

# S e m i n a r

## "Multiphysics Modeling in Microwave Power Engineering"

March 4-6, 2013

Cetara, Italy



This forum will be carried out as the next (15<sup>th</sup>) event in the series of seminar/workshops "*Computer Modeling in Microwave Engineering and Applications*" organized annually by the **Industrial Microwave Modeling Group (IMMG)** of the **Worcester Polytechnic Institute (WPI)**, Worcester, MA, USA. In 2013, the meeting will be co-organized by the **University of Salerno**, **University of Naples "Federico II"**, and **University of Modena and Reggio Emilia**.

### Seminar Objectives

Aiming to illuminate some modern trends in evolution of *computational technologies applicable to a variety of scenarios in microwave power engineering*, contributions to the topics including (but not limited to) the following are invited:

- ❑ Advances in development of electromagnetic-thermal models of systems and processes of microwave power engineering
- ❑ Models coupling electromagnetic phenomenon with other than thermal components of microwave heating
- ❑ Methodology, strategy, concepts of multiphysics modeling of microwave processing of materials
- ❑ Modeling-based determination of material parameters
- ❑ Modeling-based microwave imaging of materials
- ❑ Virtual experimentation in research, physical prototyping, and industrial applications

### Important Dates

Submission of titles and abstracts: **January 7, 2013**  
Notification of acceptance: **January 22, 2013**  
Submission of summaries: **February 4, 2013**  
Preliminary program: **February 18, 2013**  
Seminar: **March 4-6, 2013**

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### General Profile

Computer modeling and simulation are increasingly important for development of new applications and technologies of microwave power engineering. To be accurate and adequate, the models have to mimic not only electromagnetic processes in the system, but also other physical phenomena involved - such as heat transfer and mass transfer, and, in some situations, evaporation, phase change, etc.

This *interdisciplinary forum* will bring together engineers, researchers and students involved in different areas of microwave power engineering and engaged with the *development and the use of suitable numerical techniques, computational schemes and modeling procedures*. The seminar program will include contributions from both academia and industry that exemplify advantages and benefits of computer models for simulation, CAD, and optimization of microwave applicators.

### Venue & Timing

The Seminar will be held in Cetara, the scenic town in the province of Salerno in the territory of the Amalfi Coast. Hotel Cetus will be the seminar site.

Technical sessions will take place on Monday and Tuesday, 4-5 March, in the afternoon and on Wednesday, 6 March, in the morning. The Seminar Gala Dinner is scheduled for the evening of Tuesday, 5 March.



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