Conference Schedule

Day	Time	Room			
		A	**B**	**104**	**C / D**
Tuesday October 15	17^{00} – 19^{00}	*Registration*			
Wednesday October 16	08^{00} – 10^{00}	*Registration*			
	10^{30} – 12^{00}	*Opening and Plenary Lecture*			
		TELSIKS Welcome Cocktail Party			
	14^{00}			ICT-RCC	Rohde & Schwarz
		EMM	SP		RT
	16^{00}			NICAT	
		BMC	TN		PO1-PO2
	18^{00}				
	20^{00}	*Reception of TPC members at the Mayor of Niš*			
	22^{00}	*Musical performance*			
Thursday October 17	09^{00}	*Registration*			
		ME	WC I	PUKOS	Nikola Tesla 3D
	11^{00}				DIACAS 2013
		MT	WC II		
	13^{00}				
	15^{00}	*Sightseeing tour*			
	17^{00}			IEEE S&M section	
		IMP		IEEE WIE & CPN	PO3-PO4
	19^{00}				
	21^{00}	*Conference Dinner*			
Friday October 18	10^{00}	*Registration*			
		MC	CIT	IAM	
	12^{00}				
		AP	CMO	WS	
	14^{00}				
	16^{00}				
	18^{00}				

Session Name	Session mark
Applied Electromagnetics and Metamaterials	EMM
Signal Processing	SP
Broadcasting and Multimedia Communications	BMC
Telecommunication Networks	TN
Microwave Electronics	ME
Wireless Communications I	WC I
Microwave Technique	MT
Wireless Communications II	WC II
Image Processing	IMP
Microwave Communications	MC
Computer Systems and Internet Technologies	CIT
Antennas and Propagation	AP
Coding, Modulation and Optical Communications	CMO

Posters	RF & Microwaves Techniques, Antennas and Propagation	PO1
	Digital Signal Processing and Radar Techniques	PO2
	Computer Systems, Internet Technologies and Control Systems	PO3
	Telecommunication Technologies, Networks and Systems	PO4

Workshop	WS
Round Table	RT

International Professional Conference *Development and Implementation of Advanced Cable Services and Effective Business Models*	DIACAS 2013

Other Events	Mark
IEEE Serbia & Montenegro Section – Executive Committee Meeting	IEEE S&M
Women in Engineering Meeting (IEEE WIE & CPN)	IEEE WIE &CPN
Serbian Cable Operators – Steering Boards Meeting	PUKOS
Cluster of Advanced Technologies of Nis City (Meeting)	NICAT
Rohde & Schwarz commercial presentation	Rohde & Schwarz
"Nikola Tesla – Inventions and Long Island" 3D movie and presentation	Nikola Tesla 3D
ICT Association at Regional Chamber of Commerce Niš - Board Meeting	ICT-RCC

Lecture Hall
10:30

OPENING SESSION

Chairmen

Prof. **Bratislav Milovanović**
University of Niš, Serbia

Prof. **Peter Russer**
Technical University of Munich, Germany

Prof. **Wojciech Krzysztofik**
Wroclaw University of Technology, Poland

Prof. **Daniel Pasquet**
ENSEA, France

Prof. **Dominique Schreurs**
Catholic University of Leuven, Belgium

Prof. **Georgi Stoyanov**
Technical University of Sofia, Bulgaria

WELCOME TO TELSIKS 2013

Prof. **Bratislav Milovanović**
TELSIKS Conference Chairman
University of Niš, Serbia

Prof. **Nataša Nešković**
Chair of Serbia and Montenegro IEEE Section

Academician **Zoran Petrović**
Serbian Academy of Sciences and Arts

Prof. **Branko Kovačević**
Academy of Engineering Sciences of Serbia

Prof. **Vera Dondur**
President of National Council for Scientific and Technological Development, Serbia

Prof. **Dragan Janković**
Dean of the Faculty of Electronic Engineering, University of Niš, Serbia

OPENING ADDRESS

Representative of the Serbian Ministry of Foreign and Internal Trade and Telecommunications

12:00   *End of session*

Wednesday, October 16

Lecture Hall
11:30

PLENARY SESSION

Chairmen

W. Krzysztofik
Wroclaw University of Technology, Poland

D. Pasquet
ENSEA, France

Invited papers:

PL.1 **The Geometric Representation of Electrodynamics by Exterior Differential Forms**
P. Russer
Technical University of Munich, Germany

12:00 End of session

Room A
14:00

APPLIED ELECTROMAGNETICS AND METAMATERIALS

Chairmen

P. Russer
Technical University of Munich, Germany
Z. Jakšić
ICTM, University of Belgrade, Serbia
B. Jokanović
Institute of Physics, University of Belgrade, Serbia

Regular papers:

EMM.1 **A Bidirectional Moving Field Inductive Power Transfer System for Electric Vehicles**
J. Russer, M. Dionigi*, M. Mongiardo*, P. Russer
Technical University of Munich, Germany
*University of Perugia, Italy

EMM.2 **Gradient-Index Infrared Metamaterials Based on Metal-Dielectric Submicrometer Pillar Arrays**
Z. Jakšić, M. Sarajlić, Ž. Lazić, M. Dalarsson*,
N. Dalarsson*, D. Ranđelović, K. Radulović,
D. Tanasković
ICTM, University of Belgrade, Serbia
*Royal Institute of Technology, Sweden

EMM.3 **Lossy Transmision with Arbitrary Gradient Permittivity and Permeability and Constant Impedance Throughout the Structure**
M. Dalarsson, M. Norgren, T.Asenov*,N. Dončov**
Royal Institute of Technology, Sweden
*Innovation Centre of Advanced Technologies, Niš, Serbia
**University of Niš, Serbia

EMM.4 **Tuning EIT-like Response in Cross Coupled SRRs**
V. Milošević, B. Jokanović, R. Bojanić
Institute of Physics, University of Belgrade, Serbia

EMM.5 **TLM Modelling of a Coaxfed Microstrip Circular Antenna**
T. Dimitrijević, J. Joković, N. Dončov
University of Niš, Serbia

EMM.6 **Covered Coupled Microstrip Lines with Ground Planes of Finite Width**
M. Perić, S. Ilić, S. Aleksić, N. Raičević,
A. Vučković
University of Niš, Serbia

EMM.7 **Induced Currents in Cranes in Electromagnetic Field of MF Transmitters**
V. Javor
University of Niš, Serbia

EMM.8 **The Grounding System of the Pillar at the Road**
N. Cvetković, D. Vučković, M. S. Stojanović,
D. S. Krstić, D. Tasić
University of Niš, Serbia

16:00 End of session

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Room B

14:00 **SIGNAL PROCESSING**

Chairmen

G. Stoyanov
Technical University of Sofia, Bulgaria

M. Lutovac
University Singidunum, Serbia

Invited papers:

SP.1 **Improved Accuracy and Low-Sensitivity Design of Digital Allpass Based Hilbert Transformer**
G. Stoyanov, K. Nikolova
Technical University of Sofia, Bulgaria

Regular papers:

SP.2 **Concurrent Generation of Pseudo Random Numbers with LFSR of Galois Type**
E. Milovanović, I. Milovanović, M. Stojčev
University of Niš, Serbia

SP.3 **Efficient Implementation of Multiplierless Recursive Lowpass FIR Filters using Computer Algebra System**
V. Pavlović, M. Lutovac*, M. Lutovac**
University of Niš, Serbia
*University Singidunum, Serbia
**Lola Institute, Serbia

SP.4 **Design of Digital Recursive Notch Filter with Linear Phase Characteristic**
G. Stančić, S. Nikolić
University of Niš, Serbia

SP.5 **Frequency Domain Performance Analysis of Selva's Interpolator**
Đ. Babić
School of Computing, Union University, Serbia

SP.6 **Direct Position Determination of Wideband Signals: Coherent and Noncoherent Approach**
I. Pokrajac, D. Vučić*, P. Okiljević
Military Technical Institute of MOD, Serbia
*School of Computing, Union University, Serbia

16:00 End of session

Wednesday, October 16

BROADCASTING AND MULTIMEDIA COMMUNICATIONS

Chairmen

Z. Bojković
University of Belgrade, Serbia
I. Reljin
University of Belgrade, Serbia
D. Pokrajac
Delaware State University, USA

Invited papers:

BMC.1 **Network Selection in Heterogeneous Environment: A Step Towards Always Best Connected and Serve**
K. Rao, Z. Bojković*, B. Bakmaz*
University of Texas Arlington, USA
*University of Belgrade, Serbia

BMC.2 **Creation of Database for Detection of Unusual Behaviour in Surveillance Videos**
A. Hobbs, K. Stephenson, T. Ferreti*, M. Ferretti**,
F. Boukari, D. Pokrajac
Delaware State University, USA
*Wicomico County Board of Education, USA
**Stony Brook University, USA

Regular papers:

BMC.3 **MPEG Video Deployment in Digital Television: HEVC vs. AVC Codec Performance Study**
D. Milovanović, Z. Milićević*, Z. Bojković
University of Belgrade, Serbia
*Dep. of Telecom. and IT GS of the SAF, Serbia

BMC.4 **High Efficiency Video Coding Step Forward in Video Compression Improvement**
Z. Milićević , D. Milovanović*, Z. Bojković*
Dep. of Telecom. and IT GS of the SAF, Serbia
*University of Belgrade, Serbia

BMC.5 **Static Structure of GN Model of Stereoscopic Multimedia Production**
A. Spasić, D. Janković*
College of Professional Education for Pre-School Teachers, Serbia
*University of Niš, Serbia

