

2009 Medical Electronics Symposium

*Drivers for Technology, Health
and the Economy*

Wednesday & Thursday • September 16th & 17th
Arizona State University • Tempe Campus
Tempe, Arizona

Day One Sessions Include:

- Market Trends and Forecast in Medical Electronics
- Emerging Materials and Technologies
- Component Manufacturing at the Chip and Packaging Level
- Implantable Products and Applications

Day Two Sessions Include:

- Materials and Design at the Board and Systems Level
- Systems Manufacturing
- Reliability, Safety and Regulatory Testing
- System Level Products and Applications – External Instrumentation

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A SPECIAL TWO-DAY TECHNICAL SYMPOSIUM

2009

Medical Electronics Symposium

Drivers for Technology, Health and the Economy

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MEPTEC and SMTA are joining forces to present the 2009 Medical Electronics Symposium: Drivers for Technology, Health and the Economy. This two day program will cover a broad spectrum of medical applications with Day One focusing primarily on the chip level component packaging and Day Two focusing on board assembly and systems levels. Both days will also include the latest in both internal medical implants (Day One) and devices and external instrumentation (Day Two).

Innovation and new product development continues across a range of technologies related to the use of electronics in medical applications. The economic momentum in the areas of personal health and a global healthcare industry in general continue to drive positive business trends.

Technical advancements can be utilized to improve the next generation of existing medical electronic products or to develop innovative products, as both are directed to efficient medical diagnosis and improving treatments. Integrated Circuit (IC) and MEMS technologies are at the foundation of the industry, a solid base for the implantable devices and medical systems. Each product and application has a complex matrix of materials suppliers, assembly processes and the industry or government reliability requirements.

This symposium will bring together business and technical experts from the medical electronics industry to give attendees current perspectives on the economic and industry trends as well as state-of-the-art technologies and medical applications.

SYMPOSIUM CO-CHAIRS

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email: bcooper@mepotec.org, or visit the
MEPTEC website at www.mepotec.org.



Contact Melissa Serres Marx at 952-920-7682,
email: melissa@smta.org, or visit the SMTA
website at www.smta.org.

Go to www.meptec.org or www.smta.org for complete presentation descriptions.

DAY ONE – WEDNESDAY, SEPTEMBER 16TH

SESSION ONE

Market Trends & Forecast in Medical Electronics

Session Chair:

Murali Guntu, President

[Guanxi Research](#)

This introductory session will look at the future of ubiquitous electronics in health related applications, with an introductory discussion looking forward on how microelectronics industry organizations might participate and contribute to the advancement of health related technologies and packaging. There is a great deal of potential for electronics in the health industries over the next decade, and this overview session will set the stage for subsequent microelectronic technology presentations and discussions.

SESSION TWO

Emerging Materials & Technologies

Session Chair:

Thomas Jacob, Regional Manager

[Dyconex Inc.](#)

Advanced materials play a fundamental and important role in both microelectronic and bioscience applications from the medical electronics perspective. Wireless RF technology continues to expand its role in the gathering and transfer of information. Materials development allows the miniaturization of the components and sensors in a variety of diagnostic and treatment applications.

SESSION THREE

Component Manufacturing at the Chip & Packaging Level

Session Chair:

Scott Klopfenstein, Manager, Medical Devices

[PADT Medical](#)

From laboratory product prototyping to global commercialization, the manufacturing processes and capabilities are critical to high quality and reduced cost models of the end product. Communication on materials development and manufacturing is critical, as the decisions are typically made early in the product development cycles to either outsource manufacturing or to define the processes as core corporate competencies.

SESSION FOUR

Implantable Products and Applications

Session Chair:

Brian Greig, Design Assurance Manager

[St. Jude Medical](#)

There are important considerations for implantable and injectable products, including small form factors and bio-compatibility. End products including the neuro stimulation technologies, treating various diseases, continue to improve the quality of life for many on a daily basis. Products with applications in sensing, bio-telemetry, drug delivery and other types of treatment continue to advance in capability and widen their scope.

