



15th International Conference on

COMMUNICATIONS 2024

Organized by

**National University of Science and Technology Politehnica
Bucharest**

and

Military Technical Academy 'Ferdinand I'

Co-organized by

Electronica 2000 Foundation

Under the aegis of

IEEE Romania Section

Event Sponsors

Gold Sponsor



Silver Sponsors



Conference Chairs

Sorin ZOICAN
National University of Science and Technology
Politehnica Bucharest, Romania
Șerban OBREJA
National University of Science and Technology
Politehnica Bucharest, Romania

Ștefan SIMION
Military Technical Academy 'Ferdinand I', Romania
Ștefan-Adrian TOMA
Military Technical Academy 'Ferdinand I', Romania

Conference founders

Adelaida MATEESCU
University "Politehnica" of Bucharest, Romania

Mihai RADU
Military Technical Academy, Romania

Honorary committee

Victor CROITORU
National University of Science and Technology
Politehnica Bucharest, Romania
Ioan NICOLAESCU
Military Technical Academy "Ferdinand I", Romania

Silviu CIOCHINĂ
National University of Science and Technology
Politehnica Bucharest, Romania
Alexandru ȘERBĂNESCU
Military Technical Academy "Ferdinand I", Romania

Publication chairs

Iulia Mocanu
National University of Science and Technology
Politehnica Bucharest, Romania

Cristina DESPINA-STOIAN
Military Technical Academy "Ferdinand I", Romania

Social Media & Web Chairs

Alexandru FRUNZĂ
Military Technical Academy "Ferdinand I", Romania

Dragoș NASTASIU
Military Technical Academy "Ferdinand I", Romania

Financial chair

Cristina MARGHESCU
National University of Science and Technology Politehnica Bucharest, Romania

Technical Program Chairs

Alexandru RUSU
National University of Science and Technology
Politehnica Bucharest, Romania

Angela DIGULESCU
Military Technical Academy "Ferdinand I", Romania

Sponsorship chairs

Amelia CIOBANU
National University of Science and Technology
Politehnica Bucharest, Romania

Petrică CIOTÎRNAE
Military Technical Academy "Ferdinand I", Romania

Organizing Committee

National University of Science and Technology
Politehnica Bucharest

Military Technical Academy 'Ferdinand I', Romania

Radu BADEA
Octaviana DATCU
Adrian Florin PĂUN
Dragoș ȚARĂLUNGĂ

Iulian RÎNCU
Leontin TUȚĂ
Daniel DEPĂRĂȚEANU
Marius NATI
Alexandra BUZDUCEA
Denis STĂNESCU
Valeria COJOCARU

Technical Program Committee

Felix ALBU Nicolae	Valahia University of Targoviste, Romania,
ALEXANDRU	Technical University Gh Asachi Iasi, Romania
Andrei ANGHEL	National University of Science and Technology Politehnica Bucharest, Romania
Cristian ANGHEL	National University of Science and Technology Politehnica Bucharest, Romania
Stéphane AZOU	CNRS/Lab-STICC & Ecole Nationale d'Ingénieurs de Brest (ENIB)
Radu BADEA	Politehnica University of Bucharest, Romania
Alina Mihaela BADESCU	National University of Science and Technology Politehnica Bucharest, Romania
Cornelia-Ionela BĂDOI	National University of Science and Technology Politehnica Bucharest, Romania
Lidia BAJENARU	National Institute for Research and Development in Informatics, Romania
Titus C BALAN	Romania & Transilvania University of Brasov, Romania
Calin BIRA	National University of Science and Technology Politehnica Bucharest, Romania
Victoria BOBICEV	Technical University of Moldova, Moldova, Techn. University. of Iassy, Faculty of Electronics & Telecommunications, Romania
Ion BOGDAN Laurentiu	National University of Science and Technology Politehnica Bucharest, Romania
BOICESCU	
Vasile BOTA	Technical University of Cluj Napoca, Romania
Robert BOTEZ	Technical University of Cluj-Napoca, Romania
Diana BRÎNARU Corneliu	National University of Science and Technology Politehnica Bucharest, Romania
BURILEANU	National University of Science and Technology Politehnica Bucharest, Romania
Octavian CATRINA	National University of Science and Technology Politehnica Bucharest, Romania
Mihai CIUC	National University of Science and Technology Politehnica Bucharest, Romania
Dinu COLTUC	Valahia University of Targoviste, Romania
Cosmin CONTU	National University of Science and Technology Politehnica Bucharest & Coden IT Consulting, Romania
Razvan CRACIUNESCU	National University of Science and Technology Politehnica Bucharest & Future Networks Lab, Romania
Horia CUCU	National University of Science and Technology Politehnica Bucharest, Romania
Octaviana DATCU Angela	National University of Science and Technology Politehnica Bucharest, Romania
DIGULESCU	Military Technical Academy 'Ferdinand I', Romania
Ciprian DOBRE	National University of Science and Technology Politehnica Bucharest, Romania,
Virgil DOBROTA	Technical University of Cluj-Napoca, Romania
Laura-Maria DOGARIU	National University of Science and Technology Politehnica Bucharest, Romania
Mihai DOGARIU	National University of Science and Technology Politehnica Bucharest, Romania,
Radu DOGARU	National University of Science and Technology Politehnica Bucharest, Romania