BMC.6 **Enhancement of Human Body Detection and Tracking Algorithm Based on Viola and Jones Framework**
R. Krerngkamjornkit, M. Simić
RMIT University, Australia

BMC.7 **Comparison of Compression Performance of 10-bit vs. 8-bit Depth H.264 Hi422 Profile**
D. Ruiz, S. Sladojević*, D. Ćulibrk*,
G. Fernández-Escribano
University of Castilla-La Mancha, Spain
*University of Novi Sad, Serbia

18:00 End of session

Room B
16:00

TELECOMMUNICATION NETWORKS

Chairmen

V. Radojičić
University of Belgrade, Serbia
M. Janković
Republic Agency for Electronic Comm., Serbia
N. Gospić
University of Belgrade, Serbia

Regular papers:

TN.1 **Analytical Solution of Common Overflow Traffic Model**
B. Bakmaz, Z. Bojković, M. Bakmaz
University of Belgrade, Serbia

TN.2 **Network Capacity Expansion Strategies Based on Link Congestion Costs**
S. Mitrović, V. Radojičić, G. Marković
University of Belgrade, Serbia

TN.3 **Application of the Retail-Minus on Price Regulation in Wholesale Market of Electronic Communications**
A. Kostić-Ljubisavljević, M. Janković*, Lj. Matavulj*, N. Mitić*
University of Belgrade, Serbia
*Republic Agency for Electronic Comm., Serbia

TN.4 **Benefits of Retail-Minus Concept for Access Service Price Determination**
B. Mikavica, A. Kostić-Ljubisavljević, M. Stojanović, V. Radonjić-Đogatović
University of Belgrade, Serbia

TN.5 **An Approach to Assess Criticality of Elements in the Process of Information Infrastructure Protection**
G. Murić, D. Macura, N. Gospić, D. Bogojević*
University of Belgrade, Serbia
*PE Electric Power Industry of Serbia, Serbia

TN.6 **Performance Evaluation of Dual Crosspoint Queued Crossbar Packet Switch**
N. Maletić, S. Divanović*, M. Radonjić*, I. Radusinović*, G. Gardašević
University of Banja Luka, Bosnia and Herzegovina
*University of Montenegro, Montenegro

TN.7 **Optimal Routing Protocols in Wireless Sensor Networks**
S. Stancescu, A. Luca
University Politechnica of Bucharest, Romania

TN.8 **MLP Neural Network for Keystroke-Based User Identification System**
E. Popovici, O. Guta, L. Stancu, S. Arseni, O. Fratu
University Politechnica of Bucharest, Romania

18:00 End of session

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Thursday, October 17

09:00 **MICROWAVE ELECTRONICS**

Chairmen

D. Pasquet
ENSEA, France

K. Blau
Ilmenau University of Technology, Germany

V. Marković
University of Niš, Serbia

Invited papers:

ME.1 **Improved Noise Parameters Measurement for High Frequency Devices**
D. Pasquet, P. Descamps, D. Lesénéchal
LaMIPS, France

ME.2 **Practical Aspects of a Digital Feedforward Approach for Mitigating Non-linear Distortions in the Receiver**
D. Dupleich, M. Grimm, F. Schlembach, R. Thomä
Ilmenau University of Technology, Germany

ME.3 **Analysis of Microwave Noise Parameters of Scaled AlGaAs/GaAs HEMT's Under Light Exposure**
A. Caddemi, G. Crupi, E. Fazio, S. Patanè, G. Salvo
University of Messina, Italy

Regular papers:

ME.4 **Modelling Insight into the Resonance Frequencies of the Microwave Impedance Parameters for GaAs HEMTs**
G. Crupi, A. Raffo*, D.M. M.-P. Schreurs**, G. Avolio**, A. Caddemi, G. Vannini*
University of Messina, Italy
*University of Ferrara, Italy
**Catholic University of Leuven, Belgium

ME.5 **Artificial Neural Network Modeling for Transistors and Varactors in FinFET Technology**
Z. Marinković, G. Crupi*, D.M. M.-P. Schreurs**, A. Caddemi*, V. Marković
University of Niš, Serbia
*University of Messina, Italy
**Catholic University of Leuven, Belgium

ME.6 **A Novel Linearization Technique Based on Modified Baseband Signal that Modulate Carrier Second Harmonic**
A. Atanasković, N. Maleš-Ilić, K. Blau*, A. Đorić**
University of Niš, Serbia
*Ilmenau University of Technology, Germany
**Innovation Centre of Advanced Technologies, Niš, Serbia

11:00 End of session

Thursday, October 17

Room B
09:00

WIRELESS COMMUNICATIONS I

Chairmen

O. Fratu
University Politechnica of Bucharest, Romania

V. Kafedziski
University Cyril and Methodius, Macedonia

Invited papers:

WC I.1 **Interference Analysis for Inter-Band Carrier Aggregation in LTE-Advanced**
O. Fratu, A. Vulpe, S. Halunga, R. Craciunescu
University Politechnica of Bucharest, Romania

WC I.2 **Link Adaptation as a Technique to Achieve Information-Theoretic Limits in MIMO Systems?**
D. Drajić, P. Ivaniš*
Innovation Centre of the School of Electrical Engineering, Serbia
*University of Belgrade, Serbia

Regular papers:

WC I.3 **Outage Probability Approximations for Dual-Hop Amplify-and-Forward MIMO Relay Systems in Rayleigh Fading**
J. Stošić, Z. Hadzi-Velkov*
Telecom Macedonia AD, Macedonia
*University Cyril and Methodius, Macedonia

WC I.4 **Joint Source Channel Coding Framework for Real Time H.264/AVC Video Transmission over Wireless MIMO Channels Using Outage Probability**
S. Pejoski, V. Kafedziski
University Cyril and Methodius, Macedonia

WC I.5 **Radio Network Aggregation for 5G Mobile Terminals in Heterogeneous Wireless Networks**
T. Shuminoski, T. Janevski
University Cyril and Methodius, Macedonia

WC I.6 **Multi User Orthogonal Frequency Division Multiple Access (MU-OFDMA) Performances in AWGN and Fading Channels**
R. Craciunescu, S. Halunga, O. Fratu, N. Vizireanu
University Politechnica of Bucharest, Romania

WC I.7 **Impact of the User Orientation on WLAN Positioning Based Upon the Access Point with the Strongest Signal**
B. Ignjatović, B. Anđelinić, M. Simić
University of Belgrade, Serbia

11:00 End of session

Room A
11:00

MICROWAVE TECHNIQUE

Chairmen

V. Crnojevic-Bengin
University of Novi Sad, Serbia

N. Dončov
University of Niš, Serbia

Invited papers:

MT.1 **Six-Port Technology and Applications**
S. Tatu, K. Wu*
Inst. National de la Recherche Scientifique,Canada
*Ecole Polytechnique de Montr´eal, Canada

Regular papers:

MT.2 **Wave Digital Network of Parallel-coupled Microstrip based on Admittance Inverter Model**
B. Stošić
University of Niš, Serbia

MT.3 **Response Calculation in of Parallel-Coupled Resonator Filters by use of a Synthezised Digital Network**
B. Stošić, N. Dončov, A. Atanasković
University of Niš, Serbia

MT.4 **Design and Analysis of Bandpass Waveguide Filters using Novel Complementary Split Ring Resonators**
S. Stefanovski, M. Potrebić, D. Tošić
University of Belgrade, Serbia

MT.5 **Compact Multilayer Dual-Band and Tri-Band Bandpass Filters Using Grounded Spiral Resonators**
V. Radonić, V. Crnojević-Bengin
University of Novi Sad, Serbia

MT.6 **Scattering of Infrared Pulses on Ring Dielectric Micro-Resonator Band-Stop Filters**
A. Trubin
National University of Ukraine, Ukraine

MT.7 **A Tri-Band Bandpass Filter with Asymmetric Tri-Mode Resonator**
S. Birgermajer, N. Janković, V. Crnojević-Bengin
University of Novi Sad, Serbia

MT.8 **A Compact Tri-Band Bandpass Filter Based on Grounded Tri-Mode Stepped-Impedance Stub-Loaded Resonator**
A. Rusakov, N. Janković*, V. Crnojević-Bengin*
St. Petersburg Electr. University "LETI", Russia
*University of Novi Sad, Serbia

13:00 End of session

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Thursday, October 17

WIRELESS COMMUNICATIONS II

Chairmen

L. Gavrilovska
University Cyril and Methodius, Macedonia

M. Stojčev
University of Niš, Serbia

Invited papers:

WC II.1 **A Cognitive System for Future-Proof Wireless Microphones: Concept, Implementation and Results**
J. Brendel, S. Riess, R. Weigel, G. Fischer
University of Erlangen-Nuremberg, Germany

WC II.2 **Dynamic REM Towards Flexible Spectrum Management**
L. Gavrilovska, V. Atanasovski
University Cyril and Methodius, Macedonia

Regular papers:

WC II.3 **Reaching the Next Level of Indoor Human Presence Detection: An RF Based Solution**
B. Mrazovac, B. Todorović*, M. Bjelica, D. Kukolj
University of Novi Sad, Serbia
*Institute for Computer Based Systems, Serbia

WC II.4 **FPGA Implementation of Joint Spatio-Temporal Spectrum Sensing Algorithm Based on Direct Localization Method**
S. Brkić, M. Erić
University of Belgrade, Serbia

