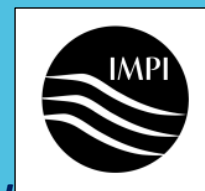


THE WAVE



The newsletter publication of the International Microwave Power Institute

April 2020



IMPI 54 Symposium to be Held Virtually, June 2020

For the first time in IMPI's history, our flagship event will be held virtually, June 15-17, 2020, due to the COVID-19 global pandemic. The abbreviated program will include a keynote address, three invited papers, twenty oral presentations and an Exhibitor Showcase. A virtual poster gallery will also be made available. The full [Schedule of Events is available here](#).

The IMPI 54 Virtual Symposium allows for four sessions, 3 to 4 hours each. Members have the option to purchase a single day registration for \$100 or a three-day registration for \$150; the Solid State Cooking Workshop, held the morning of June 18th, may be added to your registration for an additional fee. All sessions will be recorded for future viewing by attendees. [Registration](#) is now open.

Proceedings from the IMPI 54 Virtual Symposium will be published as planned and all attendees will receive an electronic copy with their registration fee. Ten students will participate in the Student Competition.

IMPI 55 will be held June 28-30, 2021 at the DeSoto Hotel in Savannah, Georgia.

IN THIS ISSUE

IMPI 54 Virtual Symposium.....	1
President's Message	2 - 3
Spring Webinar Series.....	3
IMPI Member Survey Results.....	4
JMPEE Vol 54, Issue 1.....	4
Solid State RF Energy Section.....	5
New Member News.....	5
Calendar of Events.....	6
News from Around the Web.....	6
Connect with IMPI.....	6

PRESIDENT'S MESSAGE

How the world has changed since our last Newsletter; who could have predicted, a month ago, where we are today. The column I thought I would write about "fake science", has been completely upended, but there is a lot of good news that I can talk about.

To begin with, a giant shout out to Molly, Alicia, and my colleagues on the Executive Committee (Mark Watts, John Mastela & John F. Gerling); we've all been doing our best to make IMPI 54 happen under this pandemic: dealing with our commitments to the hotel in Savannah, while protecting IMPI and maintaining the Institute's standards, fulfilling the needs of our members, and our standing in the scientific community. As a result, as you'll read elsewhere in this Newsletter, IMPI 54 will happen, not as initially planned, but as a virtual meeting. As I write this, plans are underway with the potential speakers and all the technical issues in fulfilling the virtual-symposium goals. This is a monumental task, and I am constantly impressed by Molly's intense dedication to make this happen, with Alicia's support, in a way that will make us all proud. It has been my good fortune to work closely with Molly for the past 10 years, and I doubt IMPI would still exist if it weren't for all of Molly's work, dedication and sometimes heroic efforts, all the while raising three teenage boys!

So, what are all of you doing during this time of working at home? I've been doing this for 41 years, but am blessed with having an entire floor of my home devoted to my laboratory and two offices. On the other hand, I imagine many of you working, surrounded by children and pets, etc. Since most never thought of being in this situation, you now have to find a dedicated workspace, schedule your time, focus that time on work, and convince the family that you need time alone. On top of that, you're all pretty much locked into your homes and so have to fill a lot of non-work time, and I'm sure you are binge-watching a lot of streaming television. I know that I am, and there is an enormous amount for me to pick up from. But I'd like to point you to some things that go from being technical and scientific to educational and historical. Here are a few suggestions:

PBS: there are the usual shows such as Nova, Nature, American Experience, and the great documentaries of Ken Burns, such as Baseball, Jazz, The Roosevelts, The Civil War, and lots more. If you have an Apple TV, Roku, or similar, you can stream a lot of these. Last night we watched two documentaries that seem appropriate for our present condition: one on the 2018 Spanish flu epidemic, and the other on polio and the Salk vaccine. I was a child at the time of the polio epidemic, which reached its peak in 1952. One of the boys on my block died and another ended up in an iron lung. We kids were terrified for our lives, but it was the genius of the Salk vaccine that virtually has eliminated polio as an epidemic. We can only hope that such a vaccine is developed for the Covid19 Coronavirus.

