

## ORGANIZERS

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)

IRIS ASSOCIATION (INSTITUTE OF RADIO AND INFORMATION SYSTEMS, VIENNA, AUSTRIA)

RUSSIA SECTION TEM/GRS/ITSS JOINT CHAPTER



# 2024 INTERNATIONAL CONFERENCE «ENGINEERING MANAGEMENT OF COMMUNICATION AND TECHNOLOGY» (EMCTECH)

*IEEE Conference Record #63049*

Vienna, Austria, on-line

October 16-17, 2024

# CONFERENCE PROGRAM



*Planned conference venue – Springer Schloessl Seminarhotel*

*Photo by organizers*

For inclusion in publication program, an article must be online oral presented by one of the co-authors

**THE PROGRAM INDICATES AUSTRIAN TIME UTC+2 (GMT+2)**

**OCTOBER 16 (WEDNESDAY)**

**9<sup>45</sup> ... 10<sup>00</sup>**

## **REGISTRATION**

**10<sup>00</sup> ... 10<sup>10</sup>**

## **WELCOME SPEECH BY PROGRAM COMMITTEE**

**Prof. Oleg Varlamov**, *Doctor of Technical Science, Chairman of “Institute of Radio and Information Systems” (IRIS) Association, Austria, Senior Member, IEEE*

**Dr. Svetlana Dymkova**, *Chair of IEEE TEM/GRS/ITSS Joint Chapter, member, IEEE*

**10<sup>10</sup> ... 12<sup>30</sup>**

## **PLENARY SESSION**



**VALERY TIKHVINSKIY**  
*Plenary Session Moderator*

Doctor of Economics Science (2003), Ph.D. Degree in Radio engineering (1988), Member of European Standards Organization (ETSI), (TC/M2M, TC/ERM, TC/STQ) and oneM2M Partnership Project. Actively participated in ITU (ITU-R SG1), CEPT/ECC (ENC/WG RA, ENC/WG/FM). ITU Field Expert ID: 06169. ITU-D Mission: Erevan-2001 (Armenia), Sana’a-2005 (Yemen) and Astana (2014). Visit-Professor of Tunisian Telecommunication Institute (IsetCom, Tunisia) and International Information Technologies University (IITU, Kazakhstan), published over 350 scientific papers on Economic-legal, QoS – problems of telecommunications, Spectrum Management and EMC issues, author of 15-th books on Economic-legal and Technological issues of Internet of Things and 2G/3G/4G/5G/6G mobile communications.

<b>10<sup>10</sup> ... 10<sup>30</sup></b>	<b>Alexander Pastukh, Daria Kalugina, Savochkin Alexandr,</b> <i>Institute of Radio and Information Systems (IRIS), Vienna, Austria</i> <b>Valery Tikhvinskiy,</b> <i>International Information Technologies University, Almaty, Kazakhstan</i> <b>Alexandr Solochshenko,</b> <i>Almaty University of Power Engineering and Telecommunications named after Gumarbek Daukeev, Almaty, Kazakhstan</i> <b>IMPACT OF THE DOPPLER SHIFT EFFECT TO THE DIRECT-TO-DEVICE NTN SYSTEMS USING TERRESTRIAL BANDS SPECTRUM</b>
<b>10<sup>30</sup> ... 10<sup>50</sup></b>	<b>Dimanthinie De Silva, Henk Huijser, Sam Cunningham, Nona Press,</b> <i>Queensland University of Technology, Australia, Brisbane, Australia</i> <b>ESSENTIAL PROFESSIONAL SKILLS AND COMPETENCIES FOR FUTURE INFORMATION TECHNOLOGY GRADUATES: MEETING IT INDUSTRY DEMANDS</b>

