

[View in browser](#)

# INTERNATIONAL MICROWAVE POWER INSTITUTE

## THE WAVE NEWSLETTER

*Special Symposium Edition - July 2024*



### IMPI 58 Symposium Held in Suburban Washington, D.C., USA

The 58<sup>th</sup> Annual Microwave Power Symposium (IMPI 58) was held May 29-31, 2024, at the Hyatt Regency Reston, in suburban Washington, DC, USA. One-hundred-and-twenty (120) attendees from thirteen (13) countries participated in the three-day event. Dr. B. Reeja Jayan of Carnegie Mellon University, chaired the Technical Program Committee and Dr. Ralph Bruce of RW Bruce Associates LLC, and formerly of Vanderbilt University, served as the Vice Chair.

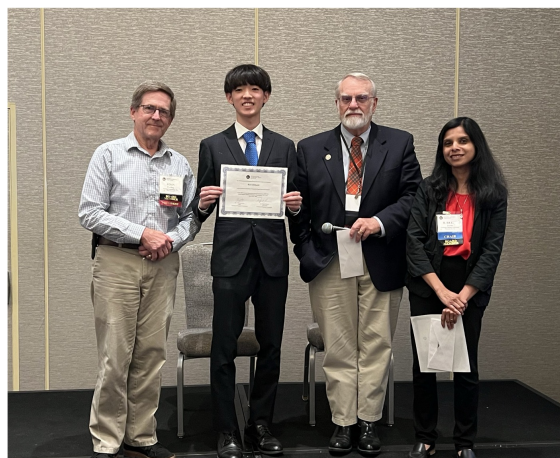
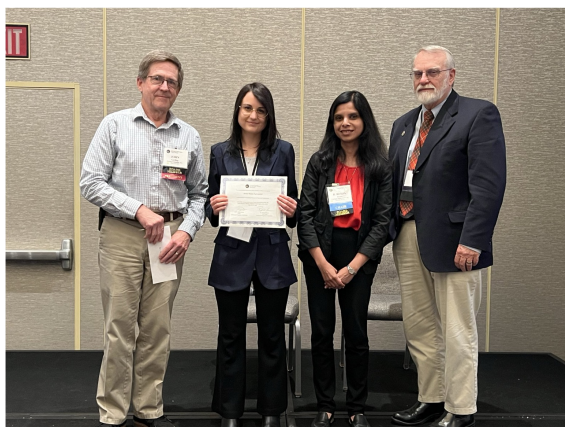
Keynote addresses were delivered by Dr. Christina Wildfire of the National Energy Technology Laboratory and Dr. John Bows of PepsiCo. Invited Speakers included Dr. Roger Ruan of the University of Minnesota, Dr. Morgan Chen of Carnegie Mellon University and Dr. Cesar A. Nieves of the Air Force Research Laboratory. In total, forty-three (43) papers were presented orally or by poster.

The Symposium featured two Short Courses on the first day: Microwave 101: Microwave/RF Technology Fundamentals and Solid State, RF Energy & Machine Learning Applications.

Five students participated in the Student Competition for Best Oral and Best Poster Presentation. Top honors went to Anna Maria Cavazzini, University of Padova (Best Oral) and Ryo Ishibashi, University of Tokyo (Best Poster). IMPI 58 also featured a Panel, "Opportunities for Young Professionals."

IMPI 58 featured nineteen (19) exhibitors and the Symposium's Platinum Sponsor was Muegge Gerling.

Additional photos from IMPI 58 can be found towards the bottom of this newsletter and across IMPI's social media platforms!



*Photos from left: Student Competition Winners Anna Maria Cavazzini (Best Oral Presentation) and Ryo Ishibashi (Best Poster Presentation), with John F. Gerling, Dr. Ralph Bruce and Dr. B. Reeja Jayan.*

## Immediate Past President's Message

As I step away from the position of IMPI President and take on a new role as Immediate Past President, I can't help but reminisce about how IMPI has evolved since my first IMPI symposium four decades ago.

At that time IMPI was thriving at its peak in both membership and attendance, driven largely by the growth of industries related to microwave cooking. IMPI's leadership was

strong, not only in technical expertise in areas of interest to its membership but equally in management skills essential to a professional association.

In the years that followed, though, IMPI fell on rough times as membership waned and finances suffered. Within a couple of decades membership and attendance had fallen to their lowest levels ever and IMPI was in financial crisis. The causes may be many, but rather than dwell on them here I am happy to say IMPI is already well on its way to a full recovery. The turn-around came just over a decade ago, thanks mostly (IMHO) to a new management “team” headed by our current Executive Director, Molly Poisant, and my predecessor as IMPI President, the late Bob Schiffmann. Under their stewardship IMPI has been operating in the black for the past several years and membership has returned to levels not seen for decades.

