



THE BRAVE NEW WORLD OF MICROWAVE & RF

NOVEMBER 6-8, 2019

Fall Seminar

Presented by the International Microwave Power Institute

Sponsored by TurboChef

Carrollton, Texas, USA



MICROWAVE MODELING • NETWORKING • FOOD COMPANY PROFESSIONALS • INDUSTRY LEADERS
• SMART OVENS • TRENDS • CONSUMER INSIGHT • BEST PRACTICES • PACKAGING
FOOD SERVICE • SOLID STATE COOKING • SUSTAINABILITY • FOOD SAFETY • INNOVATION
MENU TRENDS • TESTING • MICROWAVE TECHNOLOGY • MICROWAVABLE FOOD PRODUCTS
FROZEN FOODS • MICROWAVE COOKWARE

AGENDA

TUESDAY, NOVEMBER 5, 2019

- 12:30pm Shuttle service from Hilton Garden Inn to TurboChef
- 1:00pm - 5:00pm **Solid State RF Energy Section Meeting**
(Open to all IMPI Members, No Charge)
- 5:00pm Shuttle service from TurboChef to Hilton Garden Inn

WEDNESDAY, NOVEMBER 6, 2019

7:30am Shuttle service from Hilton Garden Inn to TurboChef

8:00am - 12:30pm

PRE-SHORT COURSE:
Microwave Fundamentals Short Course
(optional – additional fee applies)



Instructor: Bob Schiffmann
R.F. Schiffmann Associates Inc.

This 4.5-hour course will cover:

- **Fundamentals of microwave heating:**
 - How do microwaves heat foods?
 - What food properties affect the heating?
 - Influence of Specific Heat Capacity & Thermal Conductivity
- **Microwave oven technology:**
 - What are the components of microwave ovens; how do they work?
 - What are the properties of microwave ovens and how do they affect heating?
 - How do microwave ovens differ, i.e. between ovens, within ovens?
- **Microwavable product testing?**
 - What are the essential tests for any product?
 - Normal & abusive testing
 - How many ovens should be used in the test?
 - How should ovens be prepared for testing?
- **Microwave packaging:**
 - What's new in active microwave packaging?
 - Steam packaging

12:00pm Shuttle service from Hilton Garden Inn to TurboChef

12:30pm - 1:30pm

FALL SEMINAR BEGINS: NETWORKING LUNCHEON

1:30pm - 2:15pm

Welcome Address
James K. Pool III, President, TurboChef



WEDNESDAY, NOVEMBER 6, 2019, CONTINUED

2:15pm - 4:15pm

Solid State Cooking and Heating 101

Klaus Werner, President pinkRF and Chairman of IMPI's Solid State RF Energy Section



The tutorial will give an introduction on solid state RF technology in contrast to the legacy magnetron. Aspects like controllability, reliability, frequency ranges, and related basic components to generate the power will be presented. It will be discussed how to apply the "solid state RF" advantages to improved cooking and heating applications at various "processed mass scales". Consequences for system and process design will be addressed.

4:15pm - 5:15pm

Tour of TurboChef Global HQ

5:15pm - 7:00pm

WELCOME RECEPTION

Shuttle service to Hilton Garden Inn at 7:00pm

THURSDAY, NOVEMBER 7, 2019

8:00am

Shuttle service from Hilton Garden Inn to TurboChef

8:15am - 8:45am

CONTINENTAL BREAKFAST

8:45am - 9:00am

WELCOME & INTRODUCTIONS

9:00am - 10:00am

KEYNOTE: The Latest Trends You Need to Know

Marie Molde, Account Manager, Datassential



Join Marie Molde from Datassential on a journey through how personalization, migration, and automation are impacting the next wave of food trends – from global cuisine to the way food is prepared. This session uncovers all the latest trends you need to know and the major forces impacting how we eat, today and in years to come.

10:00am - 10:45am

The Power of Frozen – An In-depth Look at the Frozen Aisle Through the Shoppers' Eyes

Alison Bodor, President & CEO, American Frozen Food Institute



Frozen food is in the midst of a strong comeback. In 2019, AFFI released research that explores the consumption, purchase drivers and use of frozen foods. These findings provide a comprehensive view of the frozen food aisle while highlighting opportunities to drive continued growth in the frozen category.

10:45am - 11:05am

COFFEE BREAK

11:05am - 11:50am

Preparation and Cooking of Frozen Foods in Microwave by Consumers - Some Considerations

Jairus R. David, Ph.D., Principal Consultant, JRD Food Technology Consulting, LLC



This presentation will cover aspects of food safety of frozen foods cooked in microwave by consumers. Review emerging expectations by regulatory agencies and food industry and other perspectives.