WC II.5 **Reliable Rendezvous Between Sensor Nodes**
M. Kosanović, M. Stojčev*
High Technical School, Serbia
*University of Niš, Serbia

WC II.6 **Energy Efficiency Utilizing Lookup Table in Wireless Sensor Networks**
B. Šmidling, N. Zogović*
University of Belgrade, Serbia
*Institute Mihailo Pupin, Serbia

13:00 End of session

Room A

17:00 **IMAGE PROCESSING**

Chairmen

R. Petrović
Verance, Inc., USA

R. Kountchev
Technical University of Sofia, Bulgaria

B. Reljin
University of Belgrade, Serbia

Invited papers:

IMP.1 **Watermark Based Access Control to Copyrighted Content**
R. Petrović, V. Atti*
Verance, Inc., USA
*Qualcomm, Inc., USA

IMP.2 **PCA-based Adaptive Hierarchical Transform for Correlated Image Groups**
R. Kountchev, R. Kountcheva
Technical University of Sofia, Bulgaria

Regular papers:

IMP.3 **Second Generation Wavelets: Advantages in Cardiosignal Processing**
A. Gavrovska, G. Zajić*, I. Reljin**,
V. Bogdanović***, B. Reljin
Innovation Center of the School of Electrical Engineering, Serbia
*ICT College of Vocational Studies, Serbia
**University of Belgrade, Serbia
***Health Center "Zvezdara", Serbia

IMP.4 **Metal Artifact Reduction from CT Images Using Complementary MR Images**
A. Anderla, D. Ćulibrk, G. Delso*
University of Novi Sad, Serbia
*University Hospital, Switzerland

IMP.5 **New Content Based Forensic Metrics for Judicial Disputes Concerning the Graphic Symbols Similarity**
B. Vasić
University of Niš, Serbia

IMP.6 **Unsupervised Learning of Quaternion Features for Image Classification**
V. Risojević, Z. Babić
University of Banja Luka, Bosnia and Herzegovina

19:00 End of session

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Friday, October 18

MICROWAVE COMMUNICATIONS

Chairmen

D. Schreurs
Catholic University of Leuven, Belgium

L. Vietzorreck
Technical University of Munich, Germany

O. Pronić-Rančić
University of Niš, Serbia

Invited papers:

MC.1 **Wireless Health Monitoring: Design Challenges**
D.M. M.-P. Schreurs, M. Mercuri, P. Soh*,
G. Vandenbosch
Catholic University of Leuven, Belgium
*University Malaysia Perlis, Malaysia

MC.2 **RF MEMS based Systems for Space Communications**
L. Vietzorreck, T. Kim
Technical University of Munich, Germany

Regular papers:

MC.3 **ANN Based Inverse Modeling of RF MEMS Capacitive Switches**
Z. Marinković, T. Ćirić, T. Kim*, L. Vietzorreck*,
O. Pronić-Rančić, M. Milijić, V. Marković
University of Niš, Serbia
*Technical University of Munich, Germany

MC.4 **Hybrid ANN Model for Accurate 2D DOA Estimation of a Radiating Source**
M. Agatonović, Z. Stanković
University of Niš, Serbia

MC.5 **ANN Applications in Detection of Precipitation Based on the Received Signal Level of Commercial Microwave Links**
V. Đorđević*, O. Pronić-Rančić, Z. Marinković,
M. Milijić, V. Marković, U. Siart**, C. Chwala***,
H. Kunstmann***
University of Niš, Serbia
*Innovation Centre of Advanced Technologies, Niš, Serbia
**Institute for High-Frequency Engineering, Germany
***Institute for Meteorology and Climate Research, Germany

MC.6 **A 3.1–6.65 GHz, 933µW Impulse Radio Pulse Generator with Tuneable Spectrum in 0.18µm CMOS**
J. Radić, A. Đugova, L. Nagy, M. Videnović Mišić
University of Novi Sad, Serbia

12:00 End of session

Room B
10:00

COMPUTER SYSTEMS AND INTERNET TECHNOLOGIES

Chairmen

D. Janković
University of Niš, Serbia

B. Radenković
University of Belgrade, Serbia

Regular papers:

CIT.1 **Providing Services for Student Relationship Management on Cloud Computing Infrastructure**
B. Radenković, M. Despotović-Zrakić,
Z. Bogdanović, A. Labus, M. Milutinović
University of Belgrade, Serbia

CIT.2 **Using of Raspberry Pi for Data Acquisition from Biochemical Analyzers**
A. Milenković, I. Marković, D. Janković, P. Rajković
University of Niš, Serbia

CIT.3 **Efficient Replication of Geospatial Data for Mobile GIS in Field Work**
N. Jajac, D. Stojanović, B. Predić, D. Rančić
University of Niš, Serbia

CIT.4 **Performance Improvement of Viewshed Analysis using GPU**
N. Stojanović, D. Stojanović
University of Niš, Serbia

