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### In this issue

Another in the series of International AMPERE conferences is fast approaching. This is the 12th International AMPERE Conference on Microwave and High Frequency Heating, to be held at the Institute for Pulsed Power and Microwave Technology (IHM) at the Forschungszentrum Karlsruhe Germany during 7-10 September 2009. The local Secretariat under the chairmanship of Dr Lambert Feher, together with the Committee of Management of AMPERE, are working hard to ensure a successful and enjoyable venue akin to the other conferences held previously in various European destinations.

I must say, however, that the present credit crunch and general economic malaise, which is very deep and hurtful not only to industry but individuals, is presenting a unique challenge to ensure a certain minimum participation of individuals and also to commit industrial

companies and manufacturers or relevant radio frequency and microwave products to attend and exhibit their hardware and software. I urge all readers to do their best to participate in this important venue.

I am confident that the Chairman and his team will do their utmost to ensure a good programme and a memorable venue. Below we summarize the papers pledged so far and the distribution by topics and areas based on the abstracts thus far received.

Finally, Professor Cristina Leonelli presents an overview of the the First Bilateral Italian-French Meeting on Microwaves for Engineering and Applied Sciences which was held in Salerno in May 2008.

### Ricky Metaxas

Editor  
St John's College  
Cambridge UK

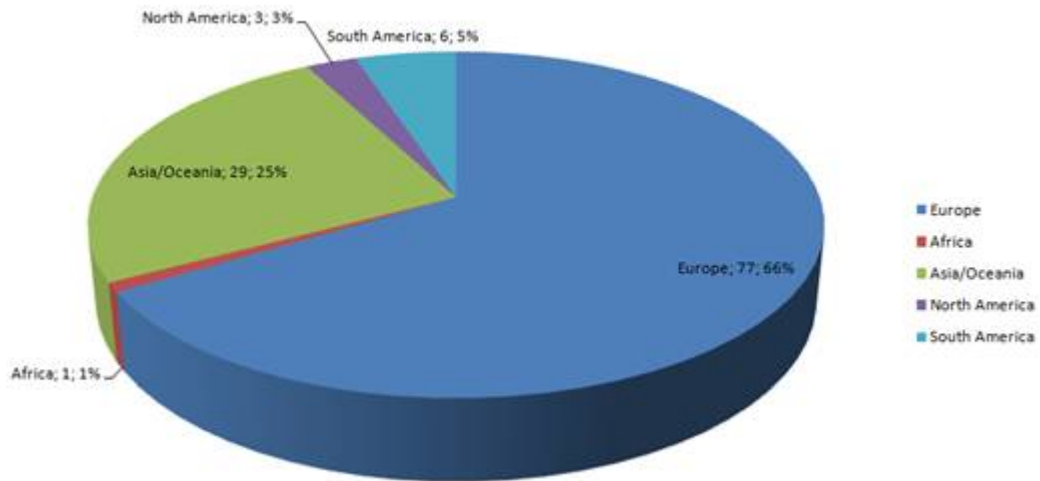
## 12<sup>th</sup> INTERNATIONAL AMPERE CONFERENCE 09



by **Prof Lambert Feher**  
Head Industrial  
Microwave  
Technology at  
Forschungszentrum  
Karlsruhe

**Microwave and High Frequency Heating, 7-10 September 2009  
Institute for Pulsed Power and Microwave Technology (IHM) at the  
Forschungszentrum Karlsruhe  
Germany**

