

2009 International Microwave Symposium

7-12 June, Boston Convention & Exhibition Center
IEEE Microwave Theory and Techniques Society



IEEE MTT-S IMS 2009 Workshop

Recent Advances in Microwave Power Applications & Techniques (RAMPAnT)

Friday, June 12, 2009

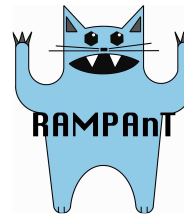
Boston, MA, USA

8 am – 5 pm

Come and stay

RAMPAnT

for new concepts and markets
in microwave theory and techniques!



Workshop Organizers:

Dr. Malgorzata Celuch
Warsaw University of Technology, Poland

Dr. Vadim V. Yakovlev
Worcester Polytechnic Institute, MA, USA



IEEE MTT-S IMS workshops are an opportunity to bring together technical experts from a focused area in a highly interactive forum. The main goal of a workshop is an instructive and interactive exchange of technical information. Proposals for the workshops associated with the annual IEEE MTT-S International Microwave Symposia are accepted from all technical areas within MTT-S as well as **new microwave areas currently outside the purview of IMS/MTT-S.**





RAMPAnT Workshop Scope and Goals

The **RAMPAnT Workshop** presents an overview of **current and emerging microwave energy applications** in science and industry. It also exposes the MTT community to the recent advancements in electromagnetic modeling techniques relevant to high-power microwave processes, computer-aided optimization of microwave heating systems, experimental studies in material processing, imaging and measurements for high-power microwave scenarios, and developments of new industrial microwave technologies.

Contemporary **applications of microwave power span an increasing number of research and industrial sectors**. Beyond widely known microwave heating and thawing of food products, they include sintering of particulate materials, powder metallurgy and metal casting, microwave plasma generation and acceleration of chemical reactions, manufacturing of nanomaterials, processing of biocompatible alloys, and surface coating of polymers. All of the quoted topics are **represented in the workshop program**.

The **RAMPAnT Workshop aims to bring the communities of “classical” and “high power” microwave theory and techniques closer to each other** with the hope to initiate information exchange and to identify the areas of common concerns that could be jointly addressed by the experts of both parties.



Confirmed Workshop Program

Control of the Microstructure of Powder Metallurgy Products by Microwave Heating

Cristina Leonelli, University of Modena and Reggio Emilia, Italy

Electromagnetic and Thermal Analysis of High Power Industrial Microwave Ovens for Metal Casting Applications

Aly E. Fathy, University of Tennessee, TN, USA

Time-Resolved Imaging of Material Changes Under Microwave Irradiation

Sébastien Vaucher, EMPA – Swiss Federal Laboratories for Materials Testing and Research, Switzerland

Modeling and Measurements of Susceptors for Microwave Heating Applications

Wojciech K. Gwarek, Warsaw University of Technology, Poland

Advanced Microwave Measurements for High-Power Applications

José M. Catalá-Civera, Technical University of Valencia, Spain

Parameter Analysis of Atmospheric Microwave Plasma Generation in Fluidized Beds

Monika Willert-Porada, University of Bayreuth, Germany

Simulation of Microwave Plasma Systems

Matthias Graf, Fraunhofer Institute for Chemical Technology, Germany

Efficient Techniques of ANN-Based Microwave Imaging in Closed Systems

Vadim V. Yakovlev, Worcester Polytechnic Institute, MA, USA

Microwave Power Applications to Metamaterial and Measurement of Complex Permittivity under NMR Temperature Mapping

Yoshio Nikawa, Kokushikan University, Japan

Microwave Quantum Interactions for Polymer and Composite Curing

Lambert Feher, Forschungszentrum, Germany



Contact, Registration, Further Details

More information on the IEEE MTT-S IMS 2009 **RAMPAnT Workshop** can be obtained from its Organizers:

Dr. Malgorzata Celuch, Warsaw University of Technology, Poland; m.celuch@ire.pw.edu.pl

Dr. Vadim V. Yakovlev, Worcester Polytechnic Institute, MA, USA; vadim@wpi.edu

Deadlines: *Early Bird* conference registration: **May 15, 2009**; advance conference registration: **June 5, 2009**

Web resources: Related general information (including registration terms and suggested accommodation) and all the symposium details will be available on the IMS 2009's web site at <http://www.ims2009.org>. Summaries of the Workshop contributions will also be placed there prior to the conference; before that, they could be found at <http://www.qwed.eu/ieee2009.html> and <http://www.wpi.edu/+CIMS/IMMG/ims2009.html>.