CIT.5 **Dynamic Simulation of Tesla's Machines in 3D Long Island Model**
V. Vučković, N. Stojanović
University of Niš, Serbia

CIT.6 **AES Implementation with TDM Multiplexing for Internet Routers**
Z. Čiča
University of Belgrade, Serbia

CIT.7 **Improving Protection of PHP Source Code Using Cryptology Models**
A. Jevremović, N. Ristić*, M. Veinović
University Singidunum, Serbia
*University Sinergija, Bosnia and Herzegovina

CIT.8 **Intrusive Detection System Implementation Using Deep Packet Inspection**
S. Zoican, R. Zoican
University Politechnica of Bucharest, Romania

12:00 End of session

Room A
12:00

ANTENNAS AND PROPAGATION

Chairmen

W. Krzysztofik
Wroclaw University of Technology, Poland
B. Kolundžija
University of Belgrade , Serbia
A. Nešić
Institute IMTEL Communications, Serbia

Invited papers:

AP.1 **Take Advantage of Fractal Geometry in the Antenna Technology of Modern Communications**
 W. Krzysztofik
 Wroclaw University of Technology, Poland

Regular papers:

AP.2 **Patch Slot Leaky-Wave Right-Hand Circular Polarization Antenna with Additional Spiral Slots in the Radiator**
 V. Vladimirov, V. Markov, V. Shepov
 Krasnoyarsk Scientific Center of the Russian Academy of Sciences, Siberian Branch, Russia

AP.3 **Electromagnetic Analysis of Antennas on Large Platforms Using Physical Optics Driven Method of Moments**
 M. Tasić, B. Kolundžija
 University of Belgrade, Serbia

AP.4 **Compact Frequency Scanning Antenna Array with SRR Phase Shifters**
 N. Bošković, B. Jokanović, A. Nešić*
 University of Belgrade, Serbia
 *Institute IMTEL Communications, Serbia

AP.5 **Antenna with Circular Polarization Composed of Bent Cross Dipole in a Cylindrical Cavity**
 I. Radnović, A. Nešić, M. Ilić, D. Nešić*
 Institute IMTEL Communications, Serbia
 *University of Belgrade, Serbia

AP.6 **Flexible Step-Impedance Spiral Antenna**
 V. Radonić, A. Rusakov*
 University of Novi Sad, Serbia
 *St. Petersburg Electrotechnical University "LETI", Russia

AP.7 **In-situ Measurements Regarding LF Radio Wave Propagation Using DCF77 Time Signal Transmitter**
 P. Dolea, V. Dascal*, O. Cristea, T. Palade*
 BITNET CCSS SRL, Romania
 *Technical University of Cluj-Napoca, Romania

14:00 End of session

Friday, October 18

CODING, MODULATION AND OPTICAL COMMUNICATIONS

Chairmen

M. Dukić
University of Belgrade, Serbia

B. Vasić
Univeristy of Arizona, USA

I. Djordjević
Univeristy of Arizona, USA

Invited papers:

CMO.1 **Taylor-Kuznetsov Fault-Tolerant Memories: A Survey and Results Under Correlated Gate Failures**
S. Brkić, P. Ivaniš, G.T. Đorđević*, B. Vasić**
University of Belgrade, Serbia
*University of Niš, Serbia
**Univeristy of Arizona, USA

CMO.2 **Beyond 100 Tb/s Serial Optical Transport Networks Based on Hybrid Multidimensional LDPC-Coded Modulation**
I. Đorđević
Univeristy of Arizona, USA

CMO.3 **Whispering Gallery Modes in Semiconductor Optical Fibre and Optical Bottle Microresonators**
N. Trivunac-Vuković, N. Healy, P. Horak, G.S. Murugan, M. Zervas, A. Peacock
University of Southampton, UK

Regular papers:

CMO.4 **Blind DFE with Parametric Entropy-Based Feedback**
V. Krstić, M. Dukić*
Institute Mihailo Pupin, Serbia
*University of Belgrade, Serbia

CMO.5 **Effects of Pointing Errors on Average Capacity of FSO Links over Gamma-Gamma Turbulence Channel**
M. Petković, G.T. Đorđević
University of Niš, Serbia

CMO.6 **Spectral Correlation Characterization of MB-OFDM Signals**
D. Vučić, M. Erić*, I. Pokrajac**
Union University, Serbia
*University of Belgrade, Serbia
**Military Technical Institute of MOD Serbia, Serbia

14:00 End of session

**Room D
16:00**

Poster session - PO1–
RF & MICROWAVE TECHNIQUES, ANTENNAS AND PROPAGATION

Chairmen

N. Maleš-Ilić
University of Niš, Serbia

Z. Stanković
University of Niš, Serbia

Regular papers:

PO1.1 **Low Level Phase Noise Measurement Techniques**
V. Papez, S. Papezova*
Czech Technical University in Prague, Czech Republic
*Czech University of Life Science Prague, Czech Republic

PO1.2 **Frequency Compensated High Power Matrix Resistor Network**
V. Papez, S. Papezova*
Czech Technical University in Prague, Czech Republic
*Czech University of Life Science Prague, Czech Republic

PO1.3 **MPPT Controller Design for a Standalone PV System**
M. Andrejević-Stošović, M. Dimitrijević, V. Litovski*
University of Niš, Serbia
*NiCAT Cluster, Serbia

PO1.4 **Artificial Neural Networks for Ranging of Passive UHF RFID Tags**
M. Agatonović, E. Di Giampaolo*, P. Tognolatti*,
B. Milovanović
University of Niš, Serbia
*University of L'Aquila, Italy

PO1.5 **Linearization of Broadband Doherty Amplifier**
A. Đorić, N. Maleš-Ilić*, A. Atanasković*,
B. Milovanović*
Innovation Centre of Advanced Technologies, Niš, Serbia
*University of Niš, Serbia

PO1.6 **Quasi-Static Analysis of the Shielded Microstrip Line with Bi-Isotropic Substrate by the Strong FEM Formulation**
Ž. Mančić, V. Petrović*
University of Niš, Serbia
*University of Belgrade, Serbia

PO1.7 **Side Lobe Suppression of Printed Antenna Array with Perpendicular Reflector**
M. Milijić, A. Nešić*, B. Milovanović
University of Niš, Serbia
*Institute IMTEL Communications, Serbia

PO1.8 **Synthesis of Intelligent Antenna Array Using Radial Basis Function Networks**
M. Sarevska, B. Milovanović, Z. Stanković
University of Niš, Serbia

PO1.9 **Neural Networks Based DOA Estimation of Multiple Stochastic Narrow-Band EM Sources**
Z. Stanković, N. Dončov, J. Russer*,
I. Milovanović**, M. Agatonović
University of Niš, Serbia
* Technische Universitat München, Germany
**Univerisity Singidunum-DLS center Nis, Serbia

PO1.10 **Using Wake-up Receivers in Bird Telemetry – Viability Study**
N. Šobajić, J. Gutiérrez, R. Kraemer, M. Krstić
IHP, System Design, Germany

PO1.11 **Prediction and Measurement of Electromagnetic Radiation at Krajina Square in the City of Banja Luka**
P. Međedović, D. Suka*
Ministry for Economic Relations and Regional Cooperation, Bosnia and Herzegovina
*University of East Sarajevo, Bosnia and Herzegovina

18:00 End of session

Wednesday, October 16

Poster session – PO2 –
DIGITAL SIGNAL PROCESSING AND RADAR TECHNIQUES

Room D
16:00

Chairmen

Z. Perić
University of Niš, Serbia

V. Pavlović
University of Niš, Serbia

Regular papers:

PO2.1 **Approximation of the Optimal Compressor Function Combining Different Spline Functions in Segments**
L. Velimirović, Z. Perić*, Miomir Stanković*
Mathematical Institute of the Serbian Academy of Sciences and Arts, Serbia
*University of Niš, Serbia

PO2.2 **Size Analysis Surface Area of the Pass-Band and Stop-Band of Multiplierless 2D FIR Filter**
J. Đorđević-Kozarov, V. Pavlović
University of Niš, Serbia

PO2.3 **3D Parametric Adjustment of the Gegenbauer's Continuous Filter Function**
V. Pavlović, A. Ilić*, Z. Cvetković
University of Niš, Serbia
*Republic Agency for Electronic Communications, Serbia

PO2.4 **Automotive Radar Target Tracking by Kalman Filtering**
A. Macaveiu, A. Câmpeanu
"Politehnica" University, Timisoara, Romania

PO2.5 **Real-time Implementation of Target Tracking System for Air Surveillance Radar Applications**
M. Jevtić, K. Marković, D. Mikluc*, B. Mišić, T. Pajić
Institute Mihailo Pupin, Serbia
*University of Defence in Belgrade, Serbia

PO2.6 **Performance Trade-offs in GPU-Assisted Radar Scan Converter**
M. Jevtić, M. Tatarević, K. Marković, T. Pajić, M. Stamatović
Institute Mihailo Pupin, Serbia

18:00 End of session

Thursday, October 17

Poster session – PO3 – COMPUTER SYSTEMS, INTERNET TECHNOLOGIES AND CONTROL SYSTEMS

Chairmen

L. Stoimenov
University of Niš, Serbia

Mirjana Stojanović
University of Belgrade, Serbia

Regular papers:

PO3.1 **Comparison of Different Algorithms for Sentiment Classification**
M. Ćirić, A. Stanimirović, N. Petrović*,
L. Stoimenov
University of Niš, Serbia
*Morena engineering d.o.o., Serbia

