

# THE WAVE



*The newsletter publication of the International Microwave Power Institute*

**July 2015 (Symposium Edition)**



*Group Dinner, Bali Hai on the San Diego Bay (IMPI 49, June 2015)*

## **IMPI 49 Symposium Concludes, Plans Underway for IMPI 50**

Over 80 attendees from 15 countries convened at the Kona Kai Resort and Marina in San Diego, California last month for the 49th annual Microwave Power Symposium.

Attendees heard from over 50 presenters, enjoyed various networking opportunities and took in the amazing views provided by the Kona Kai Resort and Marina on Shelter Island. A record nine exhibitors participated in the Symposium.

Thirteen students participated in a Student Competition and awards were given for best oral presentation and best poster presentation. Ethan Moon from Worcester Polytechnic Institute took the prize for best oral presentation for his paper, "Modeling-based Optimization of Thermal Processing in Microwave Fixation." Mathias Andrasch from INP Greifswald e.V. was awarded the prize for best poster presentation for his paper, "Microwave-Induced Plasma Analysis: Experiment and Modelling" Moon and Andrasch were each awarded a \$100 cash prize, a complimentary one year membership to IMPI and a certificate. *Photos on Page 5.*

During the closing ceremony, the location for the 50th Annual Microwave Power Symposium (IMPI 50) was unveiled. IMPI 50 will take place at the Caribe Royale Suites in Orlando, Florida, USA from June 20-23, 2015. The Technical Program Co-chairs for IMPI 50 will be Ulrich Erle of Nestle and Kadir Aslan of Mogan State University; both Erle and Aslan have been active members of the TPC for the past two years. The Call for Papers for IMPI 50 will be released in early September. IMPI.org will be updated with more Symposium details throughout the summer.

## **President's Message**

Welcome to summer!

A recent article in the New York Times (May 13, 2015) noted that Moore's Law just turned 50: A 1975 revision of the law predicted that every two years there would be a doubling of the number of transistors that could fit on a single chip of silicon so you'd get twice as much computing power for only slightly more money. It's turned out to be a remarkably accurate prediction, and we are all reaping the benefits.

However, an article that appeared in the Business Section of the paper not long after that noted "Investment in research and development has flat lined over the last several years as a share of the economy, stabilizing at about 2.9 % of the nation's gross domestic product in 2012, according to the National Science Foundation."

*Continued on Page 2*

## ***President's Message Continued***

That's a very disturbing piece of news when you think about all the remarkable innovations that have occurred in the last couple of decades:

- An iPhone in your pocket that has more computing power than the Voyager spacecraft that left the solar system two years ago
- High tech cancer drugs being approved every month
- Unbelievable advances in medical technology on a daily basis
- The list goes on and on.

2.9% may not be far from the overall peak, but other countries are now leaving the United States behind, "And even more critically, Investment in basic research—the fundamental building block for renovation and economic advancement—steadily shrank as a share of the economy in the decade 2012, the last year for which there are comprehensive statistics."

As a person who is been involved in research and development all my life, I find the statistics very disturbing. Furthermore, I am also seriously disturbed by the lack of scientific acumen among our public leaders and even more by the negative Image of science in much of the public, and which is being enhanced daily by the enormous amount of inaccurate information on the World Wide Web. This is something I'm sure all of you see as well, and must be equally appalled by it Speaking for myself, I keep battling the spread of microwave misinformation every day, as much as I can,. But at times I feel like Sisyphus trying to push the gigantic boulder of misinformation to the top of the mountain only to have it come rolling down again; and the boulder keeps growing daily! Certainly, we in IMPI do what we can with our many activities: symposia, webinars, short courses, publications, etc., But I often get the feeling that we are just talking to ourselves when I'd rather this real information were spread to the general public. This is a topic we addressed at the Strategic Planning meeting several us attended in San Diego, prior to the Symposium. If IMPI is to remain truly relevant, we need to find a way not only to provide the most recent and accurate information to our members, but to the public at large as well. Molly and I will keep you updated our progress at that meeting, but I would appreciate any input regarding any specific concerns you may have

I was happy to see many Members in San Diego @ IMPI 49. It was a terrific symposium – lots of good oral and poster presentations, good discussions and networking opportunities and the largest supplier exhibition we've ever had. A goodtime was had by all! You can read about it and see images from the Symposium on IMPI's Facebook page and website: [IMPI.org](http://IMPI.org). There are many people who contributed to the success of IMPI 49 but I want to especially thank our Technical Program Chairman Professor Ray Boxman ably assisted by Dr. Ulrich Erle, Food Science and Technology Chairman Dr. Jeyam Subbiah and IMPI's superb Executive Director Molly Poisant: great job!!!