That Bob continued as President for over ten years to help guide IMPI through its recovery was a blessing. Every year, as the IMPI Board of Governors met to elect its officers, Bob would say to us, “I’m happy to step down if anyone wants to fill the position, but I’m also happy to continue for another term.” It is no wonder that the board was unanimous in its vote to re-elect Bob! Even so, we all knew a passing of the baton was inevitable, and so we collectively discussed and settled on a succession plan that would begin in 2022 at the start of the next term. His passing mid-term in 2021 was a tremendous shock, but thankfully we were prepared. I assumed the position as Acting President to fill Bob’s shoes for the remainder of his term and, as had been planned, was elected by the board to the position for the next term.

Bob had established a management style and, indeed, a culture within the board that has been instrumental to its conduct as a cohesive team. I truly appreciate being a part of that culture, as I believe do all IMPI board members. A component of the newly adopted succession plan is an unofficial term limit whereby every two years the Vice President would ascend to the position of President and the Immediate Past President would become an ex-officio member of the board. I am a strong believer that such an arrangement will ensure leadership continuity and ongoing leadership rotation by encouraging IMPI members to join a healthy, active board.

John Mastela, IMPI’s newly elected President, has been actively involved in management decisions and his wisdom and advice have been essential to IMPI’s continued success. Congratulations to him and all newly elected IMPI officers and management team. I look forward to working with them in my new role and have no doubt their leadership as a team will see that IMPI continues to thrive for the long term.

John F Gerling  
Immediate Past President

### **Registration Opens for IMPI’s Fall Seminar at SAIREM**

Plans are well underway for IMPI’s next in-person event, the Fall Seminar, to be held October 8-10, 2024 at SAIREM in suburban Atlanta. The Fall Seminar will explore the use of Microwave and RF to resolve industrial challenges.


This hands-on Seminar will allow attendees to view live demonstrations on a range of topics, including insect drying,



herb drying, tempering/thawing, RTE meals, turning biomass into biofuel and CO<sub>2</sub> conversion.

Early-bird registration rates are \$675 for Members and \$775 for Non-Members through the end of August. Rates will increase by \$100 on September 1st.

IMPI's Fall Seminar hosted by Sairem  
 October 8-10, 2024  
 6725-B Jimmy Carter Blvd  
 Peachtree Corners, GA 30071



IMPI's Fall Seminar, hosted at SAIREM CORP in suburban Atlanta, will highlight how Microwave and Radio Frequency can resolve certain industrial challenges.



**Session organization:**

- Presentation of an industrial challenge,
- How microwave or RF can improve the process,
- Live demonstration in front of the audience,
- Question & Answer.

**Topics will include:**  
 Insect drying, Herbs drying, Tempering or Thawing, RTE Meals, Turning biomass into biofuel, CO<sub>2</sub> conversion from Melachite.

**Who Should Attend:**  
 Engineers, scientists, educators, and others having a technical background who are interested in microwave and radio frequency (Mw/RF) technologies and their use in consumer, commercial, industrial, scientific and medical applications.



This event offers a great opportunity to explore the latest advancements in microwave and RF technologies through informative sessions led by industry experts. Connect with fellow professionals and enthusiasts from the MW RF community, and engage in valuable discussions and collaborations. We look forward to welcoming you for this experience.

Registration will open July 1st!

|                        |                            |
|------------------------|----------------------------|
| IMPI Members: \$675    | Non-Members: \$775         |
| Student Members: \$300 | Student Non-Members: \$400 |



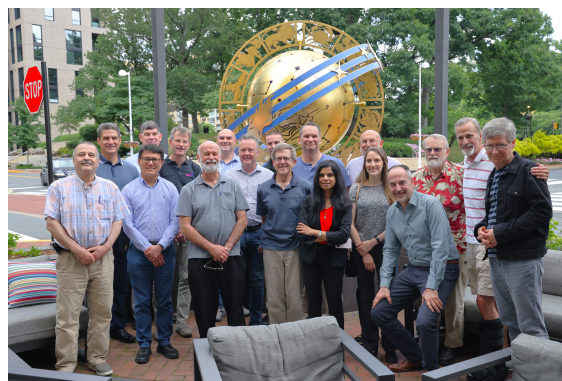
[https://portal.impi.org/membership/](https://portal.impi.org/membership)

Fees cover a Welcome Reception, all plenary sessions, two continental breakfasts and networking luncheons, coffee breaks and post-event access to materials.

### Voting Board Members and Executive Board Elected at Annual General Membership Meeting in Suburban Washington, D.C., USA

[Read the Press Release](#)

[Learn More & Register for Fall Seminar Here](#)



### IMPI Past Presidents Take Part in Smart Kitchen Summit (SKS 2024)

Mr. John F. Gerling and Dr. Juming Tang, both Past Presidents and Fellows of IMPI, were in Seattle last month for the 2024 Smart Kitchen Summit! Gerling, who was a speaker at the event, examined "What Does the Future of Microwave Cooking Look Like? Emerging technologies to fulfill the promise of microwave cooking perfection." IMPI is grateful to the



SKS 2024 team for this opportunity!



Photos: Above, John F. Gerling delivers an invited talk at SKS 2024. Right, IMPI Fellows, John F. Gerling and Dr. Juming Tang at SKS in Seattle, June 2024.

