

# Seminar “Multiphysics Modeling in Microwave Power Engineering”

March 5-6, 2012

The University of Bayreuth  
Bayreuth, Germany



This forum will be carried out as the next (14<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 2012, the meeting will be co-organized by the **Chair of Materials Processing** of the **University of Bayreuth**.

## 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 9, 2012**  
Notification of acceptance: **January 24, 2012**  
Submission of summaries: **February 6, 2012**  
Preliminary program: **February 20, 2012**  
Seminar & Final program: **March 5-6, 2012**

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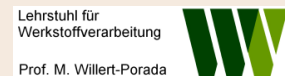
## General Profile

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, mass transfer, 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

The seminar will be held in the facilities of the University of Bayreuth, Universitätsstraße 30, 95447 Bayreuth, Germany



## Organized in cooperation with

*Society for Industrial and Applied Mathematics (SIAM)*



## Endorsed by

*Association for Microwave Power in Europe for Research and Education (AMPERE)*



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More info and the forms for online registration and submission are available at the seminar web page at <http://www.wpi.edu/CIMS/IMMG/Seminars/>