All the best  
Bob



## **JMPEE To Be Published by Taylor & Francis**

Big changes are underway for IMPI's peer reviewed Journal of Microwave Power and Electromagnetic Energy! In January 2016, as JMPEE embarks on our 50th year of publication, the Journal will enter into a publishing arrangement with renowned UK-based publisher, Taylor & Francis. Full editorial management of the Journal will remain with IMPI, under the leadership of Editor-In-Chief, Dr. Juan Aguilar-Garib. Taylor & Francis is the oldest commercial journal publisher in the world; they currently publish over 1,850 scholarly journals. IMPI's executive leadership is confident this partnership will lead to a broader readership of the Journal. Additional details on the partnership, including details on how IMPI members can access their complimentary online access, will be sent out in the coming months.

## **The Journal of Microwave Power and Electromagnetic Energy Continued**

Volume 49, Issue 2 was published in June 2015. The following papers appear in this Issue of JMPEE:

### **Detection of Surface Crack on the Substrate under Thermal Barrier Coatings Using Microwave Non-Destructive Evaluation**

*Song Guorong, Yan Tianting, He Cunfu, Yang Shen, Lu Yan, and Wu Bin*

### **Electromagnetic Field Propagation Characteristics of a Contactless Setting of Fuze**

*Ruizhi Mao, Jie Li, He Cui, and Qixing Chen*

### **Computational Method for Calculating the Effective Permittivity of Complex Mixtures**

*Ricardo Miguel Costa Mimoso, José Manuel da Silva Chaves Ribeiro Pereira, and Jose Carlos Fernandes Pereira*

### **Effective Moisture Diffusivity, Activation Energy and Dielectric Model for Palm Fruit Using a Microwave Heating**

*Kritsada Puangsuwan, Mitchai Chongcheawchamnan, and Chakrit Tongurai*

### **Effect of ZnO-PCL Nanocomposite Thickness on Attenuation in a Rectangular Waveguide at Microwave Frequency using FEM**

*Abubakar Yakubu, Zulkifly Abbas, and Nor Azowa Ibrahim*

IMPI Members are encouraged to submit manuscripts for the Journal of Microwave Power & Electromagnetic Energy. Additional details on the submission process can be seen [here](#).

Your IMPI membership entitles you to complimentary online access to the Journal; contact [molly.poisant@impi.org](mailto:molly.poisant@impi.org) if you need assistance registering with the JMPEE website. It is not too late to order a hard copy of JMPEE Vol 48 for the special member price of \$100 domestic/\$125 international (including shipping).

## **IMPI's Fall Short Course to be Held October 27-29, 2015 in Pittsburgh**

Corporate Member Heinz is sponsoring the Fall Short Course, to be held October 27-29, 2015 at the Doubletree Downtown in Pittsburgh, Pennsylvania, USA. This 2 ½ day event will include an optional Microwave 101 pre-short course and networking reception on Tuesday and sessions on topics such as consumer behavior, packaging, market trends, ingredients, product development, food safety and the regulatory landscape.

Confirmed speakers include Sharon Franke of the Good Housekeeping Institute, Jack Li of Datassential and Sven Bodell of Food Radar. The full program will be released in early August and registration will open at that time.

New this year, IMPI is seeking exhibitors and sponsors for the Fall Short Course. Please contact [molly.poisant@impi.org](mailto:molly.poisant@impi.org) if you are interested in more details.









*Photos of IMPI 49 Symposium, Kona Kai Resort and Marina, San Diego, CA, USA, June 16-18, 2015*

## **INTERACTIVE IMPI** *Direct links to Microwave News on the Web*

*Global Household Microwave Ovens Market Size And Forecast Report To 2015: [Radiant Insights](#)*

*[Marguerite Patten, 99, Dies](#); [Tutored Food-Rationed Britons in Home Cooking](#)*

*[Top 5 Microwave Tricks](#)*

## Calendar of Events

**IMPI Fall Webinars: To be held in September and November 2015.** More details on [IMPI.org/events](http://IMPI.org/events)

**AMPERE 2015**, September 14-17, 2015, Krakow, Poland, More info at <http://ampere.pk.edu.pl/>

**Fall 2015 Short Course**, October 27-29, 2015, Doubletree Downtown, Pittsburgh, PA, USA [www.impi.org](http://www.impi.org)

**50<sup>th</sup> Annual Microwave Power Symposium**, June 20-23, 2016, Caribe Royale Suites, Orlando, FL, USA [www.impi.org](http://www.impi.org)  
*Do you have an upcoming event for us to list here? Email [molly.poisant@impi.org](mailto:molly.poisant@impi.org) for inclusion.*

## Member News!

**A book prepared by IMPI Fellow, Stuart Nelson** during 2014, Dielectric Properties of Agricultural Materials and their Applications, has just been published by Elsevier (Academic Press). It is listed on the Elsevier Store web site. Here is the link, if you are interested:  
<http://store.elsevier.com/product.jsp?isbn=9780128023051&requestid=30017>

The British Standards Institution (BSI) has appointed MTA Technical Officer and **IMPI Member, Gordon Andrews**, as a Microwave Expert. Gordon will now represent Great Britain at IEC international microwave TC 59/SC - 59K/MT1 committee meeting activities.

*Have you recently been published, received an award or promotion? IMPI wants to know! Please email [molly.poisant@impi.org](mailto:molly.poisant@impi.org) for inclusion in our newsletter!*

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