PRESENTATIONS TO INCLUDE

(listed in order of presentation)

Keynote Presentation:

Implantable Medical Devices – Past Successes, Current Status, Future Possibilities and Challenges

Peter C. Tortorici, PhD, Process Development Manager

[Medtronic Microelectronics Center](#)

Evolution in Medical Devices from a Semiconductor Perspective

Srik Gurrapu, Product Line Marketing Manager

[Texas Instruments](#)

Market Trends and Business Outlook for Electronic Medical Devices

Steve Kennelly, Senior Manager, Medical Products Group

[Microchip Technology Inc.](#)

A MEMS Foundry Perspective on Advanced in Medical Electronics

Craig Trautman, Vice President, Business Development

[Innovative Micro Technology \(IMT\)](#)

Novel Catheter Based RF Treatment of Peripheral Arterial Disease

Michael Perry, CTO

[Minnow Medical](#)

MEMS for Medical Applications

Alissa Fitzgerald, PhD, Managing Member

[A.M. Fitzgerald & Associates, LLC](#)

Small Footprint SoC Extends Battery Life in Precision Portable Medical Instrumentation

Murugavel Raju, Microcontroller Strategic Marketing

[Texas Instruments](#)

Competing in a Global Market: Manufacturing Miniaturized Medical Devices & Sensors

Donald Styblo, Vice President of Technology

[Valtronic Technologies \(USA\) Inc.](#)

MEMS Sensor Applications in the Medical Field

Michael Young, C&I Pressure/Proximity Sensor Product Line Manager

[Freescale Semiconductor, Inc.](#)

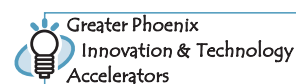
A Versatile Platform for Miniature Wireless Batteryless Sensing Implant

Nader Najafi, PhD, Founder, President & Chief Executive Officer

[Integrated Sensing Systems](#)

Others to be announced

Association Sponsors



Register for this special two-day event online today at www.meptec.org!

DAY TWO – THURSDAY, SEPTEMBER 17TH

SESSION FIVE

Materials and Design at the Board and Systems Levels

Session Chair:

Ron Molnar, Executive Director

[AZ Tech Direct, LLC](#)

Medical device modeling, simulation and characterization have become a key element in reducing prototype design time and end product time to market. Advanced material development at the board and systems levels, some disruptive to current technologies, are being implemented in parallel with those at the component level. Factors such as power consumption, data collection, displays and interface all impact the final designs.

SESSION SIX

Systems Manufacturing

Session Chair:

Randy Crutchfield, Product Engineer

[Medtronic Microelectronics Center](#)

Manufacturing processes for medical electronic end products have improved in many areas including speed, accuracy and yield, coupled with designs for manufacturability. Outsourcing models continue to gain momentum, versus captive capability, although some end product companies continue to maintain or have added these capabilities, based upon their specific product, business level, leadtimes and manufacturing cost.

SESSION SEVEN

Reliability, Safety and Regulatory Testing

Session Chair:

Dale Lee, Staff DFX Process Engineer

[Plexus Technology Group](#)

Directly impacting human life, focus on medical electronic product reliability and safety is fundamental at both the corporate quality and government regulatory levels. Testing of products, to protect the consumer, is critical to the end product development cycle. Corporations and the consumers themselves have played an active role in monitoring and reporting product safety information, with focus also on impact to the environment.

SESSION EIGHT

System Level Products and Applications – External Instrumentation

Session Chair:

Cary Kronebusch, Business Unit Director

[Benchmark Electronics, Inc.](#)

Corporations known for impact in semiconductor electronics are expanding their scope in medical applications along with corporations already focused on biomedical products. Ranging from state-of-the-art operating rooms, remote patient monitors and 4D imaging systems to disposable off-the-shelf products, the diversity and availability of products is having a positive impact on the health of individuals and the global economy in general.

