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FOR IMMEDIATE RELEASE

SMTA Space Coast Expo to Feature Technical Program Focused on Cleaning Process Optimization and Ultra High-Density Assembly

MELBOURNE, FL — November 2026 — The SMTA Space Coast Chapter is proud to announce that it will bring electronics manufacturing professionals, engineers, technology suppliers and industry experts together on Thursday, November 12, for the 2026 Space Coast Expo at the Melbourne Auditorium in Melbourne, Florida. In addition to the technology exhibition and networking opportunities, the event will feature a technical program addressing key challenges in electronics manufacturing, including cleaning process optimization and solder paste printing for ultra high-density applications.

The technical program will feature a keynote as well as two presentations from three experienced industry experts, Chrys Shea, President of Shea Engineering Services, and Shantanu Joshi, Head of Customer Solutions and Operational Excellence at KOKI Solder America, and Adam Klett, Director of Science at KYZEN. The sessions will provide attendees with practical insights and data-driven approaches that can be applied to their own manufacturing operations.



The program will kick off with the keynote presentation “Advanced Manufacturing Integration in Small Business: Practical Approaches and Key Lessons” by Chris Larsen of Aerospace Technology Group from 9-10 a.m. and will focus on the integration of advanced manufacturing techniques, and practices within a small business. It will also include lessons learned and items we wish we would’ve done in hindsight.

Chris Larsen is the co-owner of Larsen Motorsports and CEO of Aerospace Technology Group, with decades of hands-on experience in gas turbine engines, high-performance propulsion systems, aerospace fabrication, and jet-powered vehicle development. Through Aerospace Technology Group, Chris supports turbine engine research, component development, testing, alternative fuel initiatives, and specialized aerospace applications. At Larsen Motorsports, he applies that experience to the engineering, construction, operation, and continual development of jet-powered race vehicles capable of approaching 280 mph. Chris also works closely with engineers, industry partners, and students to translate real-world propulsion challenges into hands-on research, training, and workforce-development opportunities.

Solder Powder Size Types and Their Associated Print Capabilities in Ultra High Density Applications
11-11:45 a.m.
Chrys Shea, Shea Engineering Services, and Shantanu Joshi, KOKI Solder America



Shea and Joshi will present “Solder Powder Size Types and Their Associated Print Capabilities in Ultra High Density Applications,” exploring the relationship between solder paste particle size and printing performance as electronics assemblies continue to incorporate smaller components and tighter feature geometries.

Ultra High Density Interconnect (UHDI) technology presents challenges for both PCB fabricators and assemblers. As stencil apertures become smaller, the metal particles in solder paste must also become smaller to support effective aperture fill and release.

The presentation will examine the results of print testing conducted using three different solder paste particle types on an extremely challenging UHDI assembly test board. The test board incorporates passive components ranging from 0201 down to 008004 (Imperial), oriented on an X-Y grid and at 45 degrees, as well as BGAs ranging from 0.5 mm pitch down to 0.3 mm pitch.



T4, T5 and T6 solder pastes were printed, with deposits inspected and results analyzed using common statistical metrics. In addition to examining the relationship between component and aperture size and solder paste particle size, the study investigates board design characteristics including stencil area ratio relationships, pad sizes for different density classifications, component orientation, leading-edge apertures and subtle surface topographies.

Shea is President of Shea Engineering Services, a consulting firm specializing in technical studies and communications tools for the electronics manufacturing industry. An SMTA Member of Technical Distinction and Distinguished Speaker, Shea is also a four-time recipient of the SMTA International Rich Freiberger Best of Conference Award for her research on solder paste printing. She holds bachelor's and master's degrees in engineering and has a background in SMT process engineering, production engineering, new product introduction, research and management.

Co-presenter Shantanu Joshi is Head of Customer Solutions and Operational Excellence at KOKI Solder America, bringing more than 12 years of experience in electronics manufacturing, research and development, process optimization, soldering materials and electronics packaging reliability. Joshi is also a Ph.D. candidate in Industrial and Systems Engineering at Binghamton University, where his research focuses on high-reliability solder alloys for harsh environments. His work has been published in peer-reviewed journals, conference proceedings and a book chapter on solder-paste and flux technology.

Predictive Bath Life Management: A Data-Driven Framework for Sustaining Cleaning Performance

1:45-2:30 p.m.

Adam Klett, KYZEN Corporation

Klett will present “Predictive Bath Life Management: A Data-Driven Framework for Sustaining Cleaning Performance,” examining how manufacturers can use measurable process data to make more informed decisions about cleaning-agent bath replacement and maintenance.



Manufacturers must balance the costs and risks associated with cleaning bath management. Replacing baths too early can increase chemical consumption, process downtime and operating costs, while extending bath life without adequate controls can compromise cleaning effectiveness, product reliability and yield.

Klett's presentation will introduce a practical, data-driven framework for optimizing cleaning-agent bath life. The presentation will identify key process indicators that can serve as leading indicators of performance degradation and demonstrate how manufacturers can monitor bath health using measurable, actionable parameters.

A predictive modeling approach will also be presented to characterize contamination accumulation and forecast future bath conditions, enabling manufacturers to make more informed change-out decisions. The presentation will further explore proactive bath maintenance strategies designed to mitigate contamination buildup, preserve cleaning performance and extend usable bath life.

Attendees will come away with a practical roadmap for implementing bath life management programs, including recommended monitoring metrics, predictive assessment techniques and maintenance interventions designed to reduce operating costs without sacrificing cleaning quality or long-term reliability.

Klett is Director of Science at KYZEN Corporation, where he draws on his experience in the aerospace and electronics manufacturing industries to drive innovation in cleaning technologies. He holds Bachelor and Doctor of Philosophy degrees in Chemical Engineering from Clemson University and has authored multiple peer-reviewed journal articles, a textbook chapter and a patent. He has also authored, presented and chaired technical sessions at numerous SMT-related events. Klett currently serves on the SMTA Global Board of Directors.

The technical program is part of a full day of activities planned for the 2026 SMTA Space Coast Expo. The event will provide attendees with opportunities to explore electronics manufacturing technologies, exchange ideas with industry peers and gain practical knowledge from experienced technical professionals.

The 2026 SMTA Space Coast Expo will take place Thursday, November 12, at the Melbourne Auditorium, 625 E. Hibiscus Blvd., Melbourne, Florida. For additional information and registration details, visit the SMTA Space Coast Expo event page.

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