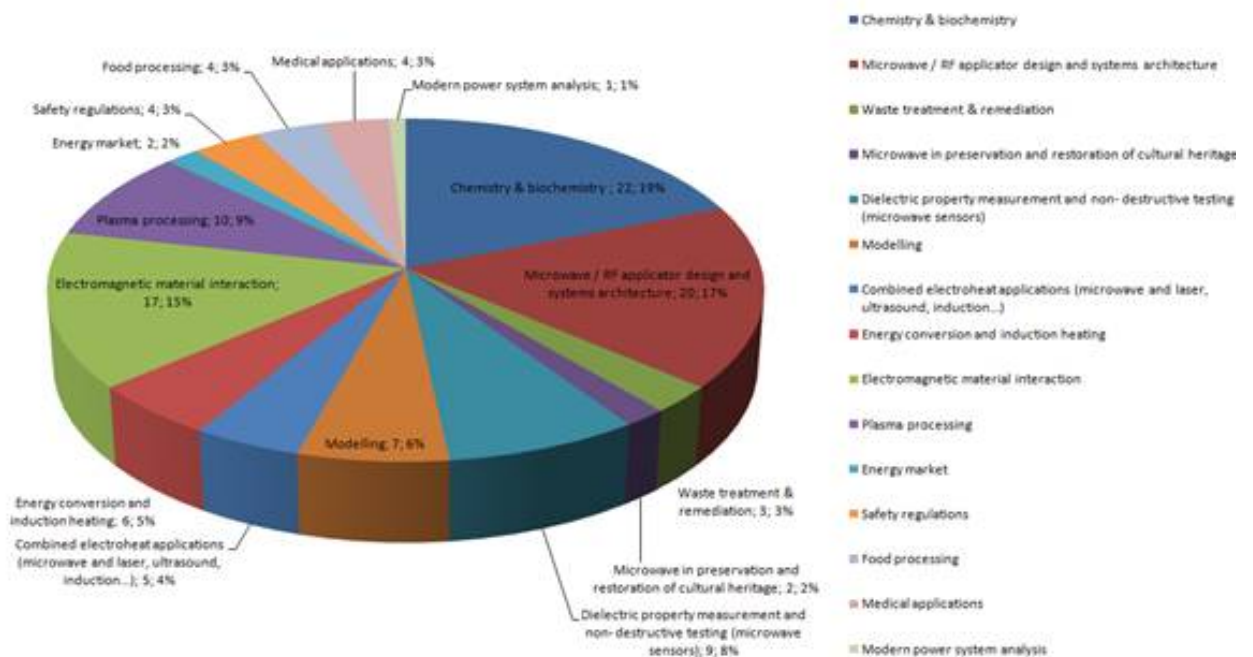
So far we report that the distribution of the papers received by the Secretariat for the above conference is as shown on the pie chart below. As expected the majority of the papers emanate from Europe.



**Figure 1.** Global distribution of abstracts received

What is more striking, however, is the dearth of papers from the USA which is surpassed even by abstracts from South America. Some bearing on this may be due to the credit crunch and the current state of the worldwide economic downturn.

The distribution of topics is shown below with three topics seeming to dominate the proceedings with over 59% of contributions covering Chemistry and Biochemistry, Microwave/RF Applicator design and System Architecture and finally, Electromagnetic Material Interaction.



**Figure 2.** Topics and areas of interest



# FIRST JOINT CONFERENCE FOR ITALIAN AND FRENCH RESEARCHERS IN MICROWAVE TECHNOLOGY

Abstracts are still being accepted so the final number and topic distribution will be somewhat different. The organizing Committee together with the Committee of Management of AMPERE are currently sifting through the abstracts to undertake the reviewing procedure and assigning the different sessions and topics. A detailed programme should follow.

On behalf of the Organizing Committee I would like to welcome you at Karlsruhe in early September.

**Dr Lambert Feher**  
Chairman

## FIRST JOINT CONFERENCE FOR ITALIAN AND FRENCH RESEARCHERS IN MICROWAVE TECHNOLOGY



**Prof. Cristina Leonelli**

Dept. Materials and Environmental Engineering,

University of Modena & Reggio Emilia

Following the previous successful events jointly organized by Gimamp (the Italian Group on Microwaves Applications to Materials and Processes) and the Universities of Naples, Modena and Salerno, the First Bilateral Italian-French Meeting on Microwaves for Engineering and Applied Sciences was once again hosted at Salerno.

The Meeting, held at Grand Hotel Salerno, basically addressed the Italian and French researchers involved in the Microwave Science and Technology, coincided with the

MISA 2008 ([www.misa2008.unisa.it](http://www.misa2008.unisa.it)), the biennial Convention that puts together Institutions, Research Centers and Industries operating in the field of applied microwaves.

The challenge was to enlarge the boundaries of the activity of MISA. This was greatly helped by the number of researchers operating abroad in the same area. The work, towards creating a greater group having common interests and targets, was the main business of the Italian and French Meeting. The idea revealed itself so successful as to suggest a new edition of the bilateral Meeting, that is currently in preparation.

The conference took place during 21-23 May 2008 and featured over 30 talks with delegates from 2 French and 2 Italian industries, 9 French and 8 Italian Research Institutions, 4 French and 26 Italian Universities. There were



