

EDITORIAL

Dear readers,

This double issue includes nine papers selected from the **19th International Conference on Applied Electromagnetics and Communications (ICECom 2007)**. ICECom 2007 was held 24–26 September 2007, Dubrovnik, Croatia, where 86 papers from 23 countries were presented. It is worth pointing out that the success of last year's conference should be perceived in the light of ICECom's 30-year-long history. Ten years have passed since the first ICECom was organized under its present name, but it continues the tradition of meetings which have been organized since early 1970s. Continuing this tradition, the ICECom 2007 deals with many subjects that are in the focus of interest of the scientific community and industrial researchers such as: antenna modelling and design, computational methods in electromagnetics, mobile communications, radio navigation and positioning, electromagnetic compatibility, fibre optic systems and sensors, THz technology, metamaterials, etc.

Authors of papers included in the conference were invited to submit extended manuscripts to this issue, and nine papers were selected and included here. Papers were peer reviewed with the same procedure as regular papers.

In the first paper, **Japan's Project for the Research and Development of Active Phased Array Antennas for Practical Applications**, Takano, Kazama, Kawasaki, Toshiyoshi, Ikeda, and Suda describe the objectives, main technical problems, organizations and schedule of a new project for research and development in Japan. The results and solutions are intended to be applied to mobile and satellite communications. The second paper is **Some Facts and Challenges in Array Antenna Synthesis** by Bucci, D'Urso, and Isernia in which authors open a few important questions and give suggestions how to solve these problems in the large array antenna synthesis process. In the third paper, **An Efficient Technique for the Analysis of Reflectarray: MLayAIM**, F. De Vita, P. De Vita, Di Maria, and Freni present an extension of the Adaptive Integral Method enabling the full-wave analysis of microstrip reflectarray patches with arbitrary shape and orientation. In the fourth paper **Direction of Arrival (DoA) Estimation for a Switched-Beam DS-CDMA System using Neural Networks** by Gotsis, Kaifas, Siakavara, and Sahalos a neural network methodology is presented for the direction of arrival estimation of the desired mobile user. The fifth paper **Smart Antenna – Phase Controlled Linear Antenna Array** by Dudás, Kovács, and Sellaer presents a development methodology of a microwave antenna whose radiation pattern is electronically controlled. The sixth paper **Distortion Minimization of Radiated Impulses of Tapered Slot Vivaldi Antenna for UWB Application** by Černý, Nevrlý, and Mazánek deals with the optimization of the Vivaldi antenna, suitable for the measurement of narrow pulse radiation characteristics.

The seventh paper **Photonic Generation of Millimeter and Terahertz Waves and Its Applications** by Nagatsuma, Hirata, Shimizu, Ho-Jin Song, and Kukutsu describes recent advances in the generation of millimeter and terahertz waves based on photonic techniques, which provides low-phase noise, wide frequency tunability, and high output power. In the eighth paper **Cost Effective FBG Based Optical Sensor**, Komljenović, Bosiljevac and Šipuš demonstrate an alternative way of measuring Bragg wavelength shift that could allow us to build cheap, reliable optical sensor.

The ninth paper **Evaluation of the Radiated Power from Near-field Measurements Acquired Via the Planar Wide-mesh Scanning** by D'Agostino, Gennarelli, Guerriero, Riccio, and Savarese develop a full procedure for evaluating the power radiated by an antenna under test from a non-redundant number of near-field measurements collected by the innovative planar wide-mesh scanning.

We would like to take this opportunity to thank all authors for their contributions. Also, we are deeply indebted to the reviewers for their time and expertise that ensured the highest quality of the papers. Finally, we would like to express our gratitude to Prof. Borivoje Rajković, PhD, the Editor-in-Chief of AUTOMATIKA for giving us opportunity and honour to serve as the guest editors of this issue.

Guest Editors
Prof. Juraj BARTOLIĆ, PhD
Prof. Zvonimir ŠIPUŠ, PhD