

PROGRAM AND REGISTRATION ON-LINE AT WWW.IMAPS.ORG/PRINTED
**IMAPS ADVANCED TECHNOLOGY WORKSHOP AND TABLETOP EXHIBITION ON
PRINTED DEVICES AND APPLICATIONS**

INTERNATIONAL PLAZA RESORT
10100 INTERNATIONAL DRIVE
ORLANDO, FLORIDA 32821
MAY 6 -7, 2010



General Chair:

C. Mike Newton, nScript, Inc.
mnewton@nscriptinc.com

Technical Program Chair:

Dr. Kenneth Church, nScript, Inc.
kchurch@nscriptinc.com

Organized by:



International Microelectronics And Packaging Society (**IMAPS**)
Bringing Together the Entire Microelectronics Supply Chain!

&



IMAPS Florida Chapter

Hotel Cut-off & Early Registration Discounts End: April 13, 2010

Printed Devices & Applications Workshop Focus:

The objective of the Printed Devices and Applications Workshop is to provide a unique forum that brings together scientists, engineers, manufacturing, academia, and business people from around the world who work in the area of printed electronics as an emerging packaging technology. This workshop enables discussion and presentations on the latest materials, process, design and emerging applications of printed electronics technology.

Organizing Committee:

Carol Gamlen, Harris Corporation
Tim Davis, JDM Associates
Mike Hudgens, Corwil
Mike McEntee, Sypris Test & Measurement

Student Activities:

Outreach Chair:

High School: **Dr. Janet Lumpp** - University of Kentucky

Florida Student Chapters:

Florida International University

Chapter Advisor: Dr. Kinzy Jones | Student President: Gao Yong

University of Central Florida

Chapter Advisor: Dr. Xun Gong | Student President: Justin Luther

University of South Florida

Chapter Advisor: Dr. Jing Wang | Student President: Kosol Son

High School Technology Student Association

TSA Teacher Advisor: Carrie Robertson
Bayside High School Palm Bay Bayside High STEAM TEAM

CCHS Advisor:

Kelly Stone, Circle Christian High School Team Noncontact

SPEAKER/PRESENTATION INFORMATION

Extended Abstract or Presentation Material due: **April 2, 2010.**

Send your extended abstract or presentation material via email to jmorris@imaps.org, in PDF format only.

Powerpoint/Presentation file used during session: ***Speaker's responsibility to bring to session on USB and/or CD*** (recommended to have back-up on personal laptop, CD-ROM, or memory stick). Laptops will be provided by IMAPS in the session room.

Speakers must register for the workshop at the reduced speaker rate. Advance registration deadline is April 13, 2010. Visit www.imaps.org/printed for more information.

Thursday, May 6th

Registration: 7:30 am – 7:00 pm

Continental Breakfast: 7:30 am – 8:30 am

Welcome: 8:00 am – 8:15 am

General Chair: C. Mike Newton, nScript Inc.

Opening Remarks: 8:15 am – 8:30 am

Technical Chair: Kenneth Church, nScript, Inc.

Exhibit Hours: 10:00 am – 7:00 pm

High School Student Printed Electronics Posters: 10:00 am – 1:30 pm

Bayside High School Communications Technology Students will be demonstrating their knowledge of screen printing techniques to incorporate printed circuit boards using non-traditional materials through a Tinker Toy lamp project that they built in class. Students learned basic electronic fundamentals and how circuitry functions. They applied their knowledge and married it with the printing applications learned in class to demonstrate by bringing their lamps to the Advanced Technical Workshop for display. Students expect to share and answer questions related to printed electronics.

University Student Posters: 10:00 am – 7:00 pm (Poster Judging at 5:45 pm)

Large Area Deposition of Nano Particulate Suspensions for the Manufacture of Flexible Electroluminescence Lamps
Nadja Straue, Martin Rauscher, Andreas Roosen, University Erlangen-Nuremberg

Printed Fuse Characterization
Cassie Soto, The University of Texas at El Paso

Design of pH Sensor Module for Wireless Sensor Network
Ho-Jeong Sohn, Sekwang Park, Kyungpook National University

Towards a Printed Reserve Cell Zinc-Air Battery
Krista L. Hawthorne, Christopher A. Applett, Eric Branson, Adam Cook, Kyle Fenton, Paul Clem, University of New Mexico

Floating Sensors with Additive Manufacturing
Rodolfo Salas, The University of Texas at El Paso

Capacitive Sensor for Automotive Engine Oil Degradation using Wireless Network
Jaedong Cho, Sekwang Park, Kyungpook National University

Multi-Axis Magnetometer using Additive Manufacturing
Richard Olivas, The University of Texas at El Paso

SESSION I: PROCESSES & MATERIALS

8:30 am - 11:30 am

Session Chair: C. Mike Newton, nScript Inc.