YouTube: there's a huge amount to watch here, and it's great to watch some old Carol Burnett skits, as well as Charlie Chaplin, Buster Keaton, Laurel and Hardy, and other old-timers, who always found a way to make us laugh. But there is one new set of streaming videos on YouTube to which I'd like to point to those of you with scientific interests: Brian Greene's Daily Equations. Professor Greene is a theoretical physicist & mathematician at Columbia University, and the best lecturer I've ever encountered. He has the unique ability to take the most difficult and profound concepts and make them clear to the layperson. A few summers ago, I took his online course on Einstein's Special Relativity Theory, and it was not only informative, but a lot of fun.

Continued on next page

PRESIDENT'S MESSAGE CONTINUED

What Greene does in these videos is take some of the most interesting & important equations in the realm of mathematics, physics and science, and explains their origin, history, and impact on scientific thinking; he may use his iPad to derive an equation in a manner that makes its origin obvious. His first lecture was on Einstein's famous $E = MC^2$ equation, describing the history of how it all came about and its profound impact on our understanding of the world. In lecture #2, he discusses Time Dilation (time slows down on a moving clock, in contrast to a stationary clock), something so weird & non-intuitive, and yet, when explained by Greene, it becomes clear and obvious, no matter how strange. Try these if you enjoy stretching your brain.

I could go on with the other things that enchant me (I love espionage & detective videos), the videos and shows that are available to us stay-at-homes, but instead, I'll wish you all good health and safety. Take this Coronavirus pandemic seriously, quarantine as much as you can (in my case, my wife and I, being in our 80s, have been self-quarantining for many weeks); it's likely to get worse before it gets better, so make use of the time as best you can. Being isolated for health reasons, we miss our children and grandchildren, but I found that weekly family get-togethers using Zoom are a reasonable substitute. I have a virtual breakfast meeting with four, friends every Thursday morning, which, in past times, was when we met at a diner in person in downtown Delhi New York, a small town in the Catskill Mountains. What's fun in this virtual case is that I can show up in my pajamas.

All the best and stay healthy!



Bob

IMPI's Spring 2020 Webinar Series - Consumer Microwave Cooking: Nutrition, Quality and Safety

Part III of IMPI's Spring Webinar Series will take place on Tuesday, April 28th at 11am EDT. Sally Gerling, a Registered Dietician/Nutritionist & Certified Diabetes Educator with Gerling Dietetics & Nutrition, will instruct the webinar entitled, "**Microwaves & Nutrition: Perceptions, Reality, Practicality.**" IMPI Members may register for this webinar, [free of charge, here.](#)

Ms. Gerling's webinar follows Part I and II in this series; if you missed these webinars by Jennipher Marshall-Jenkinson of MTA-UK or Meredith Carothers of the FSIS/USDA, you may view them in the MEMBERS ONLY section of www.impi.org (Password: IMPI@2020)

IMPI's Executive Board wishes to recognize Dr. Shawn McKeown, of Graphics Packaging International, for his tireless efforts on our Webinar Series. If you have a topic, or speaker, you would like us to consider for the Fall 2020 or Spring 2021 Webinar Series, [please email Sean directly.](#)

MEMBER SURVEY RESULTS

Thank you to everyone who took part in the Member Survey throughout January and February of this year. Roughly 25% of the membership participated and here are the highlights:

- The perceived value of IMPI membership was 4.2 out of 5 stars; 40 out of 49 respondents gave IMPI a four- or five-star rating;
- The top 6 most important member benefits were: Annual Symposium, Networking Opportunities, Information Resource, The Wave Newsletter, The Solid State RF Energy Section and JMPEE;
- 94% of respondents feel the Annual Symposium, Fall Seminar and 4-6 webinars a year are meeting their educational needs;
- 100% of respondents feel that IMPI is responsive to their needs as member;
- Many respondents provided guidance on topic areas that they would like to see explored in future programming.

Congratulations to IMPI member Chiara De Massari of inovaLab in Italy who won our drawing for a \$50 Amazon gift card.

