

**TASHKENT UNIVERSITY OF INFORMATION TECHNOLOGIES  
NAMED AFTER MUHAMMAD AL-KHWARIZMI  
KOOKMIN UNIVERSITY**



**“INTERNATIONAL CONFERENCE ON DIGITAL  
GOVERNMENT: PROSPECTS FOR DIGITAL  
TRANSFORMATION”**

**International scientific and practical conference**

**December 14<sup>th</sup> 2024, Tashkent, Uzbekistan**

## CONFERENCE COMMITTEE

B.Makhkamov	Rector of Tashkent University of Information Technologies named after Muhammad al-Khwarizmi
Byoung Joon Kim	Professor of Kookmin University
D.Yaxshibaev	First Vice Rector for Moral Affairs of Tashkent University of Information Technologies named after Muhammad al-Khwarizmi
Dj.Sultanov	Vice Rector for Academic Affairs of Tashkent University of Information Technologies named after Muhammad al-Khwarizmi
K.Tashev	Vice Rector for Scientific Affairs of Tashkent University of Information Technologies named after Muhammad al-Khwarizmi
S.Toshmatov	Vice Rector for Finance and Economics of Tashkent University of Information Technologies named after Muhammad al-Khwarizmi
Sh.Turaev	Vice-Rector for Regional Educational Institutions of Tashkent University of Information Technologies named after Muhammad al-Khwarizmi
T.Kuchkorov	Dean of the faculty Computer engineering
X.Nosirov	Dean of the Faculty of Radio and Mobile Communications
M.Saitkamolov	Dean of the faculty “Economics and Management in the sphere of information and communication technologies”
Sh.Gulomov	Dean of Cybersecurity faculty
S.Maxmudjanov	Head of the Center for Scientific Research and Technology Transfer
N.Egamberdiev	Head of the Department of Convergence of Digital Technologies
M.Yakubov	Professor of the Department of Convergence of Digital Technologies
Sh.Anarova	Professor of the Department of Convergence of Digital Technologies
F.Alimova	Associate Professor of the Department of Convergence of Digital Technologies

## **14 the of December**

Tashkent University of Information Technologies named after  
Muhammad al-Khwarizmi, Room (Conference hall) – F Building

09:30 – 10:00 A.M REGISTRATION OF PARTICIPANTS

10:00 – 10:05 A.M WELCOME (OPENING) SPEECH

10:05 – 11:30 A.M INVITED TALK

11:30 – 11:50 A.M COFFEE BREAK

11:50 – 12:00 A.M GROUP PHOTO

### **INVITED TALK**

***Byoung Joon Kim***

Professor of Kookmin  
University

Prospects for Digital Transformation

***Mukhitdinov Aziz***

PhD, Digital Transformation  
Consultant

Prospects for the Development of Public  
Services in Uzbekistan through  
Digitalization

***Yakubov Maksadkhan***

DSc, Professor of the  
Department of Convergence of  
Digital Technologies

Modernization of the structure of public  
administration in the process of  
formation of a digital society

***Byun Jeongyong***

Professor, Digital  
Transformation Consultant

A Bidirectional Notation of Korean and  
Uzbek Alphabet

## Program at a Glance

### SECTION 1. Digital state – modernization of the structure of public administration

**Chair: Yakubov Maksadkhan**

DSc, Professor of the Department of Convergence of Digital Technologies  
Room (Conference hall) – 707 F