<b>10<sup>50</sup> ... 11<sup>10</sup></b>	<p><b>Tse-Chun Hsu, Wan-Rong Wu</b>  <i>National Central University, Taoyuan, Taiwan</i>  <b>EVALUATING CLOUD SERVICE RELIABILITY: A NOVEL APPROACH USING ALMOST STOCHASTIC DOMINANCE</b></p>
<b>11<sup>10</sup> ... 11<sup>30</sup></b>	<p><b>Michael Mann,</b>  <i>School of Software Engineering and Computer Science Afeka – the Academic College of Engineering, Tel Aviv, Israel</i>  <b>THEORETICAL ANALYSIS OF AN ADAPTIVE CLOSENESS CENTRALITY-BASED ALGORITHM FOR DYNAMIC OPTIMIZATION OF TRANSPORTATION NETWORKS</b></p>
<b>11<sup>30</sup> ... 11<sup>50</sup></b>	<p><b>Alexander Pastukh, Olga Mironova, Evgeny Devyatkin,</b>  <i>Institute of Radio and Information Systems (IRIS), Vienna, Austria</i>  <b>Valery Tikhvinskiy,</b>  <i>International Information Technologies University, Almaty, Kazakhstan</i>  <b>FEASIBILITY ANALYSIS TDD AND FDD IMPLEMENTATION FOR DIRECT-TO-DEVICE NTN LTE/5G SYSTEMS</b></p>
<b>11<sup>50</sup> ... 12<sup>10</sup></b>	<p><b>Forwawteh I. Kalloh,</b>  <i>Northcentral University, San Diego, United States</i>  <b>DATA WAREHOUSE AND ITS IMPORTANCE TO BUSINESS INTELLIGENCE</b></p>
<b>12<sup>10</sup> ... 12<sup>30</sup></b>	<p><b>Valery Tikhvinskiy,</b>  <i>International Information Technology University, Almaty, Kazakhstan</i>  <b>Roman Umanskiy,</b>  <i>Institute of Radio and Information Systems (IRIS), Vienna, Austria</i>  <b>EVALUATION OF THE JUSTIFICATION AND EFFICIENCY OF ARTIFICIAL INTELLEGENCE APPLICATION IN TECHNOLOGICAL CONTROLLING WITHIN 5G AND 6G NETWORKS</b></p>

**12<sup>30</sup>... 13<sup>00</sup>**  
**COFFEE BREAK**



13<sup>00</sup> ... 17<sup>00</sup>

## SESSION I

**BROADCAST TECHNOLOGIES ADVANCEMENTS – RADIO, IP, CELLULAR, ON DEMAND, INTERACTIVE TECHNOLOGY ADVANCEMENTS IN WIRE AND OPTICAL COMMUNICATION AND CONTROL SYSTEMS  
DIGITAL TRANSFORMATION AND DATA RISK MANAGEMENT IN ICT/TELECOMMUNICATION  
ENGINEERING TECHNOLOGY LEADING TO SOCIAL AND ECONOMICAL CHANGE**



Professor (2001), Doctor of Technical Sciences (1999), Senior Science Researcher Degree in Telecommunication Networks and Teletraffic (1992), Ph.D. Degree (1990), TEMIC Fellow (2000). Member (Expert) of Group on Capacity Building Initiatives International Telecommunication Union (GCBI ITU), Switzerland: <https://academy.itu.int/index.php/main-activities/gcbi/membership>. IEEE member. Full member of the International Academy of Informatization (IAI). Author of more than 250 scientific and academic publications and monographs in the field of Telecommunication Networks Management, Teletraffic, Information Security, Data Risk Management, Human Capacity Building

