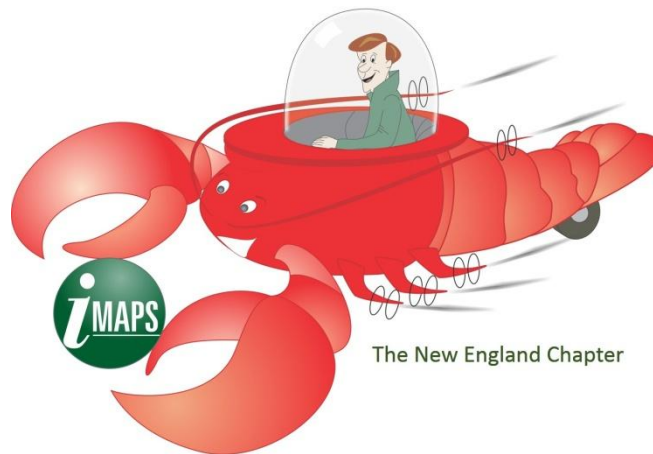


iMAPS New England

44th Symposium & Expo - Tuesday May 2nd, 2017
Boxboro Regency Hotel & Conference Center
Boxborough, Massachusetts

"The Jetsons 2017"

Advance Program



"The Future of Microelectronics"

Jon Medernach, Chapter President

Dr. Parshant Kumar, Symposium Technical Chair

KEYNOTE ADDRESS

"From Interconnect to Innovation in the DoD"

Dr Livia Racz, MIT Lincoln Lab

2017 SYMPOSIUM GOLD SPONSORS



iMAPS New England 44th Symposium & Expo

Technical Program

Morning Sessions

Session: Nanoelectronics and Optoelectronics

Chair: Yi Qian - MRSI

Grand Challenges and Timelines for Electronic-Photonic Integration

Lionel Kimerling - MIT/AIM Photonics

Standoff Chemical Sensing Wireless Network

Xuejun Lu - UMass Lowell

Quantum Cascade Laser Power Scaling Developments

Jeffrey Shattuck, Robin Huang - Forward Photonics

Wafer-level Integration and Packaging of Micro-Concentrating Photovoltaics

JJ Hu and Team - MIT

Challenges in Optical Sensor Module Packaging - Evolving from Past into Future

Julia Ying Zhao, David Bolognia - Analog Devices

Automated Die Bonding for High Volume Optoelectronics Manufacturing:

Speed, Accuracy, and Flexibility

Peter Cronin - MRSI

Session: MEMS and Nano Systems

Chairs: Robert White - Tufts University & Rick Morrison - Draper

Miniature Multiwire Systems

Caprice Gray Haley, Anthony Kopa, Andrew Magyar, Amy Duwel, Brian Smith,

Sara Barron, Mitch Meinhold & Seth Davis - Draper

A New Manufacturing Process for Fabricating 3D Interconnects for MEMS and ICs

Cihan Yilmaz - Flex

MEMS Packaging for Reliable, Low Pressure Sensing in Automotive Applications

Matt Lasorsa, Sam MacNaughton & Giff Plume - Sensata

Low Temperature, Hermetic Packaging of a MEMS Electric Field Sensor

Douglas Gauthier, Daniel Reilly, James Bickford & Stephanie Golmon - Draper

Advanced Integration program at BRIDG and the reliability issues with 2.5D / 3D integration

Amit Kumar - Bride

Tuning the Resonance Frequency of Piezoelectric MEMS Microphones by Sizing Acoustic Ports

Yu Hui, Jongsoo Choi & Robert Littrell - Vesper MEMS

Session: RF and Microwave - Innovations and Emerging Technologies

Chairs: Tom Terlizzi - GM Systems & Dr. Chandra Gupta - RF & Microwave Solutions

Microwave and Millimeter Wave Multi-Chip Module Manufacturing

Earle Stewart, HXI & David Robbins, Monzite

Challenges of Microwave Assembly

Jay Chudasama - Agile Microwave Technology

Multifaceted Simulation for the Design of a Smartwatch

Dr. Tracey Vincent - Computer Simulation Technologies

Detecting Contamination on RF/Microwave Electronics

Tristan Baldwin - BAE Systems

Hermetic System-in-Package for High Power RF MEMS Switch

Chris Keimel - Menlo Micro

Device Physics Matters in RF Designs and Manufacturing

Dr Chandra Gupta - RF & Microwave Solutions

Key Note Luncheon Speaker : Dr Livia Racz, MIT Lincoln Lab

“From Interconnect to Innovation in the DoD”

iMAPS New England 44th Symposium & Expo
Technical Program
Afternoon Sessions

Session: Medical Device Packaging
Chairs: Caroline Bjune – Draper & Steve LaFerriere - YOLE Development

