PSMA
Packaging Committee Meeting

August 10, 2021

John Bultitude, Brian Narveson, Ernie Parker
Co-chairman

PSMA

Agenda Aug. 10, 2021 - Minutes

2021 Project Updates

- Free IWIPP 2021 Corridor Event August 23, 25 & 27 2021
- IWIPP August 24-26, 2022
- PwrSoC October 26-29, 2021
- 3-D PEIM February 1-3, 2023

APEC 2022 Industry Session Plan

- Digest Review
- Speaker Recruitment - **5 Confirmed 2 Pending**
- Digest Submission August 13, 2021 – **Revising Digest to submit**

APEX 2022 January 22-27, San Diego Convention Center

Last Call for anyone interested in presenting please contact Mike Hayes:

michael.hayes@tyndall.ie

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2021 Projects - IWIPP Virtual Event

- Each session will begin at 7:00 AM CDT (2:00 PM CEST)
- http://iwipp.org/registration/

Each presentation is approximately 30 min.
There will be a panel question and answer session of approximately 45 minutes at the end of each webinar session.
PDFs of each presentation will be made available to participants before the webinar.

Webinar Date: **Monday 23rd August 2021, 1400-1630 CET**			
1400 – 1430:	**Eckart Hoene**	*Fraunhofer*	Packaging, integration and fast switching: what has been achieved and what´s next?
1435 – 1505:	**Cyril Buttay**	*CNRS*	Review on Intelligent Power Modules
1510 – 1540:	**Ty McNutt**	*WolfSpeed*	Advances in SiC Power Modules for EV Charging

Webinar Date: **Wednesday 25th August 2021, 1400-1630 CET**			
1400 – 1430:	**Stephane Azzopardi**	*Safran S.A.*	Is Power Electronics Ready for Future Aircraft?
1435 – 1505:	**Garron Morris**	*Rockwell Automation*	Environmental Trends and Challenges on Power Packaging
1510 – 1540:	**Patrick McCluskey**	*University of Maryland*	Heterogeneous Integration Roadmap

Webinar Date: **Friday 27th August 2021, 1400-1630 CET**			
1400 – 1430:	**Mona Ghassemi**	*Virginia Tech*	Insulation Materials and Systems for Power Electronic Modules
1435 – 1505:	**Nicolas Botter**	*G2ELab and Safran S.A*	Reduction of Thermal Interfaces with New Processes and Materials
1510 – 1540:	**Nick Baker**	*Aalborg University*	Liquid Metal in Power Electronics

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IWIPP 2022

- Full In-Person Conference
- Connect with world's top power, device, integrations and system researchers
- Partnership opportunities are available
- http://iwipp.org/full-in-person-conference-aug-2022/
- Call for Papers coming in September

IWIPP is Sponsored By:

Patronage Levels and Benefits:

Exhibitor: $500	Silver: $1000	Gold: $2000
Tabletop Exhibit at In-Person Event Company Logo & Brief Description on Event website and in Conference Program	One Complementary Full Registration to In-Person event All Exhibitor Level Benefits	Special Recognition and Promotion during Webinar Series All Silver & Exhibitor Level Benefits

2021 Projects

PwrSoC Workshop 2021
will be held in Philadelphia, U.S.A.
at the University of Pennsylvania
October 26 thru October 29, 2021

General Chair: Mark Allen, University of Pennsylvania
Program Co-Chair Matt Wilkowski, Enachip
Program Co-Chair: Hanh-Phuc Le. University of California at San Diego

Registration Opens August 15th

www.pwrsocevents.com

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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)
Program Manager Interconnections and Assembly 3D Systems
Packaging Research Center

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

PSMA Packaging Committee Industry Session Proposal

Latest Improvements in 3D-Packaging of Power Electronics

Focus:

The PSMA Packaging Committee is organizing and proposing an Industry Session for APEC 2022 that is focused on improved packaging of power electronics using new materials and integration of components. These presentations will describe how these advancements can facilitate more efficient and smaller power electronics. The limitations of current technologies will be described together with how these are overcome by these new technologies. The need for higher energy efficiency in power electronics will be described with respect to packaging improvements. Power source manufacturers' have to consider employing new technologies such as wide bandgap semiconductors to meet these needs and this session will explore innovative packaging technologies to facilitate this.

Target Audience:

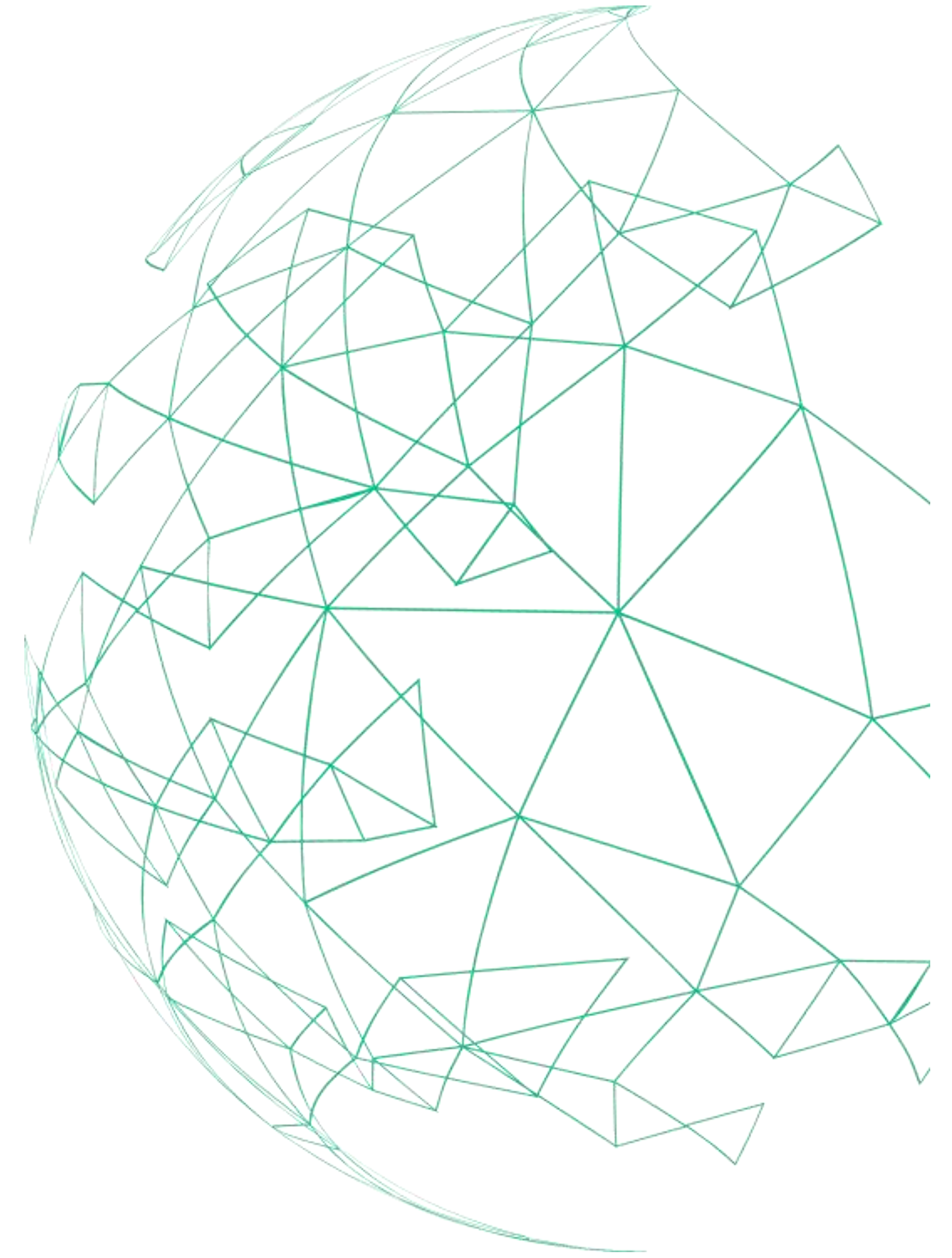
System and design engineers & program managers involved in design, manufacture or application of power electronics where decreased size and improved efficiency is required.

APEC 2022 Industry Session – Potential Speakers (7 required)

Current Status

	Presentation Title (*to be Confirmed)	Presenter	Position/Company	Status/PSMA Action
1	Aluminum Bus Bars for Aerospace*	To Be Confirmed	To Be Confirmed /Amphenol	Confirmed / Need Title & Presenter Mike Wingard
2	A Novel Design of High Temperature Lead-free Solder Paste for Die-Attachment	Hongwen Zhang	Research Metallurgist, Indium Corporation	Confirmed
3	Magnetic Characteristics and Application of Soft-magnetic Metal Flake Composite	Ken'Ichi Chatani	Research & Development Manager, KEMET Inc.	Confirmed
4	Addressing Solder Hierarchy Issues in Power Module Packaging with TLPS Pastes	Catherine Shearer	Head of Conductive Paste R&D, EMD Electronics Inc.	Confirmed
5	Single Mask Multi-Layer Manufacturing Establishing a New Paradigm for Higher Energy Density and Lower Power Losses for Wafer level Magnetics	Kamyar Ahmadi	Process Engineer, EnaChip Inc	Confirmed
6	The Technology Race in Power Electronics Packaging: The race is on!	Rainer Frauwallner	AT&S	Brian Narveson --DECLINED
7	Future of Integrated Motor Drives	Thomas M. Jahns	Univ. of Madison	John Bultitude
8	Latest Packaging Technology	Thomas Gottwald	Schweizer Electronic	Kay Essig
9	Flexible Electronics for Power	Chris Jorgensen	IPC	Doug Hopkins
10	i-NEMI Power Packaging Challenges		Hereaus	Matt Wilkowski/ Grace O'Malley
11	3-D Printing	?	Oak Ridge/Company	Doug Hopkins

Digest Submission deadline Friday August 13.



Next Committee Meeting:

Tuesday, September 14th, 10 AM CDT