**VLADIMIR DOKUCHAEV**  
*Session I Moderator*

13 <sup>00</sup> ... 13 <sup>20</sup>	<b>Haghighat Panah, Seyedreza Taghizadeh,</b> <i>Department of Computer Science, Engineering and Information Technology, Shiraz University, Shiraz, Iran</i> <b>ROWIA: A SMART IOT-BASED REVERSE OSMOSIS WASTEWATER IRRIGATION SYSTEM FOR AGRICULTURE</b>
13 <sup>20</sup> ... 13 <sup>40</sup>	<b>Jose Armando Hernandez, Miguel Colom,</b> <i>ENS Paris-Saclay, Gif-sur-Yvette, France</i> <b>RETHINKING THE AI STARTUPS CREATION BUSINESS AND MANAGEMENT MODEL</b>
13 <sup>40</sup> ... 14 <sup>00</sup>	<b>Manh Tuan Nguyen, Adnan F. Alhaj Hasan, Talgat R. Gazizov,</b> <i>Tomsk State University of Control Systems and Radioelectronics, Tomsk, Russia</i> <b>OPTIMAL SPARSE WIRE GRID STRUCTURES: DEVELOPMENT AND VERIFICATION OF AN OCGA-BASED ALGORITHM</b>
14 <sup>00</sup> ... 14 <sup>20</sup>	<b>Tuan Phuong Dang, Adnan Faiezovich Alhaj Hasan, Talgat R. Gazizov,</b> <i>Tomsk State University of Control Systems and Radioelectronics, Tomsk, Russia</i> <b>COMPARATIVE ANALYSIS OF WIRE GRID SCATTERERS WITH DIFFERENT CELLS USING MOM AND PULSE BASIS FUNCTIONS</b>
14 <sup>20</sup> ... 14 <sup>40</sup>	<b>Anujkumarsinh Donvir, IEEE Sr. Member,</b> <i>Application Development, Wayne, NJ, USA</i> <b>Sriram Panyam, IEEE Sr. Member,</b> <i>Cloud Computing and SaaS Platforms, Sunnyvale, USA</i> <b>Gunjan Paliwal, IEEE Sr. Member</b> <i>Product Marketing &amp; Development, Seattle, USA</i> <b>Praveen Gujar, IEEE, Sr. Member</b> <i>Enterprise Data Products in Digital Advertising, Saratoga, USA</i> <b>THE ROLE OF GENERATIVE AI TOOLS IN APPLICATION DEVELOPMENT: A COMPREHENSIVE REVIEW OF CURRENT TECHNOLOGIES AND PRACTICES</b>

**14<sup>40</sup>... 15<sup>00</sup>**  
**COFFEE BREAK**

<b>15<sup>00</sup> ... 15<sup>20</sup></b>	<b>Aleksey S. Gvozdev, Tatyana K. Artemova, Mikhail A. Zuev, Ivan A. Panov,</b> <i>P.G. Demidov Yaroslavl State University, Yaroslavl, Russia</i> <b>COMPARATIVE JOINT QUALITY-RELIABILITY ANALYSIS FOR RELAY-ASSISTED COMMUNICATION WITH PSK MODULATION IN PRESENCE OF HEAVY FADING</b>
<b>15<sup>20</sup> ... 15<sup>40</sup></b>	<b>Galina Platunina, T. Y. Salutina, I. A. Frank,</b> <i>Moscow Technical University of Communication and Informatics, Moscow, Russia</i> <b>CYBERSECURITY, RISK MANAGEMENT AND MONITORING OF DIGITAL AND INFOCOMMUNICATION DEVELOPMENT OF THE COMPANY</b>
<b>15<sup>40</sup> ... 16<sup>00</sup></b>	<b>Galina Platunina, Tatyana Y. Salutina, Irina A. Frank,</b> <i>Moscow Technical University of Communication and Informatics, Moscow, Russia</i> <b>RISK MANAGEMENT OF DATA TRANSMISSION WITHIN THE FRAMEWORK OF THE DIGITAL TRANSFORMATION OF THE TELECOMMUNICATIONS INDUSTRY</b>
<b>16<sup>00</sup> ... 16<sup>20</sup></b>	<b>Olga I. Sharavova, Evgeny V. Vakhovsky, Tatyana A. Kuzovkova, Alexander D. Kuzovkov</b> <i>Moscow Technical University of Communication and Informatics, Moscow, Russia</i> <b>DEVELOPMENT OF PROFESSIONAL COMPETENCIES BASED ON GAMIFICATION TECHNOLOGIES</b>
<b>16<sup>20</sup> ... 16<sup>40</sup></b>	<b>Vladimir Dokuchaev,</b> <i>International Telecommunication Union (GCBI ITU), Switzerland</i> <b>DIGITAL TRANSFORMATION AND NEW RISKS TO PERSONAL DATA PRIVACY</b>

**16<sup>40</sup>... 17<sup>00</sup>**  
**QUESTIONS AND DISCUSSION**

For inclusion in publication program, an article must be online oral presented by one of the co-authors

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**OCTOBER 17 (THURSDAY)**

**12<sup>45</sup> ... 13<sup>00</sup>**

## **REGISTRATION (SESSION II)**

**13<sup>00</sup> ... 17<sup>00</sup>**

### **SESSION II**

#### **DEVELOPING PERSONAL SKILLS FOR LEADING INNOVATION INITIATIVES**



**ELENA KORABLEVA**  
*Session II Moderator*

Ph.D., Doctor of Philosophy, Head of Chair of Philosophy, history and multicultural communications of Moscow Technical University of Communications and Informatics (MTUCI), since 2014. Received Ph.D. degree (1987) and doctor's degree (2001) in Lomonosov Moscow State University. Specializing in Ontology and Gnoseology. Professor at the Department of Philosophy, history and multicultural communications of Moscow Technical University since 2003. Academic degree: Doctor of Philosophy, academic rank: associate professor. Author of more than 150 scientific publications and monographs. Academic interests: Ontology, Gnoseology, person in information-oriented society, humanitarian dimensions of intelligent networks.

