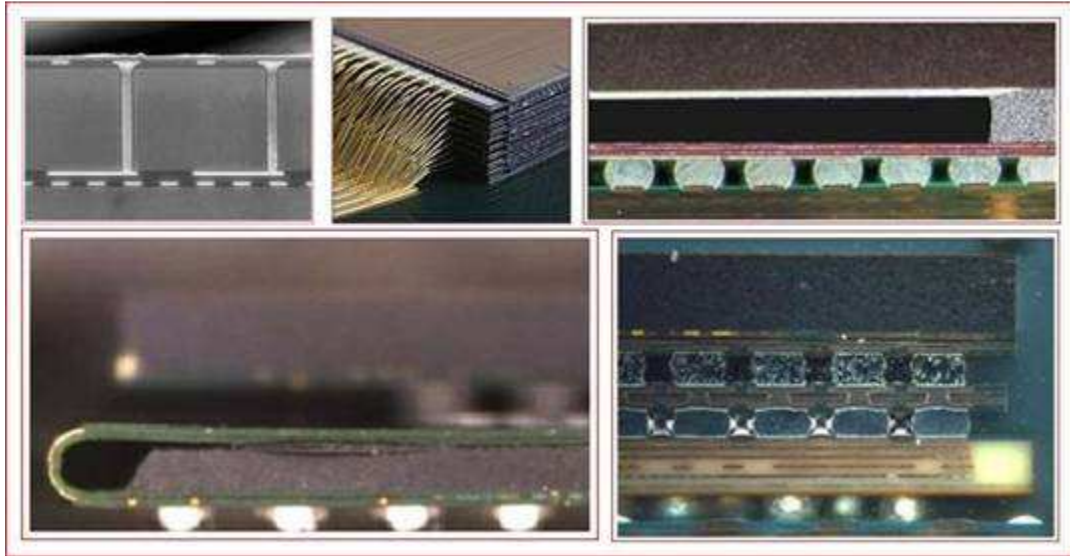


The Boston SMTA Chapter cordially invites you to attend a Local Technical Tutorial:

"Advanced Packaging Technologies for Performance & Miniaturization"



Instructor: [Charles E. Bauer, Ph.D.](#)

Senior Managing Director at TechLead Corporation

Talk about Value..... All Day Technical Tutorial Plus:

- A brief overview of the various Companies that make up Textron and their Products & Services
- A full size Sensor Fuzed Weapon (SFW) will be on display for up close viewing
- A brief video will be shown demonstrating the SFW Product in action
- Catered Lunch will be provided
- Coffee/soda and snacks during breaks included
- All Course Handouts
- Lots of Networking with Area Colleagues and Industry Experts

- Door prizes include a Copy of the proceedings from SMTAI 2013, valued up to \$600, an SMTA Portfolio & 3 New (just out) SMTA Beverage Tumblers as shown:



Thursday, June 5, 2014

8:00 a.m. - 4:30 p.m.

Textron Systems

Weapons and Sensor Systems

201 Lowell St.

Wilmington, MA 01887

[\(978\) 657-5111](tel:(978)657-5111)

[Click here](#) for Map to Textron

Directions From the South: (Boston)

Take I-93 North to exit 38 for MA-129 toward Reading/

Wilmington. Turn right onto MA-129 W/Lowell St. and follow through two sets of lights. Go about 100 yards after the second set of lights, turn left and park in the parking lot.

Directions From the North:

Take I-93 South to exit 38 for MA-129 toward Reading/ Wilmington. Turn left onto MA-129 W/Lowell St. and follow through two sets of lights. Go about 100 yards after the second set of lights, turn left and park in the parking lot.

Price: (incl. Lunch, Drinks, Snacks, Hand-Outs, etc...):

- SMTA Members - \$85
- Non-Members - \$95
- Non-Members becoming SMTA Members- \$160

(includes 1 year SMTA Membership - save \$10)

RSVP HERE to SMTA by Monday, June 2nd. Payment: Cash, Check or Credit Card will be accepted at registration.

Open to all US Citizens. Reservations must be made in advance. Sorry, no walk-ins. Meeting attendance is limited to first 100 people (first-come-first-served).

Questions?

