J. Pryputniewicz;
Worcester Polytechnic Institute, Mechanical Engineering Dept., CHSLT-NEST, Worcester, MA

“Thermal management of RF MEMS switches: computational investigation”
Malgorzata S. Machate gosia@wpi.edu, David Rosato*, Cosme Furlong, and Ryszard J. Pryputniewicz;
Worcester Polytechnic Institute, Mechanical Engineering Dept., CHSLT-NEST, Worcester, MA;
*Harvard Thermal, Harvard, MA

“Characterization of a MEMS cantilever-type chemical sensor”
Daniel Arecco kalarius@wpi.edu, Cosme Furlong and Ryszard J. Pryputniewicz;
Worcester Polytechnic Institute, Mechanical Engineering Dept., CHSLT-NEST, Worcester, MA

“Integrated MEMS wireless system for environmental measurements”
A. A. Berezin berezkin@wpi.edu, S. P. Mizar, C. Furlong, and R. J. Pryputniewicz;
Worcester Polytechnic Institute, Mechanical Engineering Dept., CHSLT-NEST, Worcester, MA

“Development of a compact interferometer system for characterization of MEMS”
Adam R. Klempner adamk@wpi.edu, Peter Hefti, Cosme Furlong, and Ryszard J. Pryputniewicz;
Worcester Polytechnic Institute, Mechanical Engineering Dept., CHSLT-NEST, Worcester, MA

“Structural effects of Joule heating on NiTiNOL test samples”
Mizar Shivananda Pai mizar@wpi.edu and Ryszard J. Pryputniewicz;
Worcester Polytechnic Institute, Mechanical Engineering Dept., CHSLT-NEST, Worcester, MA

“ACES study of the proof mass suspension mechanism of MEMS accelerometers”
Patrick J. Saggal wpiarab@wpi.edu, Cosme Furlong, and Ryszard J. Pryputniewicz;
Worcester Polytechnic Institute, Mechanical Engineering Dept., CHSLT-NEST, Worcester, MA

“Confocal microscopy imaging of MEMS”
Adam M. Siegel asiegel@wpi.edu, Peter Hefti, Cosme Furlong, and Ryszard J. Pryputniewicz;
Worcester Polytechnic Institute, Mechanical Engineering Dept., CHSLT-NEST, Worcester, MA

“Characterization of MEMS gyroscopes”
Victoria Steward vsteward@wpi.edu, Cosme Furlong, and Ryszard J. Pryputniewicz;
Worcester Polytechnic Institute, Mechanical Engineering Dept., CHSLT-NEST, Worcester, MA
Session E Microwaves Panel Discussion 1:15 p.m. to 3:30 p.m.
Session Chair/Moderator: James Stone

“An Analytical Review of the Process of Marketing New Products”
Mr. Walter Dwyer WJD3@att.net; SSP Group, Nasuha NH

“Wafer-level hermetic cavity packaging for MEMS, optoelectronics, RF, and sensors”
George A. Riley, Ph.D. griley@flipchips.com; FlipChips Dot Com, Worcester, MA

“Standardization of Test Instrument Software Interface”
Jay Williston jay.williston@viasystems.com; Viasystems, Milford, MA

“60 GHz Digital Point-To-Point Radio Links for Homeland Security, Disaster Recovery, and Military Applications”
Janusz J. Majewski jmajewski@v-spectrum.com; V-Spectrum, Wrentham, MA

Session F Optoelectronics Technology 1:15 p.m. to 3:15 p.m.
Session Chair: Dave Saums; Ceramics Process Systems, Newburyport, Massachusetts

“Questioning the Need for Automation in Optoelectronic Assembly”
Ronald C. Lasky, PhD., PE Ronlasky@aol.com; Indium Corporation & Consultant, Medway, MA

“Solder Selection for Photonic Packaging”
Brian O’Neill dsuraski@aimsolder.com; AIM Specialty Materials, Cranston, RI

“Finite Element Model of Thermoelectric Cooling of Pump Lasers with Single and Dual Pump Module Configurations”
M. Labudovic labudovic@corning.com; Corning Lasertron, Bedford, MA

“Advanced Materials for Microelectronic, Optoelectronic and MEMS/MOEMS Packaging and Thermal Management”
Carl Zweben, Ph. D. c.h.zweben@usa.net;
Advanced Thermal Management Materials Consultant, Devon, PA

Session G MEMS Emerging Technologies 1:15 p.m. to 3:45 p.m.
Session Chair: Chris Soule; Thermshield LLC, Gilford, New Hampshire

“Packaging and assembly made simple with vapor deposited eutectic solders”
John Snook snooky@stellarind.com; Stellar Industries Corp., Leominster, MA

“Silver Migration in Polymer Thick Film”
Rita Mohanty, PhD rmohanty@ark-les.com; Ark-Les Electronic, Gloucester, MA

“CII Technology Roadmap 2002”
Howard Imhof hwi@midasvision.com; Midas Vision Systems, Chester Springs, PA

“Plastic Hermetic Packages – for MEMS?”
Ken Gilleo, PhD gilleo@ieee.org & Gerald Pham-Van-Diep, PhD;
Cookson Electronics, Foxboro, MA