PRESENTATIONS TO INCLUDE

(listed in order of presentation)

Keynote Presentation

Advanced Packaging and Assembly Techniques Using Fab Type Processes

Paul Gerrish, Director, Technology Development

[Medtronic Microelectronics Center](#)

Solder Trends Affecting Medical Electronics Assembly

Tim Jensen, Product Manager

[Indium Corporation](#)

Electrical Design for Reliability on the Development of Implanted Cardioverter Defibrillators

Yan Liu, Sr. Product Engineer

[Medtronic Microelectronics Center](#)

The Suitability of Parylene for Medical Electronic Devices

Lonny Wolgemuth, Sr. Medical Market Specialist

[Specialty Coating Systems](#)

Solder Paste Selection Can Improve Cleaning Performance on Highly Dense Medical Electronic Assemblies

Mike Bixenman, Chief Technology Officer

[Kyzen Corporation](#)

Evaluation of Cleaning Chemistries for the Removal of Solder Flux Residues from Hybrid (PCB) Assemblies

Harald Wack, President

[ZESTRON America](#)

INK-JET Microdispensing: A Tool for Fabrication and Packaging of BioMEMS Devices

Donald Hayes, President

[MicroFab Technologies, Inc.](#)

Reliability Challenges in the Medical Industry

Mike Silverman, Managing Partner

[Ops A La Carte](#)

Preparing Today for the FDA Sentinel Initiative: Tracking the Performance of Medical Devices from Product Inception throughout Adoption by Patients

Nader Fathi, Chief Executive Officer

[SigmaQuest, Inc.](#)

Second Generation Lead-Free Alloys

Randy Schueller, Ph.D.

[DfR Solutions](#)

Advanced Technologies for High Reliability Medical Electronics Manufacturing

Thomas Jacob, Regional Manager

[Dyconex AG](#)

Others to be announced

SYMPOSIUM REGISTRATION

**2009
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**Wednesday &
 Thursday
 September 16 & 17**

Arizona State University
 Tempe Campus, Tempe, AZ
 8:30 am - 5:00 pm

Pre-Registration

Pre-Registration is strongly recommended. There will be no guarantee of space or materials for on-site registrants. There will be an additional \$25.00 fee to register at door on day of event without a pre-paid or held reservation. Guaranteed registration will be accepted by web secure site, mail, fax, phone or e-mail. Please note that you may pay at door for attendance, but you must hold your registration with a credit card. **Refunds for advance payment, less a \$50.00 processing fee, will be given in full provided cancellation is received 7 business days prior to event (by end of day Monday September 7). If you chose to pay at door but do not show and do not cancel by the date stated above, the credit card you provided to hold the reservation will be charged.**

**Please Register by
 September 11th**

Registration confirmation, location map and other information will be sent to you.

Hotel Information

The nearby Mission Palms Hotel at 60 East 5th Street has been designated as the official hotel for attendees, but no room block has been established. Please call 408-894-1400 or 800-547-8705 to reserve your room. The ASU rate is \$95.00. You must mention that you are attending an event at ASU in order to secure the ASU rate.

1 Attendee Information: (Please Print)

Name _____
 Title _____
 Company _____
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 City/State/Zip _____
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2 Symposium Admission

Includes Attendance, Break Refreshments, Lunch, Reception and Printed Proceedings.

- Day One Attendance Fee:** MEPTEC or SMTA Members **\$375** Non-Members **\$475** \$ _____
Day Two Attendance Fee: MEPTEC or SMTA Members **\$375** Non-Members **\$475** \$ _____
Both Days Attendance Fee: MEPTEC or SMTA Members **\$650** Non-Members **\$750** \$ _____

3 Proceedings on CD

Will be shipped two weeks following event.

- Event Attendee Day One **\$35** \$ _____
 Event Attendee Day Two **\$35** \$ _____
 Non-Attendee Day One **\$75** \$ _____
 Non-Attendee Day Two **\$75** \$ _____

4 MEPTEC Membership: Take this opportunity to sign up for a MEPTEC membership and enjoy an immediate discount on this symposium!

- Individual Membership / 1 yr. / \$95.00** \$ _____
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Visit meptec.org for more information about MEPTEC membership.

SMTA Membership: Sign up for an SMTA membership at www.smta.org and enjoy an immediate discount on this symposium!

Total \$ _____

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