Contact Karen Frericks at [\(952\) 920-7682](tel:9529207682) or karenchapters@smta.org , Mike Jansen, Chapter President, at Textron Systems, Tel.: [\(978\) 657-1208](tel:9786571208), Joe Kwong; Chapter Technical Chair at Textron Systems, Tel.: [\(978\) 657-1415](tel:9786571415) or Bob Farrell, Chapter VP at Benchmark Electronics, Tel.: [\(603\) 879-7000](tel:6038797000)

Course Overview:

Today the packaging of advanced semiconductor devices often overshadows the devices themselves. This course examines tradeoffs and trends in the SiP arena, reviews the latest developments in 3D packaging and chip integration, embedded packaging and assembly as well as the advent of interposer approaches to sub-system integration. The fields of advanced packaging further demand consideration of the economic impact of emerging technologies from pure cost implications to infrastructure, supply chain and business model disruptions.

This course begins with a study of performance and process integration issues that drive the tradeoffs between System-on-Chip (SoC) and System-in-Package (SiP). Recent packaging and assembly developments for highly integrated electronic products support and reinforce the trend

analysis. Next, the seminar reviews leading 3D concepts including stacking (both chip and package), mixed mode, and flex based as well as 3D chip integration using through silicon vias. Additional coverage includes SiP integration through embedded packaging and assembly, and the use of interposers in a 2.5D construction.

Key enabling technologies and process variations provide insight into the attractiveness of each of these approaches as well as their comparative value propositions. Economic analysis provides further understanding of the broader impact of emerging technologies on electronic system design and manufacture. Two methodologies that accelerate development and innovation demonstrate rigorous quantitative assessment of the infrastructure, supply chain and business model disruptions caused by these emerging technologies. First, yielded cost modeling of emerging technologies guides technology selection by quantifying benefits and ROI. Second, systematic analysis of the intellectual property landscape reveals strategies for establishing sustainable, competitive advantages by identifying and closing technical and market gaps.

Course Benefits:

This course enables attendees to:

- Understand the capabilities, implications and available options in advanced packaging and integration including SiP, 3D, embedded and 2.5D interposer technologies.
- Make informed decisions regarding the analysis and introduction of appropriate advanced packaging technology into their operations and/or applications.
- Develop, implement, and justify design, manufacturing, logistic, and market strategies for advanced packaging and integration.

Who Should Attend:

This course covers basic and advanced topics for product and design engineers, manufacturing process and assembly/package engineers, engineering managers, senior design technicians, consultants and academic specialists as well as marketing and sales personnel requiring an understanding of the capabilities, implications and options in the rapidly progressing field of advanced packaging technologies.

Topics:

• SoC vs. SiP

o Tradeoffs

o Process Alternatives

o Trends & Current Developments

- 3D Strategies & Technologies

- o Chip Stacking
- o Origami & Flex Based
- o Through Silicon Via (TSV) Chip Integration
- o Package on Package (PoP)

- Embedded Assemblies

- o Package Techniques
- o Printed Wiring Board (PWB) Approaches

- Interposer Systems

- o Integrated Passives
- o Materials Strategies (Si, glass, organic)
- o Assembly Challenges

- Economic Implications

- o Design & Manufacturing Infrastructure
- o Yielded Cost Analyses
- o Business Model Disruption

About the Instructor: Charles Bauer, Ph.D.

A graduate of Stanford University, Charles E. Bauer, Ph.D. focuses in the areas of strategic technology planning, market analysis & international business development. With more than 30 years experience, Dr. Bauer also serves on Advisory Boards for a variety of academic and governmental institutions bringing tremendous breadth and depth to his work. Chuck serves as Senior Managing Director at TechLead Corporation and honors include:

- Founder, Pan Pacific Microelectronics Symposium
 - Fellow, IMAPS (1994), IMAPS President (2001-2002)
 - SMTA Board of Directors (1997- 2001)
 - SMTA International Leadership Award (2007)
 - SMTA Luminary (2009)
 - Senior Member IEEE/CPMT
 - Founder, ISHM/IMAPS Advanced Technology Workshop Program
 - University of Portland Pamplin School of Business Administration Significant 75 Alumni Award
-
- Day will start off with an overview of Textron's Products & Services and a video showing SFW Product which will be on display for up close viewing.

Questions? Contact Karen Frericks at [\(952\) 920-7682](tel:9529207682) or karenchapters@smta.org.

To RSVP, please click here, or copy and paste the following address into your web browser:

http://www.smta.org/chapters/rsvp.cfm?BEE_ID=3369&BULK_EMAIL_NO=1