<b>13<sup>00</sup> ... 13<sup>20</sup></b>	<b>Svetlana N. Maltseva,</b> <i>Moscow Technical University of Communication and Informatics, Moscow, Russia</i> <b>Anna Y. Pavlova,</b> <i>Russian University of Transport (MIIT), Moscow, Russia</i> <b>SECONDARY LANGUAGE IDENTITY AS A COMPONENT OF ENGINEER'S PROFESSIONAL TRAINING</b>
<b>13<sup>20</sup> ... 13<sup>40</sup></b>	<b>Olga I. Sharavova, Tatyana A. Kuzovkova, Maria M. Sharavova,</b> <i>Moscow Technical University of Communication and Informatics, Moscow, Russia</i> <b>THE ROLE OF 5G AND 6G MOBILE COMMUNICATION TECHNOLOGIES FOR INDUSTRY 4.0 AND THE TRANSITION TO INDUSTRY 5.0</b>
<b>13<sup>40</sup> ... 14<sup>00</sup></b>	<b>Elena Korableva, Valentina Shakolyukova,</b> <i>Moscow Technical University of Communication and Informatics, Moscow, Russia</i> <b>MANAGEMENT AND LEADERSHIP IN INNOVATION: PERSONAL EFFECTIVENESS AND TEAMS CREATIVITY</b>
<b>14<sup>00</sup> ... 14<sup>20</sup></b>	<b>Nataliya V. Solovyeva</b> <i>Moscow Technical University of Communication and Informatics, Moscow, Russia</i> <b>MORPHOLOGICAL AND SYNTACTIC FEATURES OF SUBJECT-SPECIFIC ACADEMIC TEXTS</b>

**14<sup>20</sup>... 14<sup>40</sup>**  
**COFFEE BREAK**

<b>14<sup>40</sup> ... 15<sup>00</sup></b>	<b>Dmitry Zarov, Irina Steklova, Irina Abrosimova,</b> <i>Yuri Gagarin State Technical University of Saratov, Saratov, Russia</i> <b>PROBLEMS OF DEVELOPMENT METHODOLOGY OF PROFESSIONAL QUALITIES OF A SPECIALIST IN THE COMMUNICATIONS MANAGEMENT AND INNOVATIVE INITIATIVES</b>
<b>15<sup>00</sup> ... 15<sup>20</sup></b>	<b>Elena V. Voronova,</b> <i>Financial University under the Government of the Russian Federation, Moscow, Russia</i> <b>THE ROLE OF COMMUNICATION IN THE ORGANISATION OF INNOVATION ACTIVITIES IN THE COMPANY</b>
<b>15<sup>20</sup> ... 15<sup>40</sup></b>	<b>Evgeny V. Kunts,</b> <i>Moscow Technical University of Communications and Informatics, Moscow, Russia</i> <b>“PEDAGOGY OF UNEXPLORED AND MUTUAL RISK” AND TRAINING FOR THE PROFESSIONALS OF TOMORROW</b>
<b>15<sup>40</sup> ... 16<sup>00</sup></b>	<b>Zurab Makatov,</b> <i>Moscow Technical University of Communications and Informatics, Moscow, Russia</i> <b>DIGITAL PERFORMATIVITY: NEW HORIZONS OF IDENTITY IN THE ALGORITHMIC ERA</b>
<b>16<sup>00</sup> ... 16<sup>20</sup></b>	<b>Tatyana I. Bocharova, Daria I. Gorshkova, Lidia N. Sklyar, Olga K. Trubach,</b> <i>Moscow Technical University of Communications and Informatics, Moscow, Russia</i> <b>THE USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES IN TEACHING HUMANITARIAN DISCIPLINES</b>

**16<sup>20</sup>... 17<sup>00</sup>**  
**QUESTIONS AND DISCUSSION**



*Planned conference venue – Springer Schloessl seminarhotel  
Photo by organizers*