Ana Maria DRAGULINESCU	National University of Science and Technology Politehnica Bucharest, Romania
Yanal S FAOURI	The University of Jordan, Jordan
Bogdan Cristian FLOREA	National University of Science and Technology Politehnica Bucharest, Romania
Carmen FLOREA	National University of Science and Technology Politehnica Bucharest, Romania
Corneliu FLOREA	National University of Science and Technology Politehnica Bucharest, Romania
Laura FLOREA	National University of Science and Technology Politehnica Bucharest, Romania
Alexandru FRUNZA	CNRS/Lab-STICC, France & Military Technical Academy 'Ferdinand I', Romania
Bogdan GHITA	University of Plymouth & Centre for Security, Communications, and Network Research, United Kingdom (Great Britain),
Iustin-Alexandru IVANCIU	Technical University of Cluj-Napoca, Romania, iustin.lvanciu@com.utcluj.ro
Chaitanya Kumar KADIYALA	Arm Inc, USA
Pankaj KULKARNI	Radysis, India
Cristian LECA	Military Technical Academy 'Ferdinand I', Romania
Radu Caius LUPU	National University of Science and Technology Politehnica Bucharest, Romania
Alina Elena MARCU	National University of Science and Technology Politehnica Bucharest, Romania
Ion MARGHESCU	National University of Science and Technology Politehnica Bucharest, Romania
Alexandru MARTIAN	National University of Science and Technology Politehnica Bucharest, Romania
Marius Iulian MIHAILESCU	SPIRU HARET University, Romania
Bogdan MOCANU	Institut Polytechnique de Paris, Télécom SudParis, Laboratoire SAMOVAR, Evry, France
Iulia Andreea MOCANU	National University of Science and Technology Politehnica Bucharest, Romania
Corina NAFORNITA	Politehnica University of Timisoara, Romania
Ioan NAFORNITA	Politehnica University of Timisoara, Romania
Serban Georgica OBREJA	National University of Science and Technology Politehnica Bucharest, Romania
Claudia Cristina OPREA	National University of Science and Technology Politehnica Bucharest, Romania
Constantin PALEOLOGU	National University of Science and Technology Politehnica Bucharest, Romania, pale@comm.pub.ro
Sriram PANYAM	Omlet Inc & Google, USA,
Adrian Florin PAUN	National University of Science and Technology Politehnica Bucharest, Romania
Lucian Andrei PERISOARA	National University of Science and Technology Politehnica Bucharest, Romania
Eugen Ioan POP	National University of Science and Technology Politehnica Bucharest & R&D Institute for Automation, SC IPA SA, Bucharest, Romania
Victor POPA	National University of Science and Technology Politehnica Bucharest, Romania
Adrian POPESCU	Blekinge Institute of Technology, Sweden
Dimitrie C. POPESCU	Old Dominion University, USA

Emanuel PUSCHITA	Technical University of Cluj-Napoca & National Institute for Research and Development of Isotopic and Molecular Technologies (INCDTIM), Romania
Anamaria RADOI	National University of Science and Technology Politehnica Bucharest & CAMPUS, Romania
Emanuel RADOI	University of Brest & CNRS UMR 6285 Lab-STICC, France
Cristian-Iulian RINCUI	Military Technical Academy 'Ferdinand I', Romania
Alexandru RUSU	National University of Science and Technology Politehnica Bucharest, Romania
Corneliu RUSU	Technical University of Cluj-Napoca, Romania
Stefan SIMION	Military Technical Academy Ferdinand I, Romania
Mihai STANCIU	National University of Science and Technology Politehnica Bucharest, Romania
Liviu Daniel STEFAN	National University of Science and Technology Politehnica Bucharest & AI Multimedia Lab, CAMPUS Research Institute, Romania
Anusuyah SUBBARAO	Multimedia University, Malaysia
Ekaterina SVERTOKA	National University of Science and Technology Politehnica Bucharest, Romania & Brno University of Technology, Czech Republic
Andrei SZILAGYI	Military Technical Academy 'Ferdinand I', Romania
Razvan D. TAMAS	Constanta Maritime University, Romania
Ruxandra TAPU	Institut Telecom / Telecom SudParis, France
Dragos Daniel TARALUNGA	National University of Science and Technology Politehnica Bucharest, Romania
Daniela TARNICERIU	Gheorghe Asachi Technical University of Iasi, Romania
Stefan-Adrian TOMA	Military Technical Academy Ferdinand I, Romania
Razvan-Florentin TRIFAN	National University of Science and Technology Politehnica Bucharest, Romania
Leontin TUTA	Military Technical Academy 'Ferdinand I', Romania
Andrei-Alexandru ULMĂMEI	National University of Science and Technology Politehnica Bucharest, Romania
Srinivasa VEMULA	FIS Management Services, India
Constantin VERTAN	National University of Science and Technology Politehnica Bucharest, Romania
Calin VLADEANU	National University of Science and Technology Politehnica Bucharest, Romania
Marius-Constantin VOCHIN	National University of Science and Technology Politehnica Bucharest & BEIA Consult International, Romania
Alexandru VULPE	National University of Science and Technology Politehnica Bucharest & Beam Innovation SRL, Romania
Roua YOUSSEF	University of Brest & Lab-STICC, France
Sorin ZOICAN	National University of Science and Technology Politehnica Bucharest, Romania

