

IMAPS New England Technical Symposium 2020

Virtual Session B: RF/Microwave



Presented by the New England Chapter of the
International Microelectronics Assembly and Packaging Society

General Chairs:

Michael Johnson, MACOM Technology Solutions

Dave Saums, DS&A LLC

Session Chair: Tom Terlizzi, TJ Green Associates LLC

Session Co-Chair: Chandra Gupta, Communications & Power Industries Inc.

November 5, 2020



IMAPS New England Technical Symposium 2020

Introduction

President, IMAPS New England Chapter (2020-2021)



Matt Bracy

MSD Sales, Inc., Dunbarton NH USA

A New Hampshire native, Matt operates MSD Sales, a manufacturers' representative firm specializing in capital equipment sales in the New England area.



IMAPS New England Technical Symposium 2020

Introduction

International Microelectronics Assembly and Packaging Society:

- Regional chapters and country organizations globally;
- IMAPS New England Chapter is the largest chapter in IMAPS North America;
- The IMAPS New England Technical Symposium is the largest and longest-running IMAPS North America regional conference, and this is the 47th year;
- IMAPS NE Symposium is typically held on a Tuesday in May, consisting of 38 technical speakers and 55 exhibitors;
- All facets of semiconductor and electronics packaging, materials, components, and processes are relevant.



IMAPS New England Technical Symposium 2020

Introduction

General Co-Chairs, IMAPS New England Symposium 47



Michael Johnson, Sr. Principal Manufacturing Engineer
MACOM Technology Solutions, Lowell MA USA

Michael Johnson is Senior Principal Manufacturing Engineer for MACOM in Lowell MA, and has a total of twenty-one years with the company. Michael holds the B.S. Mechanical Engineering degree from Worcester Polytechnic Institute (Worcester MA).



Dave Saums, Founder and Principal
DS&A LLC, Amesbury MA USA

Dave Saums is Founder and Principal of DS&A LLC, a technical business development consulting firm that Dave has operated for eighteen years. He has forty-two years of electronics thermal management experience and is general chair for two annual thermal management technical workshops. Dave has B.S. and M.B.A. degrees from Clarkson University (Potsdam NY) and was named a Society Fellow by IMAPS in 2010.



IMAPS New England Chapter 2020

*Virtual Meeting Schedule**

September 22, 1:00PM Virtual Symposium Session A – Interconnects
Session Chair: Lee Levine, Process Control Solutions, Inc.
Three technical presentations

October 27, 5:00PM Chapter Technical Meeting
Speaker: Eric Perfecto, IBM Research (Albany NY USA)
Sr. Heterogeneous Integration Packaging Engineer, IEEE Fellow
Topic: *Heterogeneous Integration and Artificial Intelligence*

November 5, 1:00PM Virtual Symposium Session B – RF/Microwave
Session Chair: Tom Terlizzi, TJ Green Associates LLC
Session Co-Chair: Chandra Gupta, CPII
Four technical presentations

* Subject to revision. Updates will be posted at www.imapsne.org; Times shown are US Eastern time zone.



IMAPS New England Technical Symposium 2020

Logistics

- Q&A session will follow each presentation. Please use the Zoom chat box function to write a short question for the speaker and send (choose “everyone” for destination);
- As a registrant, you will receive an email at a later date that will include information about availability of the presenters’ slide sets;
- We expect that this session will conclude at approximately 3:35PM US Eastern, following final Q&A and comments;
- Moderator will turn all participants’ microphones off before our presenters begin their presentations.

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IMAPS New England Technical Symposium 2020

Introduction

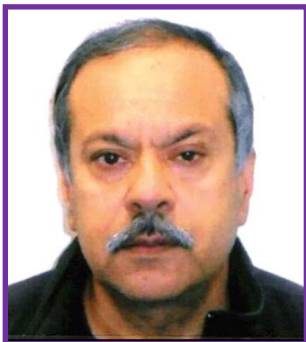
RF/Microwave Session Chair and Co-Chair



**Tom Terlizzi, Associate Consultant
TJ Green Associates, LLC**

Tom Terlizzi is Vice President at GM Systems LLC, a management, manufacturing and technology consulting firm, providing marketing and sales strategy and microelectronic product design and development. For over 40 years, he has developed microelectronic devices, thick and thin film hybrids, and multi-chip modules for aerospace and telecom markets at Aeroflex, Norden Systems/UTC, Grumman Aerospace, and General Instrument. He received a B.S. degree in Electrical Engineering from City College of New York and the M.S. E.E. degree from NYU-Polytech. Tom has published several articles, given tutorials, edited books on electronic packaging, and consulted for the DoD on advanced electronic packaging. He is a past president of the Metropolitan Chapter of IMAPS.