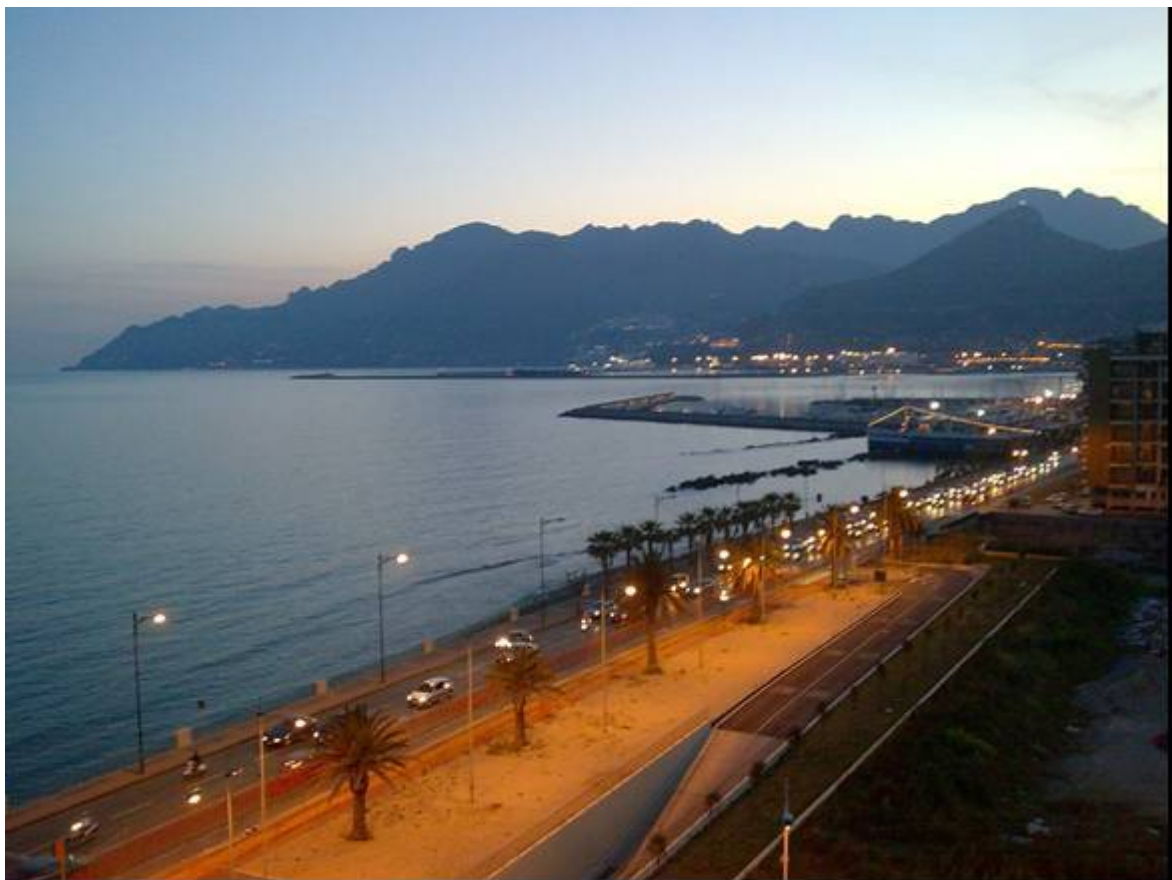
# FIRST JOINT CONFERENCE FOR ITALIAN AND FRENCH RESEARCHERS IN MICROWAVE TECHNOLOGY

multiple sessions covering 8 different technical areas: Dielectric property measurements, Modelling and Simulation, Medical and Biomedical Applications, Chemical Synthesis and Analytical Applications, Environment and Sustainable Development, Pharmaceutical Applications, Applicators and Control Systems, Materials and Processes.

The organization of the event was taken care of by Professors Cristina Leonelli, Domenico Acierno and Matteo d'Amore for the Universities of Modena and Reggio Emilia, (UNIMORE), Naples (UNINA) and Salerno (UNISA), respectively.

GIMAMP-Gruppo Italiano Microonde Applicate ai Materiali ed ai Processi gave its significant contribution.

The event was supported by CRdC Tecnologie (the Regional Center of Competence for New Technologies) and ENEA (the Italian National Agency for New Technologies, Energy and the Environment) with the endorsements of SCI-Italian Chemical Society-Division of Chemistry of Environment and Cultural Heritage and AMPERE EUROPE.



**Figure 3.** The view from the Grand Hotel Salerno at the centre of Salerno offering a spectacular view on the Tyrrhenian Sea.