Table of Contents

SIGNAL PROCESSING I.....	17
COMMUNICATIONS SECURITY	18
VEHICULAR ELECTRONIC SYSTEMS	19
COMPUTATIONAL INTELLIGENCE.....	20
IMAGE PROCESSING	21
INTERNET OF THINGS.....	22
OPTICAL COMMUNICATIONS	23
SIGNAL PROCESSING II	24
ANTENNAS AND PROPAGATION	25
COMMUNICATION NETWORKS AND SYSTEMS	26
WORKSHOP: HUMAN-CENTERED AI.....	27

The Conference Place

**National University of Science and
Technology Politehnica Bucharest**

Central Library

313 Splaiul Independenței Bd.,
District 6, 060042 Bucharest

**Universitatea Națională de Știință și
Tehnologie Politehnica București**

Biblioteca Centrală

Splaiul Independenței, 313,
București 060042

Coordinates

Latitude
44.441004

Longitude
26.05165



Useful Phone Numbers

Emergency call: 112

Conference Secretariat: +40 741 117 790

Conference Program

Thursday, October 3th, 2024	
08⁰⁰–09⁰⁰	Participants Registration 3 rd Floor, <i>Central Library</i> , Politehnica University of Bucharest
09⁰⁰–09¹⁵	Opening session Open ceremony hall – <i>Room 4.1</i> Welcome Speech , conference chairs National University of Science and Technology Politehnica Bucharest, <i>Romania</i> Military Technical Academy ‘Ferdinand I’, <i>Romania</i> Messages from participants
Plenary session (invited papers), Open ceremony hall – <i>Room 4.1</i> Chairmen: Sorin ZOICAN , National University of Science and Technology Politehnica Bucharest, <i>Romania</i> Ștefan SIMION , Military Technical Academy ‘Ferdinand I’, <i>Romania</i>	
09¹⁵–09⁴⁵	<i>Battery-Free Wireless Sensors for IoT Applications</i> Alexandru TAKACS, Gaël LOUBET, Taki DJIDJEKH, Lamoussa SANOGO, Daniela DRAGOMIRESCU
09⁴⁵–10¹⁵	<i>A Synchronization Front-End for LoRa Self-Jamming Operation on SDR Platforms</i> Clement DEMESLAY, Roland GAUTIER, Philippe ROSTAING, Cristina DESPINA-STOIAN
10¹⁵–10³⁰	Coffee break
10³⁰–11⁰⁰	<i>Graphene-based Nanostructured Sensors and Antennas</i> Arun DEEPAK, Barkha RANI, Sourav GHOSH, David JENKINS
11⁰⁰–11³⁰	<i>Signal Processing Using Phase Diagram Analysis - New Perspectives in Understanding Transient Features in Data Science</i> Cornel IOANA, Denis STANESCU, Dragoș NASTASIU, Cristina DESPINA-STOIAN, Angela DIGULESCU
Sponsor Presentations , Open ceremony hall – <i>Room 4.1</i> Chairmen: Petrică CIOTÎRNAE , Military Technical Academy ‘Ferdinand I’, <i>Romania</i> Amelia CIOBANU , National University of Science and Technology Politehnica Bucharest, <i>Romania</i>	
11³⁰–11⁵⁰	<i>Orange Romania S.A.</i>
11⁵⁰–12¹⁰	<i>Rartel S.A.</i>
12¹⁰–12³⁰	<i>RomTek Electronics S.R.L.</i>
12³⁰–12⁵⁰	<i>Optoelectronica-2001 S.A.</i>
12⁵⁰–13⁰⁰	Group Photo
13⁰⁰–14³⁰	Lunch
14³⁰–16³⁰	Parallel Sessions
16³⁰–17⁰⁰	Coffee Break
17⁰⁰–19⁰⁰	Parallel Sessions
19³⁰–23⁰⁰	Official Dinner