For TJ Green Associates, Tom is exhibit chair and program committee member for Components for the Military and Space Electronics (CMSE) Symposium, held annually, and provides support for RF and microwave and microelectronic packaging seminars. Email: terlizzi@gmsystems.com



Dr. Chandra Gupta holds Ph.D. EE and MBA degrees and has over thirty years of experience in RF and microwave -- designing, developing, managing, and producing a wide range of microwave, RF, and millimeter wave components, and integrated microwave assemblies with cutting edge technologies for commercial and defense applications. He has held positions from VP of Operations and Engineering at Herley Industries, General Manager at Aeroflex, Director at Hittite/ADI, and RF/Microwave Consultant. He is now at Communications & Power Industries (CPI) in Beverly, MA. Dr. Gupta is a Senior Member of the IEEE.

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IMAPS New England Technical Symposium 2020

First Speaker:

Jay Chudasama

Agile Microwave Technology Inc., Cary NC USA

Organic Packaging for 5G and 40GHz Applications

1:15 – 1:50PM



Jay Chudasama is Co-Founder, General Manager, and President of Agile Microwave Technology, Inc., a fabless manufacturer of microwave amplifiers and microwave modules.

Jay holds a BS in Electrical Engineering from the School of Engineering of City College of New York and an MBA from California Coast University (Santa Ana CA). Jay founded Hitec Computers in 1985 and co-founded Amplicomm in 2000, which was later acquired by Aeroflex where Jay was director of RF and Microwave Products.

Email: jayc@agilemwt.com



IMAPS New England Technical Symposium 2020

Second Speaker:

Daniel West

Co-authors: Alex Hall, Jonathan Herr, Marianne Berolini,
Ashley Stanziola, Daniel West

AVX Corporation, Fountain Inn SC USA

*Multi-Layer Organic RF Components: A New Component Option for
Harsh Environment Designs*

1:50 – 2:25PM



Daniel West graduated from Mercer University in Georgia in 2010, with a BS in Electrical Engineering.

Currently, Dan is a Field Applications Engineer in the Technical Sales Group at AVX Headquarters in Fountain Inn, South Carolina. This role centers on projects ranging from simulation models for passive components to product support and new product identification and applied development.

Prior to joining AVX, Daniel was a team leader in the U.S. Army 82nd Airborne Division 1-504 PIR, preparing for and performing combat operations during Operation Enduring Freedom.

Speaker Email: daniel.west@avx.com

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Third Speaker:

Ron Demcko

Co-authors: Palaniappan Ravindranathan, Michael Kirk,
Ashley Stanziola, Daniel West
AVX Corporation, Fountain Inn SC USA

*High Temperature Passive Component Update – Transient Voltage
Circuit Protection Devices*

2:25 – 3:00PM



Ron Demcko graduated in 1982 from Clarkson College of Technology (Potsdam NY) with a BSEE degree. He is an AVX Fellow and manages TSG team at AVX Headquarters in Fountain Inn, South Carolina. This role centers on projects ranging from simulation models for passive components to product support/new product identification and applied development. Prior to that, Ron was the EMC lab Manager for AVX in Raleigh NC. This lab concentrated on sub-assembly testing and passive component fixes for harsh electrical and environmental systems. Before the EMC lab work, he held an Application Engineering position at AVX. Product work included integrated passive components, EMI filters, and transient voltage suppression devices.

Before joining AVX, Ron worked as a Product Engineer and later Product Engineering Manager at the electronics division of Corning Glass Works. In this role, he supported production, sale, and development of Pulse Resistant Capacitors, high temperature capacitors, and radiation-resistant capacitors. He developed high frequency test methods and co-developed high temperature test systems. Principal Author Email: ron.demcko@avx.com



IMAPS New England Technical Symposium 2020

Fourth Speaker:

Rick Sturdivant

5G/6G Phased Array Packaging Challenges and Opportunities

3:00 – 3:35PM



Rick Sturdivant is a recognized expert in the fields of electronic packaging and phased arrays. He has published over 50 journal and conference papers and authored several books. His latest book is *Systems Engineering of Phased Arrays* (Artech House, 2018). He worked for Raytheon Systems for 1989-2000. Since the year 2000, he has started several successful technology companies providing solutions for wireless, microwave, millimeter-wave, and high-speed products. He is a Lecturer at Azusa Pacific University, and Founder and CTO of MPT, Inc. which provides phased arrays for communication and radar applications.

Rick holds the B.S. degree in Electrical Engineering from California State University-Long Beach; B.S. in Religion from Vanguard University, and an M.S. degree in Electrical Engineering from Cal State-Long Beach, as well as a PhD degree in Systems Engineering from Colorado State University.

Email: ricksturdivant@gmail.com

Website: www.ricksturdivant.com



Final Comments

- This is our second virtual technical session extracted from our original Symposium 2020 program.
- Please add our schedule for the next virtual technical events to your calendar. We will also alert you with emails in advance.
- We appreciate your participation and your questions, and the participation of our speakers.



Next IMAPS NE Virtual Events

Please join us:

December 15, 5:00PM Chapter Virtual Holiday Meeting

Speaker:

Dave Saums

Boston & Maine Railroad Historical Society, Inc.

***On-Line Dating, 1931:
Development of Snow Trains Across New England***

Schedule notices and updates will be posted on our website:

www.imapsne.org

We are planning for the next virtual chapter meeting in January 2021. The next virtual RF/Microwave technical session will be in February.

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