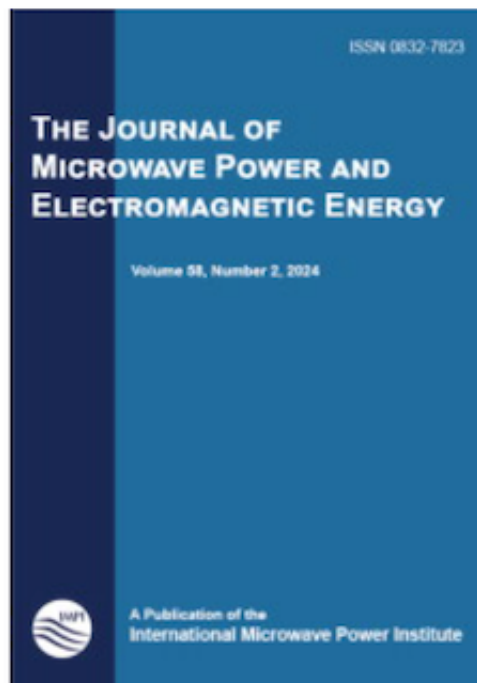


## JMPEE, Volume 58, Issue 2 Released

The latest issue of IMPI's scientific peer-reviewed journal, the *Journal of Microwave Power and Electromagnetic Energy* is now available!

As a reminder, Members of IMPI may access the current JMPEE, as well as full archive, as part of your membership. If you require a log-in, please reach out to Alicia Standridge.

The Table of Contents is as follows:



Editor's message, Attempts to place communication applications as ISM ones, by Juan Aguilar.

Comparison of modified temperature controlled microwave assisted foam-mat drying on thermo-physical and physico-chemical of orange powder, by Muhammed TAŞOVA.

Standing wave-moving and sample-rotating effect of microwave heating on ceramic in a single-model cavity, by Yang Yang, Chen Haoming, Gu Hao, and Zhu Huacheng.

Design and Simulation of a Novel THz Patch Antenna for Early Detection of Malignant Neoplasms, by Ved Agrawal, Piyush Mishra, and Bhupendra Pratap Singh.

A Green Approach for synthesizing high pure Gadolinium Zirconate nanoparticles using Microwave Energy, by Deependra Singh, Bignaraj Mishra, BHIMA RAO RAGHUPATRUNI, and SATYA SAI SRIKANT.

Identification of lyophilized avocado powder adulteration using the cavity perturbation technique at microwave frequencies, by Alonso Corona-Chavez, Tejinder Kaur, Jose Luis Olvera, and Benjamin Carrion-Schafer.

Experimental Study of an Enhanced Water-Cooling Technique for Interstitial Microwave Cancer Ablation System, by Ashraf M Said, Ashraf M. Abdelhakeem, Emad Tammam, Ahmed A. Ibrahim, and Ahmed I. Galal.



Over twenty attendees participated in the Solid State, RF Energy and Machine Learning Applications Short Course at IMPI 58. The Section also hosted a dinner to discuss the future of Solid State Applications. Membership in the SSRFE Section is open to all IMPI Members. Those interested in learning more should reach out to the IMPI Staff.





## Bruce and Chen to Lead Technical Program Committee as IMPI Returns to Edmonton, Alberta, Canada for 59<sup>th</sup> Annual Microwave Power Symposium Next June

The 59<sup>th</sup> Annual Microwave Power Symposium (IMPI 59) will be held at the Westin Edmonton in picturesque Alberta, Canada, from June 24-26, 2025. IMPI 59 will be led by Technical Program Chair, Dr. Ralph W. Bruce, of RWBruce Associates, LLC, and formerly of Vanderbilt University, and Vice Chair, Dr. Jiajia Chen, of the University of Tennessee – Knoxville. The Call for Papers will be released the first week of September 2024.

[Read the Press Release](#)

[Learn More about IMPI 59](#)

## IMPI 58 Photos – Hyatt Regency Reston – May 29-31, 2024











# MUEGGE

POWER TO YOUR PROJECTS

The MUEGGE Group is your ideal partner for microwave technology in advanced industrial heating and plasma applications.

The engineering and manufacturing capabilities of our highly qualified staff establishes MUEGGE as a world leader in microwave systems and components.

MUEGGE brings technical expertise and extensive application competence in the development, production and implementation of high-power microwave technology and provides unique solutions for your technical challenges.

Our portfolio includes microwave generators in 2.45 GHz and 915 MHz from 1 kW to 100 kW, the related waveguide and matching components. Magnetrons, plasma systems and plasma components, such as plasma-array for large area deposition, remote plasma sources, atmospheric plasma sources and downstream sources complete our range of products. Our subsidiary Leanfa Srl. also supplies solid state generators for various applications.



[www.muegge-group.com](http://www.muegge-group.com)  
[info@muegge.de](mailto:info@muegge.de)

IMPI  
PO Box 1140  
Mechanicsville, VA, 23111 USA



[info@impi.org](mailto:info@impi.org)

**FOLLOW US ON SOCIAL MEDIA**



[Click Here to Unsubscribe](#)