PO3.2 **The Relative Importance of the Usability Factors for Web Portals**
N. Đorđević, D. Rančić, I. Vulić*
University of Niš, Serbia
*University of Defence in Belgrade, Serbia

PO3.3 **Online Detection of Patterns in Semantic Trajectory Data Streams**
M. Roganović, D. Stojanović
University of Niš, Serbia

PO3.4 **Computer Network Simulation and Visualization Tool for Educational Purpose**
N. Jovanović, Z. Jovanović*, O. Popović*,
I. Stanković*, A. Zakić*
University of Priština, Serbia
*Business School, Blace, Serbia

PO3.5 **Case Study: DNS Service Protection Methods**
Lj. Ivaniš, S. Adamović*, A. Jevremović*
CPU d.o.o., Serbia
*University Singidunum, Serbia

PO3.6 **Computationally Intelligent System for Thermal Vision People Detection and Tracking in Robotic Applications**
I. Ćirić, Ž. Ćojbašić, V. Nikolić, D. Antić
University of Niš, Serbia

PO3.7 **Analysis of SCADA System Vulnerabilities to DDoS Attacks**
J. Marković-Petrović, M. Stojanović*
CE Djerdap Hydroelectric Power Plants Ltd., HPP Djerdap 2, Serbia
*University of Belgrade, Serbia

19:00 End of session

Thursday, October 17

Poster session – **PO4** – **TELECOMMUNICATION TECHNOLOGIES, NETWORKS AND SYSTEMS**

Chairmen

S. Halunga
University Politechnica of Bucharest, Romania

N. Trivunac-Vuković
University of Southampton, UK

D. Mančić
University of Niš, Serbia

Regular papers:

PO4.1 **Performances of Decorrelating MUD Using STBC for Image Transmissions in Rayleigh Fading Channel**
C. Voicu, S. Halunga, N. Vizireanu
University Politechnica of Bucharest, Romania

PO4.2 **The Performances of Complex SSC/MRC Combiner in the Presence of α-μ Fading**
P. Nikolić, D. S. Krstić*, G. Stamenović,
A. Stevanović**
Tigartyres, Pirot, Serbia
University of Niš, Serbia
**Mechanical Technical School 15. May, Niš, Serbia*

PO4.3 **Vertical Handover Improvements from WLAN to WMAN or WWAN Technologies**
K. Jakimoski, T. Janevski
University Cyril and Methodius, Macedonia

PO4.4 **Outage Probability of AF, DF and CF Cooperative Strategies for the Slow Fading Relay Channel**
M. Rizinski, V. Kafedziski*
ProSyst Labs, Bulgaria
University Cyril and Methodius, Macedonia

PO4.5 **Vehicular Ad Hoc Networks**
M. Simić
RMIT University, Australia

PO4.6 **Perception and Attitudes Towards Digital Billboards**
S. Ćićević, A. Trifunović, M. Nešić*, A. Samčović
University of Belgrade, Serbia
* *University of Niš, Serbia*

PO4.7 **Indoor to Outdoor Radio Access Network Planning in Mobile Systems**
D. Vujić
University of Belgrade, Serbia

PO4.8 **Low-Cost SDR-Based Ground Receiving Station for LEO Satellite Operations**
V. Dascal, P. Dolea*, O. Cristea*, T. Palade
Technical University of Cluj-Napoca, Romania
*BITNET CCSS SRL, Research and Development Department, Romania

PO4.9 **Cosmic Radiation Detector Performances in Salt Mines**
V. Savu, R. Craciunescu*, O. Fratu*, I. Marghescu*
National R&D Institute for Optoelectronics – INOE 2000, Romania
*University Politechnica of Bucharest, Romania

PO4.10 **Low-cost Wireless Dust Monitoring System**
U. Jovanović, I. Jovanović*, A. Petrušić,
Z. Petrušić*, D. Mančić*
Innovation Centre of Advanced Technologies, Niš, Serbia
*University of Niš, Serbia

PO4.11 **Computer Simulation of Soliton Pulses Propagation through Birefringent Fiber in the Linear and Nonlinear Mode**
M. Banđur, P. Spalević, B. Jakšić, A. Marković*,
M. Smilić
University of Priština, Serbia
*University of Nis, Serbia

PO4.12 **Implementation of the New Public Transport Management System in Belgrade**
S. Bajčetić, P. Živanović, S. Tica, M. Petrović*,
A. Đorojević, B.M. Milovanović
University of Belgrade, Serbia
*LANUS d.o.o., Serbia

PO4.13 **Aligned Software and Process Models with both the eTOM Framework and the ITIL Processes**
A. Denda, D. Drajić*
Telenor Serbia, Serbia
*University of Belgrade, Serbia

19:00 End of session