

The Fourteenth Edition of TELSIS Conference

The 14th edition of *International Conference on Advanced Technologies, Systems and Services in Telecommunications* - TELSIS 2019 was held at the Faculty of Electronic Engineering, University of Niš, Serbia from 23 to 25 October, 2019. The conference was organized by the Faculty of Electronic Engineering, Niš and the Society for Microwave Technique, Technologies and Systems, under auspices of Serbian Ministry of Education, Science and Technological Development, in cooperation with the Academy of Engineering Sciences of Serbia, IEEE Serbia and Montenegro Section, Serbia and Montenegro IEEE MTT-S Chapter, National Society for Telecommunications, Society for ETRAN, and Innovation Center for Advanced Technologies. Two IEEE societies: Antennas and Propagation Society (AP-S) and Microwave Theory and Technique Society (MTT-S), and IEEE Region 8 were technical co-sponsors of the Conference. The Conference Proceedings are published as IEEE publications, and included in IEEE Conference Publication Program (IEEE CPP) therefore all papers will be available at IEEE Xplore digital library.

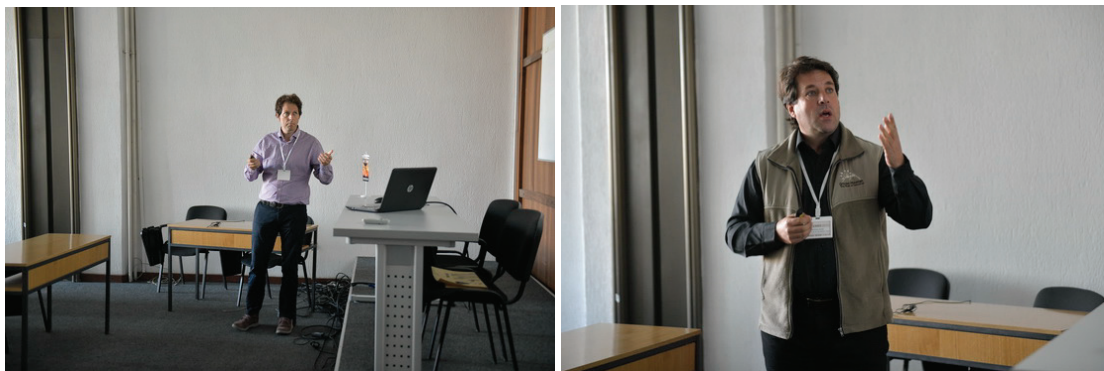
For the past 26 years, the TELSIS Conference scope has always been to provide a professional and scientific forum for engineers and research scientists from universities, research centers and industry, to support transfer of the research results into industry and to support activities devoted to making an appropriate environment for development of national ICT industry and the society in general. During the conference, participants have an ample opportunity to present research results and recent developments as well as current practices in engineering.

The Conference encompasses a wide spectrum of topics in the field of information and telecommunication technologies, systems and services. Broad areas are covered, ranging from modulation and coding to digital signal processing and multimedia, from microwave technique and electromagnetics to microwave electronics, from telecommunication technologies and systems to telecommunication networks and services, from antennas, propagation and radiolocation to wireless communications, from computer systems and internet technologies to electronics, communications and information technologies.



Opening session: Prof. N. Doncov (Serbia), Prof. Dr. Bratislav Milovanović (Serbia), Prof. Branislav Notaroš (USA), Prof. Dominique Schreurs (Belgium), and Prof. Changzhi Li (USA)

Among a number of submitted scientific or application-oriented contributed papers, which were thoroughly reviewed by the Review Board members, 77 papers were accepted and presented at the Conference, accompanied with one plenary and 12 invited papers. The conference program was comprised of scientific sessions, 10 oral and 2 poster, additional activities and rich social program. Every effort has been made to create a program that will encourage dialogue within the academic community from all over the world. To provide Conference participants the first hand information on the state-of-the-art in focused fields, each of the oral sessions started with invited keynote papers presented by today's scientific leaders (*Prof. Dominique Schreurs, KU Leuven, Belgium, Prof. Changzhi Li, Texas Tech University, USA, Prof. Felip Riera-Palou, Universitat de les Illes Balears, Spain, Prof. Giovanni Crupi, University of Messina, Italy, Prof. Nicola Donato, University of Messina, Italy, Prof. Zoran Bojković, University of Belgrade, Serbia, Prof. Dejan Drajić, University of Belgrade, Serbia, Prof. Branko Kolundžija, University of Belgrade, Serbia, Prof. Igor Belyaev, Slovak Academy of Sciences, Slovakia, Prof. Bartomeu Alorda Ladaria, Universitat de les Illes Balears (UIB), Spain, Prof. Branislav Notaroš, Colorado State University, USA, Dr. Snežana Puzović, Institute Vlatacom, Serbia, Prof. David Pokrajac, The Boeing Company, USA*).