Inexpensive Copper Films: Reducing Printed Copper Oxide on Low Temperature Substrates at Industrial Speeds in Air
Kurt Schroder, Stan Farnsworth, Dave Pope, Ian Rawson, NovaCentrix

Aerosol Jet Material Deposition for High Resolution Printed Electronic Applications
Michael J. Renn, Optomec

Large Area Patterning of Conductors Utilizing Silver Nanoparticle Inks with Traditional Printing Processes
Michael Mastropietro, PChem Associates Inc.

Break: 10:00 am - 10:30 am

MicroDispensing/Spraying for Printed Electronics
Xudong (Donny) Chen, nScript Inc.

Solder-Free Electronics Assembly Materials – SEAM
Alfred A. Zinn, Lockheed Martin Space System Company

Buffet Lunch: 12:00 pm - 1:00 pm

KEYNOTE SPEAKER: 12:30 PM – 1:00 PM

Dr. Pradeep P. Fulay, NSF

SESSION II: DEVICES & APPLICATIONS

1:30 pm – 5:00 pm

Session Chair: Kenneth Church, nScript, Inc.

The Ideal Design System for the new Printed Devices Technology
John Sovinsky, CAD Design Services, Inc.

The Integration of Electronics with Textiles via Inkjet Printing and Non-metallic Conductive Fibers
Michael D. Irwin, Richard I. Olivas, Eric W. MacDonald, University of Texas at El Paso

What's Nano about Electronics?
David R. Darling, Lockheed Martin Missiles and Fire Control

Break: 3:00 pm - 3:30 pm

Towards a Fully Printable Battery: Robocast Deposition of LiFePO₄
Chris Apblett, Sandia National Laboratories; Kyle Fenton, Plamen Atanassov, University of New Mexico

Magnetic Polymer Nanocomposites for RF and Microwave Applications
Jing Wang, Cesar Morales, Julio Dewdney, Susmita Pal, Kristen Stojak, Hariharan Srikanth, Thomas Weller, University of South Florida

Advantages of Printed Electronics for Small Vehicle Platforms such as Un-manned Air Vehicles (UAVs)
Robert M. Taylor, Sciperio, Inc.

Reception: 5:15 pm – 7:00 pm

University Student Poster Judging: 5:45 pm - 6:30 pm

Dinner: On your own

Friday, May 7th

Registration: 7:30 am - 12:00 pm

Continental Breakfast: 7:30 am - 8:30 am

Exhibit Hours: 8:00 – 12:00

SESSION III: PANEL DISCUSSION – GLOBAL PRINTED ELECTRONICS & TRENDS

8:30 am - 12:00 pm

Session Chairs: Kenneth Church, Sciperio, Inc.; C. Mike Newton, nScript Inc.

The panel discussion will focus on the technical and disruptive obstacles that must be overcome before printed devices will dominate next generation consumer electronics. While replacing existing products is one goal, the more obvious vision and impact will come from never-before produced products; well, not outside of Hollywood.

Featured Panel Discussion Speakers:

Printed Electronics in Asia

Namsu (Peter) Kim, Professor & Director, Seokyoung University

University Student Poster Winners (*winners selected on May 6th*)

Closing Remarks: 12:00 pm

THANK YOU

A SPECIAL *THANK YOU*

TO ALL THE MEMBERS OF THE ORGANIZING COMMITTEE, STUDENT ACTIVITIES,
THE SESSION CHAIRS AND SPEAKERS.

YOUR PARTICIPATION IS GREATLY APPRECIATED!

Tabletop Exhibition

"An opportunity to talk to industry leaders"

May 6 - 7, 2010

Thursday, May 6th 10:00 am - 7:00 pm (Exhibit Hours)

Friday, May 7th 8:00 am - 12:00 pm (Exhibit Hours)

Tabletop exhibits will be located in the session room. Exhibitors will not only have the advantage of hearing the presentations, but they will have additional exposure to the attendees.

Tabletop Registration Fees

	On or before 4/13/10	After 4/13/10
IMAPS Corporate/Organizational Member	\$475 per booth	\$575 per booth
IMAPS Non-Corporate/Organizational Member	\$575 per booth	\$675 per booth

Included With Your Registration: one (1) six foot draped table, two (2) chairs, one (1) Technical Presentations CD-ROM - post workshop, one (1) List of Attendees - post workshop, Exhibit Hall admission for two (2) booth personnel.

Additional booth personnel are welcome at an extra cost of \$50 per person.

Registrations for the full workshop are not included, but are available at an additional cost; see the registration page.

Shipments are made to the hotel directly. You save money because no service contractor is involved!

International Plaza Resort
10100 International Drive
Orlando, Florida 32821
Phone: 407-352-1100

Cancellation Policy

Booth cancellations made on or before 4/23/10 will receive a refund minus \$100 handling fee.
Booths cancelled after 4/23/10 will not be refunded.

