

THE WAVE



The newsletter publication of the International Microwave Power Institute

February 2023



IMPI Sets Sights on 57th Annual Microwave Power Symposium to be Held in Denver, Colorado

Nearly fifty (50) abstracts were received for the **57th Annual Microwave Power Symposium** before the Call for Papers concluded on February 3rd. IMPI 57 will take place June 27-29, 2023 at the Curtis Hotel in downtown Denver, Colorado, USA.

Under the leadership of Dr. Candice Ellison, USDA-ARS and Dr. B. Reeja Jayan, Carnegie Mellon University, the Technical Program Committee is hard at work reviewing the submissions. Author notifications will be released on February 24th and the full program will be published here by March 1st.

IMPI 57 will feature two (2) short courses on Tuesday, June 27th: **Dielectric Material Properties Measurements** and **Solid State RF Energy Applications: Case Studies & Demonstration**. The Exhibitor Showcase will begin at 4pm followed by the Welcome Reception. Plenary, Concurrent, Poster/Exhibitor Sessions will take place the whole of Wednesday, June 28th and Thursday, June 29th, with the conference concluding by 4pm.

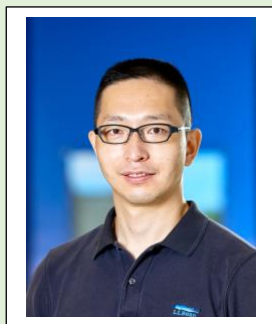
IMPI Members are encouraged to register early for IMPI 57 to save \$100 on the registration fee; the early-bird Member rate is \$675 and Student Member rate is \$445 for those who register by March 27th! The registration fee covers all in-person sessions, a Welcome Reception, two continental breakfast & luncheons, four coffee breaks, a copy of the conference Proceedings and unprecedented networking opportunities. Attendees are encouraged to book your hotel room soon to secure the \$195 group rate. *Continued on Page 2*

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*Cover Photo: Skyline Denver,
Colorado, USA*

IMPI 57 Symposium *Continued*



IMPI 57 Invited Speakers include (*from left*) Dr. Shuntaro Tsubaki, Associate Professor, Graduate School of Bioresource and Bioenvironmental Science International Institute for Carbon-Neutral Energy Research (I²CNER), Kyushu University; Dr. John Hu, Endowed Chair Professor, Chemical Engineering, West Virginia University and Mr. Matt Rigney, Business and Culinary Development Manager, for Panasonic Food Service. IMPI 57 will also feature five Special Sessions, highlighted on IMPI's [Symposium page](#).

Muegge Gerling will serve as the Platinum Sponsor of IMPI 57. At present, there are fifteen confirmed exhibitors: Muegge Gerling, Richardson Electronics, IMPI's Solid State RF Energy Section, Odyssey Technical Solutions, Microwave Techniques, Leanfa, Crescend Technologies, PSC, QWED, Symphony Microwave, Stellant Systems, Ampleon, SAIREM, MKS and Microwave Amps Limited. There are a limited number of booths available. Please contact molly.poisant@impi.org as soon as possible if interested. [Exhibition & Sponsorship](#) packages are available for download. Stay up to date with the latest IMPI developments [here!](#)

PRESIDENT'S MESSAGE

Last year IMPI formed a committee to update its Strategic Plan for growth and strengthened ability to fulfill its mission. Among others, an important goal of the plan adopted by the IMPI Board of Governors is to widen academic participation through furthering IMPI's engagement with both educators and students. Indeed, academia is represented by roughly 12% of IMPI's membership, compared to 80% in the industrial sector. In 2018 the distribution was 20% and 68%, respectively. Clearly, we see an opportunity for improvement.

IMPI's board has had numerous conversations about the importance of academia to IMPI and its mission. By scanning the internet one can find a great deal of research activity in many different areas involving microwave and RF technologies. The vast majority are related to applications in telecommunications, automotive and consumer electronics, defense, and others broadly covering the RF/microwave spectrum. This should come as no surprise given that the market sizes in these areas dwarf that of high-power microwave/RF applications within the ISM bands. Nonetheless, important research in ISM applications can be found at many institutions throughout the world, as evidenced by not only IMPI's academic membership but those of AMPERE (EU), JEMEA (Japan) and CAMPA (China) associations.

