

**IEEE MTT-S International Microwave Workshop Series (IMWS) on
Innovative Wireless Power Transmission: Technologies, Systems, and Applications
IMWS-IWPT2011**

May 12-13, 2011 – Uji (Kyoto), Japan

General Information

Microwave technologies are being used mainly for the purpose of communication and remote sensing, which can be found in our daily life. Considering the environmental problems of our Earth, we need to explore a new way of life with innovative technologies, which is an urgent issue today. What can the microwave technologies do for the future? One potential and attractive answer is to develop innovative microwave technologies for wireless power transmission so as to reduce power transmission cost and battery-related problems. J. C. Maxwell suggested that a radio wave is in the form of a power in the end of 19th century. N. Tesla carried out the first WPT experiment even though he failed it in the early 20th century. W. Brown demonstrated the possibility of a wireless power transmission via microwaves in 1960's. Following these pioneering works, the Space Solar Power Satellite has been a principal application platform to conduct subsequent microwave power transmission research. In 21st century, we have exploited numerous applications which are suitable for the use of wireless power transmissions such as ICs, LED as tiny power digital device, electric vehicle and plug-in hybrid car. There exist several types of wireless power transmission including inductive power transmission, resonance power transmission, and power transmission via microwaves. The wireless power transmission technology is an emerging and innovative application of microwaves with many interesting features and characteristics. We can deploy a number of wireless power transmission technologies for specifically targeted applications. In this workshop, speakers with contributed and invited papers from all over the world will present and discuss a variety of wireless power transmission technologies, systems and their applications and the future of such technologies will also be debated.

The topics of the workshop include, but not limited to, the following

1. Application and System
 - 1.1 Long distance applications and systems of wireless power transmission
 - 1.2 Short distance applications and systems of wireless power transmission
 - 1.3 Other applications and systems of wireless power transmission including Energy Harvesting
2. Standardization, Regulation, and Biological Effects
 - 2.1 Standardization and regulation including frequency, safety and emissions limits)
 - 2.2 Biological effects of electromagnetic fields
 - 2.3 Others
3. Antenna, Coupling, and Transmission
 - 3.1 Antenna theory and technologies for wireless power transmission
 - 3.2 Phased array theory and technologies which include phased array, beam forming, and DOA for microwave power transmission
 - 3.3 Coupling theory and technologies via resonators or inductors
 - 3.4 Others
4. Circuits, Components and Devices
 - 4.1 Rectenna and rectifying circuits theory and technologies for wireless power transmission
 - 4.2 Power amplifier and microwave tube theory and technologies
 - 4.3 Circuits and components theory and technologies for wireless power transmission
 - 4.4 Devices theory and technologies for wireless power transmission
 - 4.5 Others
5. Others

Venue

Uji Oabaku Plaza, Uji campus of Kyoto University, Uji, Kyoto, Japan
<http://www.rish.kyoto-u.ac.jp/English/access.html>

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Blagovest Shishkov (Bulgarian Academy of Sciences)
Tadashi Takano (Nihon University)
Ke Wu (University of Montreal)
Masanobu Yajima (JAXA)

Important dates

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