

Organizing a conference day dedicated to microwave industrial applications

Marilena Radoiu

Microwave Technologies Consulting, France

Contact E-mail: marilena.radoiu@btinternet.com

The 20th edition of the AMPERE Conference is now over and so is the Industry Day. It was a great event and a great success – says the feedback received. But...

1. How and why did it happen?

Both the Industry Day and the Medical & Biological Applications session¹ dedicated to Nevio Tosoratti were new additions to this year's program.

The idea for the Industry Day 2.0² emerged at the end of the 19th AMPERE conference in Cardiff in 2023. I personally loved the Cardiff conference – as a scientist (what is left of it anyway), I always enjoy hearing about microwave research and the advances disclosed at such events. However, I felt that something was missing: a more robust link between academia, equipment manufacturers, and businesses. This became particularly apparent at the end of the conference when the exhibitors started packing up their stands and we said our goodbyes, knowing that we would most likely see each other again at the next AMPERE conference.

Setting aside any competition among historical AMPERE exhibitors such as Leanfa, MKS, Muegge and Sairem, we started a friendly discussion about maintaining closer contact and leveraging AMPERE conferences to better benefit the participants and the exhibitors without whom organising such conferences would be very difficult.

Francesco Garuti (Alter/MKS), Marco Fiore (Muegge Group/Leanfa), Markus Dingeldein (Muegge Group), David Vennin (Sairem), Jean-Paul

Bernard (MIS Company and one of the AMPERE's Industry link) and I, we all agreed on the spot that the Industry Day (ID) was a good idea and that we were willing to organise it. We also briefly discussed the format of the day: one session dedicated to microwave industrial heating applications and another to microwave industrial plasma applications. And who better to help organise this than John Bows (PepsiCo) and Philippe Bergonzo (Seki Diamond)? The ID TEAM was now complete!

As we parted from Cardiff, we had a plan that was pitched to the AMPERE2025 local organisers - Cristina Leonelli and Paolo Veronesi, as well as to the AMPERE President - Georgios Dimitrakakis at our first online meeting on 16 February 2024. All thumbs up by the end of the meeting!

From that day on, we held e-meetings every two months on a Friday afternoon when everyone else around us was perhaps in weekend mode. We managed to avoid complicated agendas and business travel (and holidays), and the plan gradually came together. Who says *All beginnings are hard* when the TEAM works like clockwork?

As we agreed that the primary aim of the ID was to showcase real end-user solutions and provide proof that microwaves are being used by the industry, as well as encouraging dialogue between researchers, equipment manufacturers, and end-user companies, we created an organisational chart (see Annex 1) to convince end-users to participate. We even considered introducing an award, the Scale-Up Award, which would be given to an ID speaker based on audience voting.

¹ Co-organised by Prof. Li Wu, Sichuan University, PRC, Prof. Christopher Brace, University of Wisconsin-Madison, USA, Prof. Punit Prakash, George Washington University, USA, Prof. Marta Cavagnaro, Università La Sapienza, Rome, Italy and Marco Fiore, Leanfa/Muegge Group, Ruvo di Puglia, Italy.

² I organised the first Industry Day at AMPERE 2011 in Toulouse. It was a half-day event and as far as I remember, it was also well received by participants.



The Industry Day TEAM at the Gala Dinner. From left to right: Paolo Veronesi, Li Wu (co-organiser of the Biomedical session), Marilena Radoiu, Markus Dingeldein, Philippe Bergonzo, Marco Fiore, David Vennin, John Bows, Francesco Garuti (credit to J.P. Bernard).