Friday, October 4 th , 2024	
09 ⁰⁰ -11 ⁰⁰	Parallel Sessions
11 ⁰⁰ -11 ³⁰	Coffee Break
11 ³⁰ -12 ⁰⁰	<p>Closing Session, Best Student Paper and Diploma of Appreciation Awards</p> <p>Open ceremony hall – <i>Room 4.1</i></p>

Exhibition program:

- 3rd Floor Hall, *Central Library*, National University of Science and Technology Politehnica Bucharest
 - ✓ **Thursday, October 3, 2024:** 9⁰⁰- 13⁰⁰, 14³⁰- 19⁰⁰
 - ✓ **Friday, October 4, 2024:** 8³⁰-12⁰⁰

Sessions Schedule

	Room 4.1 <i>(Sala 4.1)</i>	Room 3.1 <i>(Sala 3.1)</i>	Room 4.2 <i>(Sala 4.2)</i>	Room 3.2 <i>(Sala 3.2)</i>
<i>October 3rd, 2024</i> <i>09¹⁵–11³⁰</i>	Invited Papers			
<i>Thursday</i> <i>October 3rd, 2024</i> <i>14³⁰–16³⁰</i>	Signal Processing I	Communications Security	Vehicular Electronic Systems	Computational Intelligence
<i>Thursday</i> <i>October 3rd, 2024</i> <i>17⁰⁰–19⁰⁰</i>	Image Processing	Internet of Things		Optical Communications
<i>Friday</i> <i>October 4th, 2024</i> <i>09⁰⁰–11⁰⁰</i>	Workshop: Human-Centered AI	Signal Processing II	Communication Networks and Systems	Antennas and Propagation

Activities Schedule

<i>Room</i>	<i>3rd Floor</i>		<i>Open ceremony hall – Room 4.1</i>	<i>4th Floor Hall</i>
<i>Thursday October 3rd, 2024</i>	08⁰⁰–09⁰⁰ Participants Registration	09⁰⁰–13⁰⁰ 14³⁰–19⁰⁰ Exhibition	09⁰⁰–09¹⁵ Opening Session	10¹⁵–10³⁰ Coffee Break
				13⁰⁰–14³⁰ Lunch
				16³⁰–17⁰⁰ Coffee Break
				19³⁰–23⁰⁰ Official Dinner
<i>Friday October 4th, 2024</i>	08⁰⁰–11⁰⁰ Conference Secretariat	08³⁰–12⁰⁰ Exhibition	11³⁰–12⁰⁰ Closing Session, Best Student Paper and Diploma of Appreciation Awards	11⁰⁰–11³⁰ Coffee Break
				11⁰⁰–11³⁰ Coffee Break

SIGNAL PROCESSING I

Thursday, October 3rd, 2024
14³⁰–16¹⁰, Room 4.1 (Sala 4.1)

Chairs:

Roland GAUTIER

Université de Bretagne Occidentale, France

Cornel IOANA

Institute National Polytechnique de Grenoble, France

14³⁰	Lorena MUSCAR Toma TELEMBCI Corneliu RUSU Technical University of Cluj-Napoca, Romania	<i>Deep Learning-Based Sound Classification Algorithms for Enhanced Service Robots Audio Capabilities</i>
14⁵⁰	Ionela Cristina VOICU Filip ROȘU NXP Semiconductors, Romania National University of Science and Technology Politehnica Bucharest, Romania	<i>Maximum Iterations Criterion for OMP in FMCW RADARs</i>
15¹⁰	Marius NATI Dragoș NASTASIU Denis STĂNESCU Angela DIGULESCU Military Technical Academy Ferdinand I, Romania Cornel IOANA Institute National Polytechnique de Grenoble, France	<i>Pipe Leaks Detection and Localization Using Non-Intrusive Acoustic Monitoring</i>
15³⁰	Cristina DESPINA-STOIAN Dragoș NASTASIU Military Technical Academy Ferdinand I, Romania Cornel IOANA Institute National Polytechnique de Grenoble, France Angela DIGULESCU Denis STĂNESCU Military Technical Academy Ferdinand I, Romania	<i>Movement Characterization of Multirotor UAV Based on Their Acoustic Signature</i>
15⁵⁰	Sama Hussein AL-GBURI Kanar Alaa AL-SAMMAK Ion MARGHESCU Claudia Cristina OPREA National University of Science and Technology Politehnica Bucharest, Romania Khattab M. Ali ALHEETI University of Anbar, Iraq Nadia Ali Abbas ALMOSA College of Information Technology, Iraq	<i>Analyzing Different Models for Driver Behavior Detection Using EEG Data</i>