Packaging Capabilities at MST
Susan Bagen - Micro Systems Technologies
Low-Cost Electronically-Controlled Prostheses for Transfemoral Amputees
Molly Berringer - MIT/Draper
The Use of Advanced Microelectronic Packaging Techniques
to Miniaturize Implantable Neuro Stimulators
Jim Ohneck - AEMtec
Chromatic Mechanical Response in 2-D Layered Transition Metal
Dichalcogenide (TMDs) based Nanocomposites
BalaJi Panchapakesan - WPI
Dragonfleye - Ultraminiature Cybernetic Insect Control Using Optogenetics
Carlos Segura - Draper
Thread Based Sensors and Interconnects for Medical Diagnostics
Meera Punjiya, Hojat Rezaei, Pooria Mostafalu and Sameer Sonkusale - Tufts

Session: Thermal Management
Chair: Dave Saums - DS&A

Automation of Die Attach with Copper and Silicon...
Richard Koba - Materion
Packaging and Thermal Issues for Handheld, Mobile, and Medical Implantable Devices
Dave Saums - DS&A
Thermal Test Chip for Thermal Characterization and Qualification
of Materials, Packages and Systems
Mohamad Abo Ras - Berliner Nanotest
Improved Heat Dissipation for High-Power Systems via Nanocopper-Based Metal SMT
Alfred Zinn - Lockheed Martin/Kuprion
Electronic Coolants and Rack-Mount Vapor Cycle Chillers
Randy Owen, KO Concepts

Session: Printed Electronics
Chairs: Katherine Duncan - US Army & Dr. Craig Armiento - UMass Lowell

Printing 2D and 3D Nanostructures for Electronics and Sensors
Cihan Yilmaz - Flex Hybrid Institute
Inkjet Printable Etching and Plating Resist
Balantrapu Krishna - Dow Chemical
3D Printing of Flexible and Stretchable Interconnects
Mike O'Reily & Mike Renn - Optomec
Use of 3D Printed Antennas for RF Energy Harvesting Purposes
Charlotte Blair - ANSYS
MIT Nano Centre Introduction
Dennis Grimard - MIT Nano Centre

iMAPS New England 44th Symposium & Expo
Technical Program

All Day Poster Session

Design, Fabrication, and Characterization of Novel Micro Coax for Power Distribution

Daniela A. Torres - Tufts/Draper

Optimal Design of Longitudinal-fin Heat Sinks

Accounting for Simultaneously Developing Flow and Conjugate Effects

Georgios Karamanis & Marc Hodes - Tufts

Designing a Drone Delivery Container for Vaccine
with Active Temperature Controls

Jianyu Liang – WPI

Verifying Electronic Component Cleanliness using Ion Chromatography

Scott Mazur - Benchmark Electronics

2017 Symposium GOLD SPONSORS



EXHIBITORS AS OF March 31, 2017

Laser Services
Photofabrication Engineering
Coining
Epoxy Technology
NN
GENERAL METAL FINISHING
Finetech
CWI Technical Sales
utz technologies
MicroChem
Neu Dynamics
P/M INDUSTRIES
Heraeus Electronics
AI Technology
Remtec
MMS Technical Sales
Creyr Innovation
Gowanda Electronics
Palomar Technologies
UBOTIC
Century Seals
EMA Sales & Marketing
Mini-Systems
STELLAR INDUSTRIES

Air Products and Chemicals
Micro Systems Technologies
MSD
AdTech Ceramics
PEP
LFG Micro
Geib Refining
KemLab
XYZTEC
Cirexx International
Riv
Materion
Metallix Refining
iMAPS New England
Honle UV America
Hesse Mechatronics
MRSI Systems
Kyocera Semiconductor Components
SETNA
Sonoscan
ATV Technologie
Boston Micro-Components
TEN TECH LLC
Ferro Corporation

www.imapsne.org