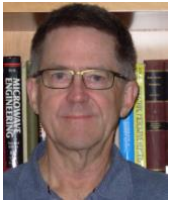
Closer inspection of academic research in ISM applications reveals that most of this work is focused on the application itself. Microwave/RF technology may be an integral part of the methods and/or apparatus under development, but the research focus is rarely on microwave/RF technology. In many ways it is merely a tool the researcher learns to use. But how? Learning to apply microwave/RF technology isn't quite like reading the User Manual of a new lab instrument, even if the new lab instrument is a microwave/RF system complete with manufacturer's instructions.

Continued on next page

PRESIDENT'S MESSAGE *Continued*

Of the microwave applications research programs in academia, many have established under champion leadership a high level of knowledge and expertise in microwave/RF technology. While many of these programs are self-reliant and able to carry on with their work independently of outside microwave/RF expertise, many also recognize the importance and benefit of IMPI membership as a form of continuing education. But many don't, or did and, for one reason or another, have dropped out. In some cases, institutions are no longer represented by IMPI members because their champion of microwave/RF applications research perhaps moved to a new position, or is retired, or has taken interest in other fields of research, leaving nobody to fill the void. This is not only a loss to IMPI but to the entire microwave/RF applications community. It is a phenomenon that I believe IMPI can play a key role to address.

Students, having chosen a field of study in a program under the leadership and mentorship of a champion of microwave/RF applications, may or may not pursue careers utilizing their newly acquired knowledge of microwave/RF technologies. IMPI can help encourage them by providing support not only to students directly but the academic programs and champion mentors. Every successful launch of a career in microwave/RF applications will benefit both IMPI and the entire community it serves.



John F. Gerling
President, IMPI

Would You Like to Become More Involved with IMPI?

Come and be a part of the IMPI team! We have numerous volunteer opportunities available for 2023! IMPI is seeking a Webinar Coordinator to assist with our Spring and Fall Webinar Series. We also have openings on our International Expansion, Emerging Applications & Academic Expansion Committees. If you are interested in learning more, please contact molly.poisant@impi.org for more details. The more volunteers we have, the better IMPI will become! Please consider getting involved!



SAVE THE DATE: IMPI FALL 2023 SEMINAR

IMPI's Fall Seminar will be held the first week of October 2023, at the Richardson Electronics Headquarters, outside of Chicago, IL, USA. More details will be [posted here](#) in the next month!





IMPI SOLID STATE RF ENERGY SECTION

Update Provided by Dr. Klaus Werner, Chairman, IMPI Solid State RF Energy Section

The Section has started to lay the groundwork for a publication on how to go about the decisions one has to make when investing in an RF energy system. This framework will be bolstered with a couple of case studies.

- o Interested colleagues are more than welcome to join the discussion about this topic.

The Section will entertain a workshop during IMPI 57 where a few RF energy applications will be discussed in detail. In particular the interaction between modeling and realization. A live demonstration of a solid state RF energy system will be part of it.

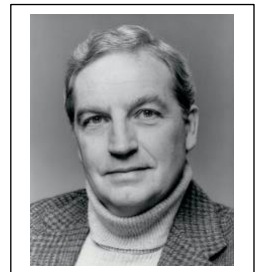
Membership in the Section is open to all IMPI Members. Please contact alicia.standridge@impi.org to join the SSRFE Section.

Join Us in Welcoming IMPI's New Corporate Member!