COMMUNICATIONS SECURITY

Thursday, October 3rd, 2024
14³⁰–16³⁰, Room 3.1 (Sala 3.1)

Chairs:

Alexandru VULPE

National University of Science and Technology Politehnica Bucharest, Romania

Iulian ACIOBANITEI

Military Technical Academy Ferdinand I, Romania

14³⁰	<p>Maria Mădălina ANDRONACHE National University of Science and Technology Politehnica Bucharest, Romania</p> <p>Alexandru VULPE National University of Science and Technology Politehnica Bucharest, Romania Beam Innovation SRL, Romania</p> <p>Corneliu BURILEANU National University of Science and Technology Politehnica Bucharest, Romania</p>	<i>A Malware Study Using Static and Dynamic Analysis</i>
14⁵⁰	<p>Alexandru CHIS Titus C BALAN Petru Adrian COTFAS Daniel Tudor COTFAS Transilvania University of Brasov, Romania</p>	<i>Deployment of a Security Solution for Cloud</i>
15¹⁰	<p>Teodora Georgiana BANU Mihai TOGAN Military Technical Academy Ferdinand I, Romania</p>	<i>SEARCH: Symmetric Encryption Algorithm Research and Characteristic Hunting</i>
15³⁰	<p>Alexandru-Gabriel ROMANIUC Vlad VASILE Monica BORDA Technical University of Cluj Napoca, Romania</p> <p>Banica ALEXANDRU Communication, Information and Cyber Defence Training School, Romania</p>	<i>Results on the Impact of GNSS Spoofing Attack on GNSS Sensors Using RINEX Data</i>
15⁵⁰	<p>Ștefan ARSENI Emil BUREACĂ Iulian ACIOBANITEI Military Technical Academy Ferdinand I, Romania</p>	<i>Digital Signatures Long-Term Preservation Services, IPFS and Blockchain are a Good Match</i>
16¹⁰	<p>Haralambie FLORIN Cristian-Iulian RINCU Military Technical Academy Ferdinand I, Romania</p> <p>Razvan BARTUSICA Mihai-Virgil NICHITA Special Telecommunications Service, Romania</p>	<i>Hybrid Chaotic Hash Function Based on HAIFA Structure</i>

VEHICULAR ELECTRONIC SYSTEMS

Thursday, October 3rd, 2024
14³⁰–16¹⁰, Room 4.2 (Sala 4.2)

Chairs:

Octaviana DATCU

National University of Science and Technology Politehnica Bucharest, Romania

Leontin TUȚA

Military Technical Academy Ferdinand I, Romania

14 ³⁰	<p>Ilie-Sergiu PÎRVU Lucian Andrei PERISOARA National University of Science and Technology Politehnica Bucharest, Romania Cosmin Razvan DANISOR National University of Science and Technology Politehnica Bucharest, Romania National Research Council of Italy</p>	<p><i>FPGA Cryptosystem by Using RSA Algorithm for Enhanced Security in Controller Area Networks</i></p>
14 ⁵⁰	<p>Mihaela GAVRILA Madalina-Giorgiana MURARIU Delia-Elena BARBUTA Daniela TARNICERIU Technical University Iasi, Romania</p>	<p><i>Development of a Modular Sensor Battery Integrated With a Data Collection Platform for Alcohol Level Detection and Driver Geolocation</i></p>
15 ¹⁰	<p>Constantin Laurentiu PARASCHIV Larisa Mihaela TUFEANU National University of Science and Technology Politehnica Bucharest, Romania Marius-Constantin VOCHIN National University of Science and Technology Politehnica Bucharest, Romania BEIA Consult International, Romania</p>	<p><i>Enhancing Battery Management Systems With Machine Learning and 5G Connectivity Beyond Maritime Transport Software Architectures</i></p>
15 ³⁰	<p>Alexandru-Dragos ADAM Nirvana POPESCU National University of Science and Technology Politehnica Bucharest, Romania Jair GONZALEZ Ansys Inc., France Cosmin Andrei POPA Cristiana Gabriela LĂZĂRESCU Cosmina Elena BARBU Military Equipment and Technologies Research Agency, Romania</p>	<p><i>Development of a Self-Stabilized 3-Axis Platform Using Ansys SCADE</i></p>
15 ⁵⁰	<p>Cosmin ALIOANEI National University of Science and Technology Politehnica Bucharest, Romania</p>	<p><i>Realtime Devices Manager: Arduino Based Automatic System</i></p>

COMPUTATIONAL INTELLIGENCE

Thursday, October 3rd, 2024

14³⁰–16¹⁰, Room 3.2 (Sala 3.2)

Chairs:

Anamaria RADOI

National University of Science and Technology Politehnica Bucharest, Romania

Eugen POP

National University of Science and Technology Politehnica Bucharest, Romania

14 ³⁰	<p>Razvan Sebastian NECULAI Eviden, Romania Ioana Corina BOGDAN Marian ALEXANDRU Dan ROBU Transilvania University of Brasov, Romania</p>	<p><i>Access Management in IoT: Implementing a Secure Access Control System</i></p>
14 ⁵⁰	<p>Sorin SOVIANY Cristina-Gabriela GHEORGHE Virginia SANDULESCU Maria GHEORGHE-MOISII Dragoş NICOLAU National Institute for Research and Development in Informatics, Romania</p>	<p><i>A Machine Learning-Based Model With Feature Fusion for Biometric Data Processing</i></p>
15 ¹⁰	<p>Eugen Ioan POP National University of Science and Technology Politehnica Bucharest, Romania R&D Institute for Automation, SC IPA SA, Romania Miruna - Elena ILIUȚĂ Mihnea - Alexandru MOISESCU National University of Science and Technology Politehnica Bucharest, Romania</p>	<p><i>Digital Twin Architecture Based on Services Interoperability</i></p>
15 ³⁰	<p>Alexandru-Gabriel ROMANIUC Vlad VASILE Monica BORDA Technical University of Cluj Napoca, Romania Banica ALEXANDRU Communication, Information and Cyber Defence Training School, Romania</p>	<p><i>NTP Spoofing Attack Detection on Time Servers With GNSS Sensors Based on Long Short-Term Memory Algorithm</i></p>
15 ⁵⁰	<p>Sreeja YENNAM Jeya Sheela J JOSELIN Saveetha School of Engineering, India</p>	<p><i>Dietary Analysis Among Diabetic Patients Using Gradient Boosting Over Decision Tree</i></p>

IMAGE PROCESSING

Thursday, October 3rd, 2024
17⁰⁰–18²⁰, Room 4.1 (Sala 4.1)

Chairs:

Dragos TARALUNGA

National University of Science and Technology Politehnica Bucharest, Romania

Anisia-Luiza CULEA-FLORESCU

University Dunarea de Jos, Romania

17 ⁰⁰	Maria ONIGA Alina Elena SULTANA National University of Science and Technology Politehnica Bucharest, Romania Olguța Anca ORZAN Carol Davila University of Medicine and Pharmacy, Romania	<i>Intelligent System for Monitoring Skin Lesions From Dermatoscopic Images</i>
17 ²⁰	Andrei RADU Ana A. NEACȘU National University of Science and Technology Politehnica Bucharest, Romania	<i>Testing the Robustness of Deepfake Detectors</i>
17 ⁴⁰	Mihaela MIRON Anisia-Luiza CULEA-FLORESCU Bogdan Ioan STEFANESCU University Dunarea de Jos, Romania	<i>Automatic Segmentation of Cervical Cancer Vascular Anatomy From 3D Power Doppler Ultrasound Images</i>
18 ⁰⁰	Sorin ZOICAN Roxana ZOICAN Dan GALATCHI National University of Science and Technology Politehnica Bucharest, Romania	<i>Image Denoising Algorithm for IoT Based on Compressive Sensing Principle and Blackfin Microcontrollers</i>

INTERNET OF THINGS

Thursday, October 3th, 2024
17⁰⁰–18⁴⁰, Room 3.1 (Sala 3.1)

Chairs:

Alexandru TAKACS

Université de Toulouse, France

Ion MARGHESCU

National University of Science and Technology Politehnica Bucharest, Romania

17 ⁰⁰	Petrica CIOTIRNAE Daria ANTON Military Technical Academy Ferdinand I, Romania	<i>Multi-Factor Secure Authentication Method Used for Accessing Sensitive Data Bases</i>
17 ²⁰	Marilena IANCULESCU Dragoș NICOLAU Cristian PETRACHE Ana VASILEVSCHI National Institute for Research & Development in Informatics, Romania	<i>Advancing Neurodegenerative Disease Management: The NeuroPredict Platform Integrating IoT, AI, and Cloud Technologies</i>
17 ⁴⁰	Otilia POPESCU Andrew GROW Dimitrie C. POPESCU Murat KUZLU Old Dominion University, USA	<i>Prototyping a 5G-Enabled IoT Gateway Using Off- The-Shelf Components and Open Source Software</i>
18 ⁰⁰	Paul CIOLOCA Military Technical Academy Ferdinand I, Romania Alexandru ALOMAN Alexandru BRATU Special Telecommunications Service, Romania Iulian ACIOBANITEI Military Technical Academy Ferdinand I, Romania	<i>Efficient Framework for Supply Chain Digitization Using Blockchain and IoT</i>

OPTICAL COMMUNICATIONS

Thursday, October 3rd, 2024

17⁰⁰–18⁴⁰, Room 3.2 (Sala 3.2)

