

PROGRAM

IMAPS Advanced Technology Workshop on

Advanced Packaging for Wireless Medical Devices

San Diego Marriott Mission Valley
San Diego, California - USA

JANUARY 26-27, 2016

WORKSHOP WEBSITE: WWW.IMAPS.ORG/MEDICAL

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Event Chairs:

Matt Nowak
Qualcomm

Vern Stygar
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Featuring Keynotes & Panels...

- ◆ KEYNOTE: **Medical Devices in the Wireless Era**
Dr. Lucian Iancovici
Managing Member, dRx Capital
Senior Investment Manager, Qualcomm Ventures
- ◆ PANEL: **Consumable Medical Devices that utilize Si Micro-Chips** - Moderator: Jan Vardaman,
TechSearch International
- ◆ PANEL: **Miniaturization Strategies for Mobile Medical Products** - Moderator: Susan Bagen,
Micro Systems Technologies, Inc.

Technical Presentations from...

- ◆ OnKol
- ◆ AGC Electronics - Asahi Glass Company
- ◆ TechSearch International
- ◆ Leek Technologies
- ◆ IMT Masken und Teilungen AG
- ◆ Invenios
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- ◆ Transystem Inc & Lumimax Optoelectronic Tech.
- ◆ Micro Systems Technologies
- ◆ Applied DNA Sciences
- ◆ University of California - San Diego
- ◆ IPDiA
- ◆ Draper Laboratory; and more!



Organized by:

International Microelectronics Assembly and Packaging Society (**IMAPS**)

Bringing together the entire microelectronics supply chain!TM

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The Advanced Technical Workshop on Advanced Packaging for Wireless Medical Devices will bring together technologists in semiconductor packaging with life science experts interested in applying the Internet of Things to healthcare. The workshop will provide a venue for presentations and discussions focused on traditional packaging, and emerging packaging technologies for medical diagnostic devices including RF circuits used to monitor patients or to connect remote patients with doctors. Attendees at this event will be exposed to a wide variety of disciplines to encourage new products, discussions and collaborations. The two day event will draw invited experts in the fields of medicine, chemistry, RF, and semiconductor packaging.

Tuesday, January 26, 2016

Registration: 8:00 am – 4:30 pm
Continental Breakfast: 8:00 am - 8:45 am

9:00 am – 9:15 am: Opening Comments

Workshop Chairs

Matt Nowak, Qualcomm; Vern Stygar, Asahi Glass; Tim LeClair, Cerapax



9:15 am - 10:00 am: KEYNOTE SPEAKER
Medical Devices in the Wireless Era

Dr. Lucian Iancovici
Managing Member, dRx Capital
Senior Investment Manager, Qualcomm Ventures

Abstract: The advent of the connected health has fueled a new generation of companies trying to turn healthcare into a system where information can flow more easily to drive more efficient and effective care. The excitement around the possibilities has driven billions of dollars of investment over the last few years. With this investments, there seems to be a pattern emerging -- bring the data on-line from many sources, aggregate the data, analyze the data, and then use the insights to effect change. In other words -- mobilize, organize, analyze, catalyze. What will the future hold? Venture funding in digital health continues to rise despite a dip in pharma and med-tech investment. Start-ups that reached scale have raised massive new rounds. Institutional and corporate investors have built up portfolios. This talk will provide an overview of this exciting new application space and will highlight opportunities for medical sensor, wearable and device companies.

The Internet of Things is Wasted on the Young: ONKÖL's Solution to Elderly Technology Adoption

10:00 am – 10:30 am -- Erich Jacobs, OnKol

Networking Break: 10:30 am – 11:00 am

What is in Store for Glass in the Next 50 Years?

11:00 am – 11:30 am -- Nobu Imajyo, AGC Electronics Asahi Glass Co., Ltd.

Transitioning Mobile Functionality and Packaging to Wireless Medical Devices

11:30 am – 12:00 pm -- E. Jan Vardaman, Trevor Yancey, TechSearch International, Inc.