2. D-Day structure

The ID was organised as a one-day event with two main sessions:

- Industrial Microwave Heating with 7 speakers – John Bows (PepsiCo, UK), Rudy Tops (Tops Foods, Belgium), Luca Perregrini (Endeavour, Italy), Alexander Feigl (Krones AG); Alberto Lazzaretti (Gr3n SA, Switzerland), Michele Pagotto (SMC Group Srl, Spresiano TV, Italy), and Christian Bianchi (UNOX, Italy).
- Industrial Microwave Plasma with 4 speakers – Mathé van Stralen (Prysmian, Netherlands), John Ciraldo (Washington

Diamond Advanced Materials, USA), Jayam Sonani (Diamond Elements Pvt Ltd, India), and Hildegard Sung-Spitzl (iPlas Innovative Plasma Systems GmbH, Germany).

Three plenary lectures were given:

- Prof. Georgios Stefanidis of the National Technical University of Athens kicked off the ID with a lecture on how microwaves can contribute to the intensification of the processes of chemical reactors (and how much the chemical industry needs these changes!).

- In less than 40 minutes, Dr. Philippe Bergonzo of Seki Diamond Systems – Cornes Technologies USA taught the audience about how lab-grown diamonds are obtained using microwave plasma (and how shiny they are!) and explained why industries need them.
- Prof. Chris Dodds of the University of Nottingham, UK, lectured on mega-scale

industries and provided insight into what microwave equipment manufacturers are expected to produce in order to help these industries reduce their carbon footprint.

A Panel Discussion including all the Plenary & Industry Day speakers was then moderated by AMPERE's President, Prof. Georgios Dimitrakakis together with AMPERE2025 co-organiser, Prof. Paolo Veronesi.



The Panel Discussion. From left to right: Mathé van Stralen, Philippe Bergonzo, John Bows, Hildegard Sung-Spitzl, Georgios Stefanidis, Jayam Sonani, Chris Dodds, Michele Pagotto, Alberto Lazzaretti (credit to DIGILABS, Italy).

At the end of the animated discussions, the winner of the Scale-up Award was announced (Paolo, thank you for the clever app!).

Alexander Feigl of Krones AG won over the audience with the quality of his presentation and the industrial readiness of Krones' equipment for PET bottle manufacturing. Last but not least, the ID was crowned with four 10-minute talks about the

emergent applications of microwaves as a fully electrified technology. The speakers were Alberto Pascual (Instituto Tecnológico de Aragón, Spain); Renaat Van Geel (MEAM, Belgium); Paolo Veronesi (Department of Engineering "Enzo Ferrari", University of Modena and Reggio Emilia, Italy); and Marilena Radoiu (Microwave Technologies Consulting, France).



The Scale-up Award winner, Alexander Feigl (right) with Marco Fiore and Marilena Radoiu (credit to DIGILABS, Italy).

3. What did we learn? What will we do differently?

To mark the 40th anniversary of the Association for Microwave Power, Education and Research in Europe (AMPERE), and the 20th AMPERE conference, we wanted to showcase the industrial applications of microwaves for heating and plasma. Industry Day 2.0 was an important milestone in demonstrating this.

Although the final programme was rather dense (much denser than we had anticipated three - four months before the conference), and that we experienced some delays and that we ran out of time (but hey, we were in Italy!), we managed to adapt on the spot and generally speaking, to make a good impression.

We learned that it is not easy to bring industry representatives among us – the issue of