Chairs:

Alexandru RUSU

National University of Science and Technology Politehnica Bucharest, Romania

Alexandru FRUNZA

Military Technical Academy Ferdinand I

17⁰⁰	<p>Shadi ALBOON Yarmouk University, Jordan</p>	<p><i>Dual Optical Notch/Comb-Notch Filter With Tunable Wavelength Based on the Integrated Michelson and Gires-Tournois Interferometers</i></p>
17²⁰	<p>Alexandru FRUNZA Military Technical Academy Ferdinand I, Romania CNRS UMR6285 Lab-STICC, France Vincent CHOQUEUSE Ecole Nationale d'Ingénieurs de Brest (ENIB), France CNRS UMR6285 Lab-STICC, France Flavius Ionuț MIRON Military Technical Academy Ferdinand I, Romania Stéphane AZOU Ecole Nationale d'Ingénieurs de Brest (ENIB), France CNRS UMR6285 Lab-STICC, France</p>	<p><i>A Parametric State-Space Network for Global Impairments Compensation in Optical Systems</i></p>
17⁴⁰	<p>Rasha Shamat AL HASNAWI Ion MARGHESCU Alexandru RUSU National University of Science and Technology Politehnica Bucharest, Romania</p>	<p><i>Reliability and Capacity Evaluation for Vehicle-To-Vehicle VLC</i></p>
18⁰⁰	<p>Mihai BĂNICĂ Croitoru VICTOR National University of Science and Technology Politehnica Bucharest, Romania</p>	<p><i>Architectural Challenges for Optical Transmission Network Nodes</i></p>
18²⁰	<p>Rasha Shamat AL HASNAWI Alexandru RUSU Nicolae MILITARU National University of Science and Technology Politehnica Bucharest, Romania</p>	<p><i>Influence of Channel Modeling and Atmospheric Conditions on the Reliability and Capacity of V2V-VLC Systems</i></p>

SIGNAL PROCESSING II

Friday, October 4th, 2024

09⁰⁰–10²⁰, Room 3.1 (Sala 3.1)

Chairs:

Gabriel GASPARESC

University Politehnica Timisoara, Romania

Denis STANESCU

Military Technical Academy Ferdinand I, Romania

09 ⁰⁰	<p>Dan CURĂVALE Cristina M. ANDRONACHE Ana A. NEACȘU National University of Science and Technology Politehnica Bucharest, Romania</p>	<p><i>Robust and Hardware Agnostic EEG Signal Processing Tool</i></p>
09 ²⁰	<p>Gabriel GASPARESC University Politehnica Timisoara, Romania</p>	<p><i>Generation of Power Quality Disturbances Using a Programmable Arbitrary Waveform Generator</i></p>
09 ⁴⁰	<p>Horia IONITA Victor POPA Bogdan MOROȘANU National University of Science and Technology Politehnica Bucharest, Romania</p>	<p><i>Multiband Dynamics Compressor With Automatic Parameter Learning</i></p>
10 ⁰⁰	<p>Costin DĂMĂRĂȘARU Veruvis, Romania Leontin TUȚĂ Georgiana ROȘU Military Technical Academy Ferdinand I, Romania Mircea NICOLAESCU National University of Science and Technology Politehnica Bucharest, Romania Marius NATI Alexandra BUZDUCEA Military Technical Academy Ferdinand I, Romania</p>	<p><i>Real-Time DSP-Based Waveform Generator for Brainwave Entrainment</i></p>

ANTENNAS AND PROPAGATION

Friday, October 4th, 2024
09⁰⁰–10²⁰, Room 3.2 (Sala 3.2)

Chairs:

Adrian FOCSA

Military Technical Academy Ferdinand I, Romania

Iulia MOCANU

National University of Science and Technology Politehnica Bucharest, Romania

09⁰⁰	<p>Maria SÎRBU-DRĂGAN Simona V. HALUNGA Octavian FRATU National University of Science and Technology Politehnica Bucharest, Romania</p> <p>Petru MAZARE Anton MURARU Camelia MAZARE Sorin LAZAR National Association of the Reserve, Romania</p>	<p><i>The Generation of the Plane-Of-Symmetry Vertical Profile for a Double-Curved Reflector Antenna With $\text{cosec}^2 \cdot \text{ctg}^{0.5}$ Directivity Characteristic, Illuminated by a cos^2 Pattern Beam Radiation Source</i></p>
09²⁰	<p>Adrian FOCSA Stefan-Adrian TOMA Bogdan SEBACHER Grigore Lucian STEFANITA Mihai COCA Military Technical Academy Ferdinand I, Romania</p>	<p><i>3D Location Algorithms for Freehand SAR Focusing</i></p>
09⁴⁰	<p>Mădălin A VIZITIU The Special Telecommunications Service (STS), Romania</p> <p>Lidia DOBRESCU National University of Science and Technology Politehnica Bucharest, Romania</p> <p>Cristian MOLDER Bogdan SEBACHER Military Technical Academy Ferdinand I, Romania</p> <p>Bogdan TRIP Vlad BUTNARIU National University of Science and Technology Politehnica Bucharest, Romania</p>	<p><i>Detection of TEMPEST Audio Compromising Signal Using Artificial Intelligence</i></p>
10⁰⁰	<p>Mădălin A VIZITIU The Special Telecommunications Service (STS), Romania</p> <p>Lidia DOBRESCU National University of Science and Technology Politehnica Bucharest, Romania</p> <p>Cristian MOLDER Bogdan SEBACHER Military Technical Academy Ferdinand I, Romania</p> <p>Bogdan TRIP Vlad BUTNARIU National University of Science and Technology Politehnica Bucharest, Romania</p>	<p><i>Determine Electronic Devices' Vulnerabilities Using Artificial Intelligence</i></p>

COMMUNICATION NETWORKS AND SYSTEMS

Friday, October 4rd, 2024

09⁰⁰–10⁴⁰, Room 4.2 (Sala 4.2)

Chairs:

Marius CORICI

Fraunhofer FOKUS, Germany

Petrica CIOTIRNAE

Military Technical Academy Ferdinand I, Romania

09 ⁰⁰	<p>Octavian CATRINA Silvia-Ioana STANCIU National University of Science and Technology Politehnica Bucharest, Romania</p>	<p><i>Secure V2I Communications for Traffic Management in an Intersection</i></p>
09 ²⁰	<p>Marius CORICI Hauke BUHR Hemant ZOPE Pousali CHAKRABORTY Fraunhofer FOKUS, Germany Thomas MAGEDANZ Fraunhofer FOKUS, Germany TU Berlin, Germany</p>	<p><i>End-To-End QoS Management Solution for 5G NTN Mega-Constellations</i></p>
09 ⁴⁰	<p>Octavian CATRINA Gabriela CRAIU National University of Science and Technology Politehnica Bucharest, Romania</p>	<p><i>Fast Prototyping and Testing of Network Security Solutions Using Virtualization and Ansible</i></p>
10 ⁰⁰	<p>Petrica CIOTIRNAE BEIA Consult International Military Technical Academy Ferdinand I, Romania Adrian Florin PAUN BEIA Consult International National University of Science and Technology Politehnica Bucharest, Romania</p>	<p><i>Increasing the Robustness of the Time Reference Distribution Equipments Using Multimodal Security Methods Based on Blockchain Implementations</i></p>
10 ²⁰	<p>Kanar Alaa AL-SAMMAK Sama Hussein AL-GBURI Ion MARGHESCU Ana Maria DRAGULINESCU Cristina MARGHESCU National University of Science and Technology Politehnica Bucharest, Romania Nawar Alaa Hussein AL SAMMAK College of Education for Pure Science, Iraq</p>	<p><i>An Experimental Study of Power Consumption in Narrowband IoT Devices</i></p>

WORKSHOP: HUMAN-CENTERED AI

Friday, October 4th, 2024
09⁰⁰–11⁰⁰, Room 4.1 (Sala 4.1)

Organizers:

Anamaria RĂDOI

National University of Science and Technology Politehnica Bucharest, Romania

Horia CUCU

National University of Science and Technology Politehnica Bucharest, Romania

09⁰⁰	Constantin-Bogdan POPESCU Corneliu FLOREA National University of Science and Technology Politehnica Bucharest, Romania	<i>Attention Based Framework for Traffic and Collision</i>
09²⁰	George CIOROIU National University of Science and Technology Politehnica Bucharest, Romania Anamaria RADOI National University of Science and Technology Politehnica Bucharest, Romania CAMPUS, Romania	<i>Emotion Recognition From Contextualized Speech Representations Using Fine-Tuned Transformers</i>
09⁴⁰	Florian Enrico GARAIMAN National University of Science and Technology Politehnica Bucharest, Romania Anamaria RADOI National University of Science and Technology Politehnica Bucharest, Romania CAMPUS, Romania	<i>Multimodal Emotion Recognition System Based on X- Vector Embeddings and Convolutional Neural Networks</i>
10⁰⁰	Alexandru-Lucian GEORGESCU Gheorghe-Iulian CHIVU Horia CUCU National University of Science and Technology Politehnica Bucharest, Romania	<i>Exploring Fusion Techniques for Multimodal Emotion Recognition</i>
10²⁰	Bianca ANDREI Laura FLOREA National University of Science and Technology Politehnica Bucharest, Romania	<i>A Deep Learning Approach for Semantic Segmentation of Images With Burned Skin</i>