Lunch: 12:00 pm - 1:00 pm

1:00 pm - 2:30 pm: PANEL DISCUSSION

Consumable Medical Devices that utilize Si Micro-Chips

Moderator: Jan Vardaman, TechSearch International

Panelists: TBD

Topics:

- end markets; consumer, clinical, laboratory, other
- functions; analytical, diagnostic, therapeutic, other
- microchip purposes; fluidics, electrical, optical, other
- packaging; interconnect, modules, instrument interfacing
- cost, assembly, reliability, supply chain

IoT Packaging for Polymer Absorption Sensors; Medical and Environmental Uses

2:30 pm – 3:00 pm -- Chris Neidre, Leek Technologies (Alex Robertson, Tim LeClair, Sam Crivello)

Networking Break: 3:00 pm – 3:30 pm

Scalable Wafer Level Production of Consumables Made of Non-CMOS Compatible Materials on Glass, Challenges and Opportunities Utilizing a Foundry Concept

3:30 pm – 4:00 pm -- Alexios Tzannis, IMT Masken und Teilungen AG

New Packaging and Manufacturing Tools for In Vivo Projects

4:00 pm – 4:30 pm – Berkeley Johnson, Invenios

4:30 pm – 5:30pm – Networking Reception

Appetizers, Beer, Wine & Networking!

Wednesday, January 27, 2016

Registration: 8:00 am – 4:30 pm

Continental Breakfast: 8:00 am - 8:45 am

9:00 am – 9:15 am: Opening Comments

Workshop Chairs

Matt Nowak, Qualcomm; Vern Stygar, Asahi Glass; Tim LeClair, Cerapax

Advanced Packaging Techniques as Enablers for the Health IoT Ecosystem

9:15 am – 9:45 am -- Erik Jung, Fraunhofer IZM (Andreas Middendorf, Michael Toepper, Rafael Jordan, Klaus Dieter Lang)

How to Select the Optimal WiFi Module? Transystem WiFi Module Technical Strength

9:45 am – 10:15 am -- Tony Yang, Transystem Inc. and Lumimax Optoelectronic Technology (Henry Chen)

Smart Medical Microelectronics: Design and Reliability Considerations in Miniaturized Wireless Circuit Topologies

10:15 am – 10:45 am -- Ravi Subrahmanyam, Micro Systems Engineering, Inc. (Hal Paver, Micro Systems Technologies, Inc.; Danbo Shen, Micro Systems Engineering, Inc.)

Networking Break: 10:45 am – 11:00 am

SigNature® DNA Marking and Forensic Traceability

11:00 am – 11:30 am -- Bob MacDowell, Applied DNA Sciences

Processing Techniques for Medical Device Platform Miniaturization

11:30 am – 12:00 pm -- Yuhwa Lo, University of California - San Diego (Xuekun Lu, Iftikhar Ahmad Niaz, Bernd Fruhberger, Raffaella Fior)

Lunch: 12:00 pm - 1:00 pm

<p>1:00 pm - 2:30 pm: PANEL DISCUSSION Miniaturization Strategies for Mobile Medical Products</p>
<p>Moderator: Susan Bagen, Micro Systems Technologies, Inc. Panelists: TBD</p>
<p>Topics:</p> <ul style="list-style-type: none"> - range of applications driving miniaturization - design rules and guidelines - materials and package technology selection - interconnect and assembly methods - performance, compatibility, and reliability issues

Networking Break: 2:30 pm - 2:45 pm

3D Silicon IPD for Smaller and More Reliable Implantable Medical Devices

2:45 pm – 3:15 pm -- Mohamed Mehdi Jatlaoui, IPDiA (Sébastien Leruez, Olivier Gaborieau, Catherine Bunel)

Packaging Architecture for an Implanted System that Monitors Brain Activity and Applies Therapeutic Stimulation

3:15 pm – 3:45 pm -- Caroline Bjune, Charles Stark Draper Laboratory (Thomas Marinis)

Closing Remarks: 3:45 pm

Registration Information:

Member, Non-member, Speaker & Student fees include: access to all technical sessions, meals, refreshment breaks, and one (1) DOWNLOAD of presentations; download will contain the presentations as submitted by the presenter. Download will be available after the event. Member/Non/Student also includes a one-year IMAPS individual membership or membership renewal at no additional charge

Type	Fee
IMAPS Member	\$350
Non-Member	\$450
Speaker	\$75
Student	\$75
Premier Event Sponsorship <i>(includes: 1 attendee registration, 1 tabletop exhibit, print advertisement in programs, flyer/giveaway distributed to all attendees, logo/advertisement on event webpages)</i>	\$1500

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