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## **There were eight Plenary lectures, listed in the following:**

- Prof. George Roussy, Bureau d'Ingénierie Pro-Mi-Thé, Nancy, France, 'A critical Look at Permittivity and Permeability Measurement Methods in Waveguide';
- Dr. Maria Rosaria Scarfi, IREA-CNR, Napoli, 'Electromagnetic fields in biology and medicine';
- Mr. Jean-Paul Bernard, S.A.I.R.E.M, Lyon, France 'Synthesis of Laurydone® under microwave field';
- Prof. Didier Stuerger, UMR 5209 CNRS-Université de Bourgogne, coauthored by T. Caillot, IRCELYON, Institut de Recherches sur la Catalyse et l'Environnement de Lyon, Villeurbanne, France, 'Nanomaterials and Microwave: Interests and advantages';
- Prof. Walther Caminati, University of Bologna 'Microwave Spectroscopy and Molecular Chemistry';
- Prof. Lionel Estel, INSA-Rouen, France, 'Microwave Variable Frequency and Process Intensification';



# FIRST JOINT CONFERENCE FOR ITALIAN AND FRENCH RESEARCHERS IN MICROWAVE TECHNOLOGY

- Mr. Marco Garuti, ALTER s.r.l., Reggio Emilia, Italy, 'Novelty in microwave sources';
- Prof. Roberto De Leo, Dipartimento di Elettromagnetismo e Bioingegneria, Università Politecnica delle Marche, Ancona, Italy, 'Guidelines after the 2004/40/CE European directive on electromagnetic fields in workplaces'.



**Figure 4.** Cristina Leonelli and Daniela Iordache

All the papers were orally presented to a total of 46, of which 26 were full and 20 short presentation of the 20 posters accepted. Researchers from Romania and Switzerland also attended the event. The conference included the presentation of a book in Italian on Microwave Heating Principles and Applications

collecting the contribution of several authors under the editorial work of Prof. Cristina Leonelli. A Round Table on Safety and Regulation enriched the Meeting, moderated by Prof. I. M. Pinto, Università del Sannio, Benevento and Prof. C. Mazzocchia, Politecnico di Milano.

Networking opportunities were encouraged with a trip to Paestum excavation site and museum, and a dinner at a restored XIV Century farm in the Campania countryside. Delegates tasted traditional cheese and wine of different types. The banquet, on the third evening, was held in the Grand Hotel, site of the Meeting.

Microwave and RF technology related research in Italy and France was orally presented by Prof. Cristina Leonelli at GCMEA 2008 - the first Global Congress on Microwave Energy Applications (<http://www.jemea.org/majic2008/scope.html>) during the time allocated for AMPERE was also presented by kind invitation from the AMPERE's President, Prof. Elias de Los Reyes Davò.

Finally, the presentations of the research activity in the numerous research institutions, laboratories and industries were collected in a volume titled "**MISA 2008-Microwave in Italy and France: State of the Art**" edited by Eng. Antonio Colaiuda and Prof. Cristina Leonelli and published by ENEA.



### NEWS AND EVENTS

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#### **IMS 2009 RAMPANT WORKSHOP**

**June 7-12, 2009**

Workshop "Recent Advances in Microwave Power Applications and Techniques" (RAMPAnT) – a part of the 2009 International Microwave Symposium, Boston MA USA  
<http://www.ims2009.org>

For details contact the organizers:

Dr. Malgorzata Celuch  
E-mail: [m.celuch@ire.pw.edu.pl](mailto:m.celuch@ire.pw.edu.pl)  
or

Dr. Vadim V. Yakovlev  
E-mail: [vadim@wpi.edu](mailto:vadim@wpi.edu)

#### **IMPI SYMPOSIUM**

43rd Annual Microwave Power Symposium

8-10 July, 2009

Washington, DC, USA  
Phone: +1 (804) 559-6667  
Fax: +1 (804) 559-4087  
[info@impi.org](mailto:info@impi.org)

#### **PIERS 2009 MOSCOW**

Progress in Electromagnetic Research Symposium (PIERS)  
18-21 August, 2009, Moscow, Russia

Deadline for Abstract Submission:  
20 February 2009

<http://piers.mit.edu/piers2k9Moscow/>

#### **12TH INTERNATIONAL AMPERE CONFERENCE 09**

**Microwave and High Frequency Heating, 7-10 September 2009**

**Institute for Pulsed Power and Microwave Technology (IHM) at the Forschungszentrum Karlsruhe Germany**

As was announced in the previous issue of this Newsletter the 12<sup>th</sup> International AMPERE conference on Microwave and High Frequency Heating will be staged at Karlsruhe during Monday 7 to Thursday 10 September 2009. The conference will be held at the Forschungszentrum Karlsruhe.

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Email: [Lambert.Feher@ihm.fzk.de](mailto:Lambert.Feher@ihm.fzk.de)  
or visit [www.ampereurope.org](http://www.ampereurope.org)

#### **MS&T 09**

**Microwave processing of Ceramics**

Pittsburgh USA 25-29 October 2009

Contact Dr Mahmoud Morsi for further details at:

Advanced Technologies and New Materials Research Institute (ATNMRI)







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