

JOURNAL OF TELECOMMUNICATIONS AND INFORMATION TECHNOLOGY

Preface

The special issue of the *Journal of Telecommunications and Information Technology* is devoted to the **15th International Conference on Microwaves, Radar and Wireless Communications MIKON'04**, which was held on 17–19 May 2004 in Warsaw. The event is widely considered one of the highest ranking microwave conference. Expressing my gratitude towards the Editorial Board, I would like to present a brief history of the Conference as well as a short summary of last year's MIKON.

It is worth pointing out that the success of last year's conference should be perceived in the light of MIKON's 35-year long history. It started in 1969 as a microwave solid state technology conference MECS and in 1983 it was transformed and renamed into a microwave conference. All over the years, MIKON has been continuously modified and expanded. The first nine conferences were national assemblies of the Polish microwave community, organized every two or three years with only a limited number of invited foreign guests. In 1994 MIKON received the international status. Since then it has been organised biannually in May under the auspices of two parent institutions: the Polish Academy of Sciences, being the original one, and the new one – the Institute of Electrical and Electronics Engineers, and is hosted by various Polish cities – biggest research and culture centres. Due to the fact that telecommunications and radar technology are the principal driving forces behind microwave research, in 1998 MIKON was extended once again and since then has been held as an international conference on microwaves, radar and wireless communications. Nowadays, MIKON assembles the whole Polish microwave and radiolocation community as well as numerous representatives of our immediate neighbors. It is also privileged to host the leaders of other foreign research centres collaborating with Poland as well as scientists of Polish origin, now working and living abroad. Almost 140 papers were presented during MIKON-1994 as well as for the MIKON-1996. Each of the following three conferences in Cracow (1998), Wrocław (2000) and Gdańsk (2002) featured about 190 papers, making MIKON one of leading events in Europe.

In 2004 MIKON moved to Warsaw, with the record number of **234** papers accepted for presentation: 105 from Poland and, what we highly appreciate, 129 of those come from abroad, from **31** countries. These figures are certainly indicative of the enhanced international dimension of MIKON. The majority of foreign papers were submitted by the neighboring countries – Russia, Ukraine, Germany, Sweden and Lithuania as well as other European

countries including France, Italy and the Netherlands. From overseas, the largest number of papers came from Australia and the USA. Out of the accepted papers, 137 were oral and 97 poster presentations. The MIKON-2004 program comprised 36 sessions in total. The number of contributions from the area of wireless communications and antennas had been constantly increasing, and last year 10 sessions were organized on these subjects. Traditional MIKON topics such as CAD methods, measurement techniques, active and passive components were also very well covered. Although millimetre technology, integrated circuits and optoelectronics have attracted less interest in regular papers, they were well represented by invited speakers.

The MIKON-2004 was for the eighth time organized by the **Telecommunications Research Institute** (PIT). Celebrating already its 70th anniversary, PIT is nowadays the leading research centre in radar technology, assembling the biggest group of microwave specialists in Poland. Large scale research collaboration with various technical universities has facilitated the development by PIT of high quality advanced systems, also well known on the international market. PIT will also be the organizer of MIKON-2006 in Cracow.

This year's MIKON constituted the kernel of the Microwave and Radar Week-2004 in Poland (17–21 May), which was comprised, besides MIKON, of the following events: the *5th International Radar Symposium*, the *17th International Conference on Electromagnetic Fields and Materials* and the *East-West Workshop on Advanced Techniques in Electromagnetics*. A total number of 506 participants from 40 countries attended the whole Week, for which 374 papers were presented.

The Polish microwave and radar community felt privileged to have many distinguished guests among the Conference participants. We took the chance of listening to welcome addresses given by Prof. Michał Kleiber, Minister of Scientific Research and Information Technology, IEEE MTT 2004 President, Prof. Robert Trew and Prof. Władysław Włosiński of the Polish Academy of Sciences. Furthermore, six distinguished members of the MIKON community were presented with special *certificates of appreciation* in recognition of their outstanding contributions to the technical program of the Conferences over the years as well as the promotion of MIKON among the world's microwave and radar community.

Last year's Conference hosted a strong representation of young authors. MIKON-2004 continued the Young Scientist Contest addressed to young engineers and Ph.D. students. In whole, 83 papers of young authors were submitted for the competition, over half of which came from abroad. The prizes were founded by the European Microwave Association, IEEE AP/AES/MTT Joint Chapter of Poland Section and the Polish Academy of Sciences.

This special issue comprises 15 papers, chosen from those presented by young authors. A significant number of the papers is devoted to the analysis and design of antennas and antenna arrays (particularly for mobile communication systems). Another group of papers focuses on new microwave measurement techniques as well as advanced numerical methods and modelling in electrodynamics. Finally, the areas of microwave photonics and lightweight technology are also represented.

It is my hope that this volume addresses issues of interest to the Readers and will prove relevant in terms of practical application.

Józef Modelski
Guest Editor