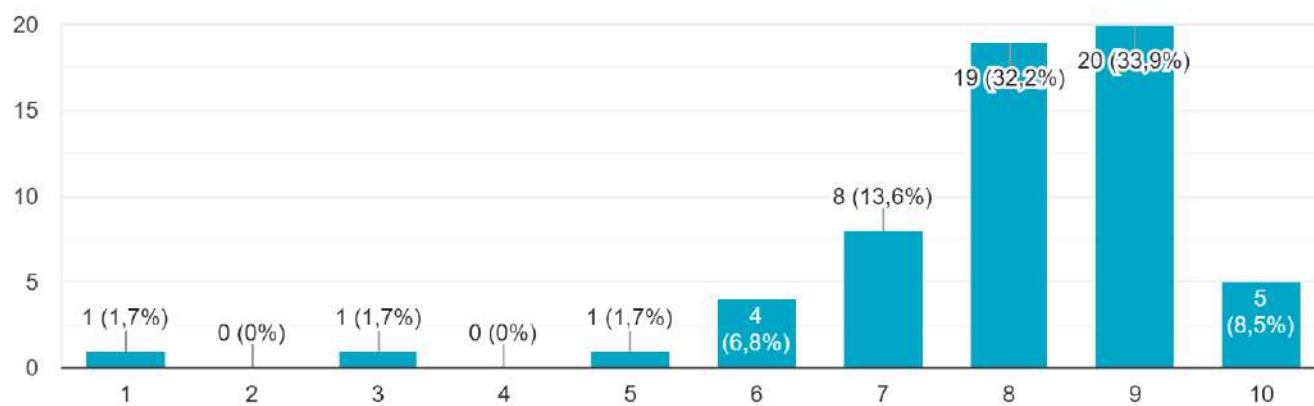
confidentiality is well acknowledged – but when they do attend, they add a lot of value to our conference and provide satisfaction for everyone involved with the technology. I am personally very grateful for their attendance and involvement, their time and the quality of their presentations! THANK YOU!

We also learned that organising this kind of event (an event inside another event – Cristina Leonelli said) requires a lot of time, a very enthusiastic and innovative (dream) team as well as plans A, and B and C and even plan N. Clearly, a different organisation to that of the general conference is required.

Effective communication is the key, after all!
Shall we do it again in 2027?

How do you rate this the industry day?

59 risposte



Results of the Industry Day satisfaction survey (credit to P. Veronesi).



Group photo of the Industry Day audience & participants (credit to DIGILABS, Italy).

Annex 1. A chart for organising the Industry Day

1. Only end users are admitted. This means they must have an application at industrial scale, including plasma CVD of diamond.
2. The industry day is organised on one dedicated day with no other sessions running in parallel.
3. End users will give a 15-minute presentation. They are asked not to reveal any confidential information, but rather to talk about the process of scaling up from the initial idea to the industrial process, including how long it took, how difficult it was, why microwaves were used, whether IP was filed, etc.

4. End users are asked not to publicise their presentations and are given the right to refuse any questions from the audience that may be considered confidential.
5. End users will be asked not to publicly disclose or thank their equipment manufacturer (e.g., 'Thank you, Muegge, for the generators...').
6. The Industry Day's will have two chairs (Marilena Radoiu & Philippe Bergonzo at AMPERE2025).
7. A one-hour panel discussion will be organised at the end of the Industry Day oral presentations. All Industry Day speakers and the three keynote speakers are invited to participate, but are under no obligation to do so.
8. A Scale-up Award to be given at the end of the panel discussion, and the audience will be asked to vote using an app. Instruction for voting distributed directly inside the conference room on the morning and during the Industry Day.
9. To end the Industry Day, a few very short presentations (10 minutes each) are scheduled after the panel discussion in the 'Emergent Applications' category.
10. A get-together buffet party ends up the day.

Personal reflections of AMPERE25

A.C. (Ricky) Metaxas

Life Fellow St John's College, Cambridge, UK

Contact E-mail: acm33@cam.ac.uk

The 20th in the series of AMPERE conferences was held in Bari, Italy during 15 to 18 Sept 2025.

Prior to the start of the conference a welcome party was held at the splendid restaurant 44 Gatti in downtown near the polytechnic.



Welcome party at the 44 Gatti restaurant.

The venue was the magnificent Villa Romanazzi Carducci Conference Centre comprising

a large lecture theatre holding up to 250 persons supported by three smaller lecture rooms enabling four parallel sessions covering the many diverse topics.



View of the venue.

The plenary sessions were all held in the large lecture theatre starting on Tuesday by a talk from Christopher Brace about microwave ablation