For more information, visit www.imaps.org/printed or contact:

Ann Bell, abell@imaps.org; 202-548-8717

Marketing Feature Available for Exhibitors

IMAPS is offering Exhibiting Companies the opportunity to have an unlimited amount of product promotion information on the Technical Presentation CD-ROM. **Exhibitors must submit ONE pdf or word file, via email, containing the information you want to appear on or before April 30, 2010 to Ann Bell (abell@imaps.org).** Submissions must be as stated and arrive by the deadline. Any materials not sent in the required format or that arrive after the deadline, may not appear on the CD-ROM. There is no charge for this optional feature.

Hotel Information

Hotel Cut-off: April 13, 2010

**INTERNATIONAL PLAZA RESORT
10100 INTERNATIONAL DRIVE
ORLANDO, FLORIDA 32821
PHONE: 1-800-327-0363
<http://www.intplazaresort.com/>**

Single/Double: \$99/night

Please reference IMAPS - International Microelectronics And Packaging Society when making reservation by phone.

Registration Deadlines

**Early Registration Discount Ends
April 13, 2010**

Session Chair, Speaker/Presenter must register for the workshop at the reduced rate.

Extended Abstract Due:

April 2, 2010

Email extended abstract in PDF format only to jmorris@imaps.org.

REGISTRATION FORM (REGISTER ON-LINE AT WWW.IMAPS.ORG/PRINTED)

PRINTED DEVICES AND APPLICATIONS ATW - MAY 6 - 7, 2010

Dr. Mr. Ms. IMAPS Member ID# _____
First Name _____ M.I. _____ Last Name _____
Company/Affiliation _____ Job Position _____
Address _____
City _____ State _____ Zip _____ Country _____
Phone _____ Fax _____ Email _____

PAYMENT

PRINTED 10

Workshop Fee: \$ _____
Tabletop Exhibit Fee: \$ _____
Additional Purchases: \$ _____
Total Payment Due: \$ _____

Enclosed is a check payable in US funds to IMAPS

Charge my fees to:

AMEX VISA MC Discover

Card# _____ Exp. _____

Signature _____

Card billing address, if different from above: (required)

Email address required to receive confirmation of registration.

For Wire Transfer information call 202-548-4001

Mail this form with payment to: IMAPS * 611 2nd Street, NE * Washington, DC 20002-4909. For credit card transactions, register on-line: www.imaps.org; or register by phone with your credit card by calling 202-548-4001; Fax: 202-548-6115. Additional information? E-mail: IMAPS@imaps.org, or visit our web site: <http://www.imaps.org>. **Workshop Cancellation** will be refunded (less a \$50 processing fee) only if written notice is postmarked on or before **Friday, April 23, 2010**. No refunds will be issued after that date.

REGISTRATION FEES: EARLY DISCOUNT ENDS 4/13/10

WORKSHOP FEES

(On or before 4/13)

(After 4/13)

<input type="checkbox"/> Member (IMAPS)*	\$500	\$600
<input type="checkbox"/> Non-Member*	\$600	\$700
<input type="checkbox"/> Speaker* <input type="checkbox"/> Chair* <input type="checkbox"/> Chapter Officer*	\$300	\$400
<input type="checkbox"/> Student*	\$125	\$150

Exhibits Only (does not include lunch)

FREE

Exhibits Lunch (per person/per day)

\$45

Thursday

*Includes one-year IMAPS individual membership/renewal. Does not apply to corporate or affiliate memberships. Workshop Fee includes an Abstract book, meals listed and a CD-ROM of presentations. CD will be mailed 15 business days after the event.

TABLETOP EXHIBIT BOOTH

<input type="checkbox"/> Member	\$475	\$575
<input type="checkbox"/> Non-Member	\$575	\$675
<input type="checkbox"/> Yes, I will participate in the CD-ROM		FREE

Tabletop registration fee includes 1-six foot draped table, 2 chairs, Exhibit Hall admission for 2 booth personnel, list of attendees & CD-ROM participation. A CD-ROM of Technical Presentations and 1-list of attendees will be sent to you after the event.

Exhibits will be on May 6th & 7th.

Exhibit cancellation must be received on April 23, 2010; \$100 cancellation fee applied. No refunds issued after this date.

ADDITIONAL PURCHASES

<input type="checkbox"/> Guest/Family Member (meals only)	\$160
<input type="checkbox"/> Printed Devices CD of Presentations (member)	\$200
<input type="checkbox"/> Printed Devices CD of Presentations (non-member)	\$300
<input type="checkbox"/> Add to Ship in the US	\$7
<input type="checkbox"/> Add to Ship Overseas	\$25

Housing (Hotel Cut-off is April 13, 2010)

INTERNATIONAL PLAZA RESORT

10100 INTERNATIONAL DRIVE

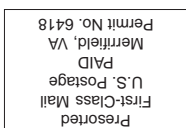
ORLANDO, FLORIDA 32821

PHONE: 1-800-327-0363

[HTTP://WWW.INTLPLAZARESORT.COM/](http://www.intlplazaresort.com/)

Single/Double: \$99/night

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IMAPS Registration
611 2nd Street, NE
Washington, DC 20002-4909
"Return Service Requested"