11:50am - 1:00pm

NETWORKING LUNCHEON

THURSDAY, NOVEMBER 7, 2019, CONTINUED

1:00pm - 1:45pm

Labeling Best Practices for Food Companies & The Five Stages of Grief

David Rosenfield, Of Counsel, Herrick, Feinstein LLP



In recent years, food companies have become the targets of class action lawsuits and regulatory investigations concerning food labeling and product promotion. When faced with a class action or regulatory proceeding, we have found that a food company may go through the five stages of grief: denial, anger, bargaining, depression and acceptance. Many times, the final stage involves a settlement including monetary payments. Food companies are much more likely to avoid lawsuits and governmental actions by following best practices when designing labels and promoting products.

1:45pm - 2:30pm

The Sustainability Conundrum in Microwave Packaging

Mark Watts, Senior Manager R&D- Packaging, Campbell Soup Company



This presentation will outline the requirements for different packaging formats to serve and function to product performance, while at the same time addressing environmental impact and the increasing demand of the retailer to minimize packaging waste.

2:30pm - 3:15pm

Has the Time for Microwave Cookware Returned?

Bob Schiffmann, President, R.F. Schiffmann Associates Inc. & IMPI



There was once a very active microwave cookware business, along with microwave cooking schools and cookbooks; but all have virtually disappeared. However, with the promise of real cooking opportunities provided by solid-state microwave ovens, it's possible that many of these cookware products may be resurrected. We'll survey the many varieties that were available.

3:15pm - 3:35pm

COFFEE BREAK

3:35pm - 4:20pm

Use of Simulation Technologies for Rapid Product Development: Applied to Microwave Equipment and Microwavable Products

Chandra Arcot, Chief Technology Officer, Axiom Consulting



This presentation outlines the benefits of performing tests using simulation technologies to help evaluate designs early on, explore several design options digitally, including non-intuitive radical designs. The use of this technology, in the initial phases of development, makes it a design-enabler which is more compelling and powerful than the use of technology for downstream design evaluation. The application areas would be food packaging design, specialized packages including susceptors, and equipment design.

4:20pm - 4:50pm

ROUNDTABLE WITH THURSDAY PRESENTERS

4:50pm

Shuttle service from TurboChef to Hilton Garden Inn

6:30pm - 8:30pm

GROUP DINNER AT SALTGRASS

(Optional - additional fee applies. Walking distance from Hilton Garden Inn)

FRIDAY, NOVEMBER 8, 2019

8:00am Shuttle service from Hilton Garden Inn to TurboChef

8:15am - 9:00am **CONTINENTAL BREAKFAST**

9:00am - 10:00am **KEYNOTE: Game Changing Industrial Innovation through the Smart Application of Microwave Energy at 2450**
Steve King, Product Line Manager, ALKAR



The newly designed 'Turbo Chef by ALKAR' Cyclone-Microwave, builds on the fundamental design of Turbo Chef's microwave technology, combined with the Intellectual property of ALKAR's Cyclone Industrial Technology. The result of which has created a highly innovative Linear Industrial Oven that provides the dexterity of an advanced propagating system, using a complex array of frequencies within the ISM band. This technology is simultaneously applied with traditional forced air convection, heat sources and humidity to create a very flexible process environment that is unique to the protein processing industry. This combined approach has reduced processing times by over 45% and up to 85%. With patents pending, and by applying the engineering and historical knowledge of over fifteen patents – the Apollo and ALKAR engineering teams were able to build an industrial system that has shattered processing applications for whole muscle jerky, pet food, chicken wings, snack sticks, meatballs, tender loins (pork and turkey) and burger patties (chicken and beef).

10:00am - 10:45am **Understanding the Energy Gradients in Rapid Cooking Technology**
David Castillo, Vice President of Engineering, TurboChef



As TurboChef develops and capitalizes its presence in the food service industry, it has initiated a fast track program to employ solid state technology in their rapid cooking platform to improve and reduce cook times while maintaining food quality integrity.

10:45am - 11:05am **COFFEE BREAK**

11:05am - 12:00pm **Panel: The Brave New World of Microwave & RF**

12:00pm - 1:00pm **NETWORKING LUNCHEON**

1:00pm **CONFERENCE CONCLUDES**
Shuttle service from TurboChef to Hilton Garden Inn

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The International Microwave Power Institute wishes to extend our sincere thanks to TurboChef for sponsoring the Fall Seminar. In particular, we wish to thank Mr. James Pool and Mr. David Castillo for all of their hard work. We wish to recognize IMPI President Bob Schiffmann and Vice President Mark Watts for leading our Fall Seminar Program Committee. We would also like to thank each of you for taking the time out of your busy schedules to be with us this week.

All attendees will receive an email within one week with a secure log in and password to access the presentations that were shared this week. Please make sure you fill out and return your survey so that we may continue to provide you quality events.

We hope to see all of you in Savannah, Georgia, June 15-17, 2020 for the 54th Annual Microwave Power Symposium (IMPI 54); the Solid State RF Energy Section will meet on June 18th at the same venue. The Call for Papers for IMPI 54 is open until January 15, 2020 and additional details on this event are available at www.impi.org