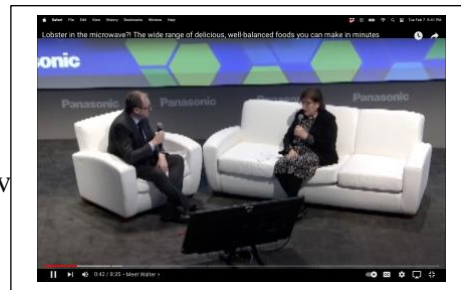
Schiffmann Memorial Scholarship Contributions Being Accepted

The Robert F. Schiffmann Memorial Scholarship will seek to recognize a high school Senior, or undergraduate student, pursuing a degree in Science during the 2023/2024 academic school year. Application guidelines will be released at www.impi.org on March 1, 2023. A Scholarship Committee, comprised of IMPI Members, will review applications beginning in April and an awardee will be announced at the Annual Symposium in June of 2023. Those wishing to make a tax deductible contribution to the Robert F. Schiffmann Memorial Scholarship [can do so here](#) or mail a check, payable to IMPI, to: IMPI, PO Box 1140, Mechanicsville, VA 23111 by April 1st (include Memorial Scholarship in the subject line). Thank you in advance for helping IMPI continue to honor Bob's legacy!



IMPI Corporate Members Panasonic and Tyson Foods Collaborate at CES 2023

Marie Jirsa, a Senior Scientist at Tyson Foods and IMPI Board Member, joined Panasonic's Walter Taffarello, Director of Merchandising for Appliances in the US, to break down some of the misconceptions around microwave cooking and to discuss some of the many surprising ways you can use your microwave to cook delicious, well-balanced meals. The interview took place at CES 2023 in Las Vegas last month. This is the largest Consumer Electronics Show in the US, with 115,000 attendees.



[You can watch the interview here!](#) Thank you, Marie & Walter; we love to see our IMPI Members working together!

If you have a story you would like to share in an upcoming newsletter, please contact molly.poisant@impi.org

Journal of Microwave Power & Electromagnetic Energy News

A friendly reminder, JMPEE is available, at no additional cost, to IMPI Members who “opt-in” to receive this benefit each year. **If you would like access to JMPEE in 2023, please take a moment to [complete this 3-question survey](#) ASAP!** If you have any questions, please contact alicia.standridge@impi.org



JMPEE, Vol 57, Issue 1, will be released by March 31, 2023, as follows:

Editor's message: Textbooks for helping new generations to see further, by Juan Antonio Aguilar Garib.

Measurement and Modelling of organic matter's altering effect on dielectric behavior of soil in the region of 200MHz to 14GHz, by Prachi Palta, Prabhdeep Kaur, and K. S. Mann.

Effects of microwave dryers on the properties of jerusalem artichoke: physico-chemical, thermo-physical, energy consumption, by Burcu Aksüt, Samet Kaya Dursun, Hakan Polatçı, and Muhammed Taşova.

Theoretical and experimental studies on localized electric field during microwave drilling of metals, by Jiaying Yan, Shichun Li, Zhi Yang, Wenjing Cai, Min Ou, and Junzhe Li.

Advantages and problems of electric microwave processing plants with hybrid working chambers, by Midhat Tuhvatullin, Yuri Arkhangelsky, Rustam Aipov, Arthur Akhmetshin, and Dinar Atnagulov.

Study of multi-frequency heating based on the nonlinear response characteristics of magnetron to improve uniformity, by Mengna Du, Zihao Zhang, Jie Huang, Huacheng Zhu, and Yang Yang.

JMPEE is led by Editor-in-Chief, Dr. Juan Antonio Aguilar Garib, of the University of Nuevo Leon (Mexico) and published by Taylor and Francis (United Kingdom).

MEMBER ONLY PAGE PASSWORD UPDATE!!!

The password for the Member Only Page has been updated, effective today.

Please check your email. The subject line reads:

IMPI Member Only Password Change for 2023!

Link: <https://impi.org/members-only/>



The Member Only Page can also be accessed on the far-right corner of the IMPI.org homepage and contains: Past Proceedings, Wave Newsletter Archive, Links to Previously Held Webinars, a Membership Directory and more. Please remember: all Member's financial transactions still run through the Online Store, your username is your email and your password is the password you chose. If you need your password reset, please contact alicia.standridge@impi.org

CALENDAR OF EVENTS

Stay up to date with IMPI Events by visiting our [Calendar of Events page](#). If you have an event you would like to add to the Calendar, please contact molly.poisant@impi.org

PARTNER NEWS & EVENTS

The **AMPERE 2023** conference will be held in Cardiff, United Kingdom from September 11-14, 2023. The Call for Abstract deadline is March 10, 2023. Learn more here: www.ampere2023.com

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