JMPEE Volume 54 Issue 1

"Editor's message: Experiments with microwave kitchen ovens" by Juan Aguilar.

"Measurement and modelling of soil dielectric properties as a function of soil class and moisture content" by Humayun Kabir, Mohammad Jamal Khan, Graham Brodie, Dorin Gupta, Alexis Pang, Mohan V. Jacob, and Elsa Antunes.

"Structural, Magnetic, and Microwave Absorption Properties of SrCexFe12-xO19/PVP Composites" by Zahra Rasouli, Mohammad Yousefi, Maryam Bikhof Torbati, Susan Samadi, and Khadijeh Kalateh.

"Multi-physical field study of asphalt mixtures containing moisture based on microwave heating" by Tongsheng Sun and Hanqian Sheng.

"Determination of ionic strength due to magnesium sulfate heptahydrate in water by means of its permittivity in the microwave range" by Edel Serafín Hernández Gómez, José Luis Olvera Cervantes, Benito Corona Vásquez, Alonso Corona Chávez, Laura Sol Perez Flores, and Tejinder Kaur Kataria.

"Selection and Modeling of Simultaneous Cooled Microwave System for Polycondensation of L-lactic acid" by Başak Temur Ergan.

Access to Volume 54 (and the entire JMPEE Archive) is available to members as part of your dues fee. Contact alicia.standridge@impi.org if you need your log in information resent to you.

Solid State RF Energy Section Update

by Dr. Klaus Werner, Section Chairman

Section Workgroups on “Tagging” and “PA Roadmap” in Operation

Two workgroups have commenced operation:

“Tagging” is working on a formal language to describe a microwave ovens food load in order to exploit the benefits that solid-state driven microwave ovens provide on “any” pre-packaged food item. The tagging initiative is going strong with Steve Drucker at the helm. A well organized and structure team is working to identify a formal descriptive open source language to describe CPGs and other food items to cook in solid state ovens. Food scientists, CPG producers, packaging specialists and bring all necessary expertise to the table.

The “PA Roadmap” workgroup will revisit earlier technology forecasts and update the predictions on what a power amplifier should look like and how it should behave for the coming years.

Section Membership

The Section continues to recruit new members. Membership is open to any IMPI member and there is no fee to participate in 2020. Those interested in joining the Section should email alicia.standridge@impi.org

Section Web page

The Section webpage is up and running and we will add content continuously. Make sure you [stop by to see it](#) developing. Also, if you and/or your company would want to place non-commercial, tutorial or RF Energy related “nice to know” on our web page or Events Calendar, please contact alicia.standridge@impi.org with the details.

Section Meeting

The Section will host a virtual “Solid State Cooking” Workshop from 9am-12pm on June 18th and you may register for this while registering for the IMPI 54 Virtual Symposium [here](#). Our Section Business Meeting has been postponed.

IMPI Welcomes Our New Corporate Members!



CALENDAR OF EVENTS

IMPI's Calendar of Events is [available here](#).

If you have an event you would like to feature on our Calendar, please send your event details to info@impi.org by the 15th of the month.

NEWS FROM AROUND THE WEB

[Percutaneous microwave ablation therapy](#) of renal cancer local relapse after radical nephrectomy: a feasibility and efficacy study.

Compostable [Steam Bags](#)

Unpacking food technology: How smarter packaging makes our [food supply safer and fresher](#)

[Understanding Food Label Regulations](#): USA, EU, China

Gerry Goldhaber, "The Warnings Doctor", a world-renown safety warnings and communications expert, who addressed IMPI as an invited speaker at IMPI 47 (Providence, 2013), has written a new book that should appeal to many members: "Murder Inc. – How unregulated industry kills or injures thousands of Americans every year ... and what you can do about it." Erin Brockovitch wrote "Everyone should read this book. Your life may depend upon it." Its available for purchase at Barnes & Noble.

The International Microwave Power Institute

PO Box 1140

Mechanicsville, VA 23111

info@impi.org www.impi.org

Follow Us on Social Media