Prof. Felip Riera-Palou, and Prof. Bartomeu Alorda Ladaria, Universitat de les Illes Balears (UIB), Spain



Prof. Dominique Schreurs, KU Leuven, Belgium, and Prof. Changzhi Li, Texas Tech University, USA



Prof. Igor Belyaev, Slovak Academy of Sciences, Slovakia

This year, the scientific program of the Conference has been enriched with two Special Sessions "Bioengineering Applications of Microwave Techniques" and "Electromagnetics in Biomedical Applications and Healthcare" organized by Zlatica Marinković (Serbia) and Giovanni Crupi (Italy), which has aroused a tremendous interest among participants.



Special Session "Bioengineering Applications of Microwave Techniques"



Poster session

Following presentations of scientific papers, several additional events were arranged, which were related to the scientific and professional trends in the world and in Serbia as well as to the applications of the latest ICT achievements in the Serbian industry. Peculiarly significant and stimulating activities were:

- Plenary lecture *"Higher Order Computational Electromagnetics, Uncertainty Quantification, and Meshing Techniques with Applications in Wireless Communication, Medicine, and Meteorology"* given by Prof. Branislav Notaroš from the Colorado State University, USA, subsequently to the opening ceremony.
- Women in Engineering Meeting *"Meet the MTT-S president"*, organized by the Women in Engineering – Affinity Group of IEEE Serbia and Montenegro Section and MTT-S Chapter of IEEE Serbia and Montenegro Section. The Participants had an opportunity to meet MTT-S President 2019: Prof. Dominique Schreurs.
- *CEEPUS* (Central European Exchange Programme for University Studies) Meeting, and
- Panel entitled *"The Role of Telecommunications in Development of Smart Cities"* arranged by the Serbian Chamber of Engineers and Forum of Advanced Technologies



Plenary lecture by Prof. Branislav Notaroš, University of Colorado, USA



IEEE WiE/MTT-S Meeting



Panel "The Role of Telecommunications in Development of Smart Cities"

During their stay in Niš, participants could learn about its stormy history and enjoy its rich culture and heritage. The venues for rich official social events were selected to allow attendees to experience both tradition and modernity.

The official Opening Ceremony of the Conference consisted of inspiring talks and enjoyable performances by a local ensemble "Lutajuća srca", while the following Welcome Cocktail was a perfect opportunity to meet other attendees and enjoy national drinks and food in a relaxed setting.



Welcome Cocktail

On the Wednesday evening, 24 October, the civic reception for conference delegates, hosted by Niš City Mayor at the City Hall, enabled participants to hear about the growth and development of the city that is known as the city where Emperor Constantine the Great was born.



Reception at the Niš City Mayor

The Sightseeing Tour was organized on Thursday, 24 October, giving the conference participants the opportunity to feel the spirit of modern and traditional Niš. Within the sightseeing tour they visited *Niš Fortress*, extant fortification of Turkish origin, dating back to the first decades of the 18th century, *Archeological Hall of National Museum of Niš*, and *Monument Scull Tower* (unique monument in the world is 5 meters tall and it has inbuilt 952 human heads, raised by the Turks in 1813, after the defeat of the Serbian rebels led by Stevan Sindelić on Čegar, on 31 May, 1809).

The Conference Gala Dinner took place on Thursday, 25 October, in the restaurant *Exclusive Palace*, where all participants enjoyed fine cuisine, good beverages and exclusive live music by domestic musical ensemble "*Acoustic band*". Following the steps of the hosts, foreign participants managed to learn basic steps of a traditional circle dance, known as "kolo".



A sightseeing tour: Skull Tower and Niš Fortress



Conference Gala Dinner and dancing with the orchestra "Acoustic Band"

The TELSIKS conference organizers hope that all the attendees will remember this Conference as the successful one and that they have experienced the city in all its purity and greatness especially because of the people full of warmth, hospitality and enthusiasm even in difficult times. We hope that you will find professional and personal interest to participate in the next conference edition – TELSIKS 2021.

Sincerely,

On behalf of the Organizing Committee,
Dr. Tijana Dimitrijević, Dr. Biljana Stošić, Dr. Zoran Stanković
 University of Niš
 Faculty of Electronic Engineering
 Niš, Serbia

On behalf of the Technical Program Committee,
Prof. Dr. Nebojša Dončov
 University of Niš, Faculty of Electronic Engineering
 Niš, Serbia

Conference General Chair,
Prof. Dr. Bratislav Milovanović