



*The Multinational Power Electronics Association*

# PSMA Packaging Committee Meeting

**John Bultitude, Brian Narveson, Ernie Parker**  
Co-chairman

September 27<sup>th</sup>, 2022



*PSMA is a not-for-profit organization and a CO-SPONSOR OF APEC*



# Agenda

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## Conference Update

- 3-D PEIM February 1-3, 2023

## APEC 2023 Session Planning

- APEC 2023 Industry Session topic recap
- **Submission made September 2, 2022**
- **Recruitment of Speakers Discussion**

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# The Fourth International Symposium on 3D Power Electronics Integration and Manufacturing

## 3D-PEIM 2023

Feb 1-3, Miami, Florida



**General Chair**  
**P M Raj**  
(Florida International University)  
Associate Professor



**Technical Co-Chair**  
**Vanessa Smet**  
(Georgia Institute of  
Technology)  
Assistant Professor in  
Mechanical Engineering, GT



**Technical Co-Chair**  
**John Bultitude**  
(KEMET)  
Vice President, Technical Fellow

Brian Narveson, Narveson Consulting, U.S.A – Finance Chairman  
Arnold Alderman, Anagenesis, Inc. U.S.A. – Publicity Chairman



# The Fourth International Symposium on 3D Power Electronics Integration and Manufacturing

**REGISTRATION IS OPEN: <http://www.3d-peim.org//>**

## 27 Submissions 4 are Posters only

### Program at a Glance

Session	Chair
S2: IVR for Computers and Servers	Siddarth Ravichandran
S3: Multiphysics Design & Tools	Rajen Murugan
S4: Additive Manufacturing	Peter Friedrichs
S5: Manufacturing Technologies	Jason Rouse
S7: Materials I Interconnects & Lead Attachments	Andy Mackie
S8: Materials II Substrates & Encapsulants	Ninad Shahane
S9: High Power Module Integration	Cyril Buttay
S11: Thermal Management and Reliability	Patrick McCluskey
S12: Passive Component Integration	John Bultitude
S13: Low Power & Telemetry	Shubhendu Bhardwaj

### Plenary Speakers

**Professor Fred C. Lee Virginia Tech, “PCB based Integrated Magnetics”**

**Prof. Katsuaki Suganuma, University Osaka, “Superior heat dissipation by low-pressure Ag sinter joining and real-time AI lifetime prediction for SiC power module”**

**Dr. Brandon Passmore, Wolfspeed, “Finite-Element Predictive Modeling for Power Modules”**

**Dr. Mahadevan Iyer, Amkor, “Emerging Power electronics packaging and system integration for automotive applications”**

**Prof. Madhavan Swaminathan, Georgia Tech, “Integrated Power Delivery for AI Computing: Technology Gaps & Opportunities”**

**Preliminary Program on-site, Working with Technical Committee & Session Chairs to complete invitations & review submissions**



# APEC 2023 IS Speaker Recruitment September Abstract Review

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## **Aluminium liquid cooled heatsink and FSW: a high efficiency and low-cost solution for EV thermal management**

L. Dubourg

Stirweld, Batiment ENS Rennes, Boulevard de Schumann, Campus de Ker Lann, 35170 BRUZ

### ABSTRACT

This presentation will describe the combination of aluminium die casting and Friction Stir Welding (FSW) to develop high efficiency and low-cost liquid cooled heatsinks for EV thermal management. Extensive knowledge and experience on various EV components (controllers, electric drive motors, power electronics) were utilized for this talk. This presentation will describe the golden design rules, FSW key points and associated quality control procedures for developing these components.

**Will Confirm as speaker**

# APEC 2023 IS Speaker Recruitment September Actions

There are 4 speakers confirmed as noted in the Table recruitment of the following 3 speakers is underway per the attached speaker list

	Presentation Title/Topic	Presenter	Title/Company
1	Manufacturing Challenges and Qualification of 3D Packaging	Charles Woychik	Sr. Director Advanced Packaging Platforms at Skywater Technology Foundry, Kissimmee, Florida, United States
2	TBD/Innovations in Interconnection	Gyan Dutt	McDermid Alpha Electronic Solutions
3	Voice of the Customer presentation on Form Factor by IBM	Eric Svenson	Power Development Engineer, IBM
4	Aluminium liquid cooled heatsink and Friction Stir Welding (FSW): a high efficiency and low-cost solution for EV thermal management	Laurent Dubourg	CEO and founder of Stirweld, Bruz, France
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6			
7			

***Next Committee Meeting:***

***Monday October 10, 11:00am CDT***