14:00 – 17:00 p.m

Section 1	
1.	<i>Bekmuxammedov Bunyodbek, To‘xtasinov Adxamjon.</i> The relevance and importance of online education in the digital society
2.	<i>Byun Jeongyong, Egamberdiyev Nodir, Naim Nodira, Bekmuxammedov Bunyodbek, Yuldashev Raxmon, Yakubov Maksadxan.</i> A Bidirectional Notation of Korean and Uzbek Alphabet
3.	<i>Kalmuratov Maksetbay.</i> Introduction of artificial intelligence and digitization technologies in public administration
4.	<i>Kalmuratov Maksetbay.</i> Data privacy and security in digital government
5.	<i>Khoshimov Bakhodirjon.</i> Technology for vacuum-conducting mazute on two-step hydroelector systems
6.	<i>Kim Elena. Kuznetsova Viktoriya, Muxtarova Gulnora.</i> Algorithm for conducting pre-design research and modeling of information systems
7.	<i>Kuvnakov Avaz, Alimova Fotima.</i> Comparing Traditional Article Writing Processes and AI-Assisted Article Creation: A Comprehensive Analysis
8.	<i>Kuznetsova Viktoriya, Muxtarova Gulnora.</i> The modern trend in the digitalization of society based on the development of telegram bots
9.	<i>Malikova Nodira, Djurayev To‘lqin.</i> Improving information exchange processes in organizing logistics processes
10.	<i>Mamatov Alisher, Makhanov Said.</i> Transition stages of Uzbekistan from e-government to digital government and its position in international rankings
11.	<i>Matyakubov Marks, Raxmonova Nilufar, Kamalova Sevara.</i> Digital transformation of public administration
12.	<i>Mukhitdinov Aziz.</i> Prospects for the Development of Public Services in Uzbekistan through Digitalization
13.	<i>Toliev Khurshid.</i> Comparative Analysis of Lactation Curves and Arima Model in Predicting Milk Yield
14.	<i>Ubaydullaeva Mavluda.</i> Improving the professional competencies of employees in the context of technological transformation
15.	<i>Uzakov Barxayotjon.</i> Algorithms for simulation modeling of the oil industry enterprises process by the component chains method

16.	<i>Xurramova Ra'no, Yuldashov Rahmon.</i> The role of digital society in the modernization of public administration
17.	<i>Yakubov Maksadkhan, Bekmuxammedov Bunyodbek, To'xtasinov Adxamjon.</i> Managing information flows and analyzing the competitive environment in distance education
18.	<i>Yakubov Maksadkhan.</i> Modernization of the structure of public administration in the process of formation of a digital society
19.	<i>Yakubov Maqsadxon, Naim Nodira.</i> Diagnosis of patients with viral pneumonia based on the SIR and SIER models
20.	<i>Yuldoshov Rahmon, Fayzullayev Shakhzod.</i> Marketing technologies in implementing e-commerce goods and services in digital government

## SECTION 2. Implementation of artificial intelligence and digitalization technologies in public administration

**Chair: Kuchkorov Temurbek**

PhD, Dean of the faculty Computer engineering  
Room (Conference hall) – 202 F

**14:00 – 17:00 p.m**

Section 2	
1.	<i>Azimov Bunyod, Ahmadaliyev Boburjon.</i> The importance of student image recognition programs in education management
2.	<i>Fayzullayev Shakhzod, Yuldashov Rahmon.</i> The role of artificial intelligence in digital transformation
3.	<i>Khalilov Sirojiddin, Khamdamov Utkir, Omonullayeva Farangiza.</i> Human object detection from image using computer vision technologies
4.	<i>Khudoyorkhan Jamolov, Djumanov Jamoljon, Rajabov Farkhat.</i> Water quality classification using KNN algorithm and real-time monitoring
5.	<i>Kuchkorov Temurbek, Saydullayev Humoyun, Khamzaev Jamshid.</i> Enhancing Land Cover Change Detection through Advanced Algorithms and Multi-Sensor Data Integration
6.	<i>Nazarova Gulchexra, Boboqulov Abbos.</i> The Importance of Artificial Intelligence in Information Systems
7.	<i>Raximov Abdug'ofur.</i> The role of machine learning algorithms in image classification
8.	<i>Raximov Nodir, Primqulov Oybek.</i> History Of Development and Basic Concepts Of Quantum Computing Theory
9.	<i>Saydazimov Javlonbek, Atadjanova Nozima.</i> Object Detection: AI Algorithms, Methods, and Results
10.	<i>Saydazimov Javlonbek.</i> Segmentation Process with AI in Object Recognition: A Comprehensive Analysis
11.	<i>Sevinov Jasur, Zaripova Shahlo.</i> Adaptive hybrid filtering algorithms with an artificial neural network as part of an adaptive filter

12.	<i>Turg'unov Abrorjon, Aliev Oybek, Nosirova Namunabonu, Matyakubov Marks.</i> Using artificial intelligence technologies in higher education management
13.	<i>Uralova Iroda, Boboqulov Abbas.</i> Different of A Study based Face Recognition Algorithms

### SECTION 3. Effective use of big data in digital transformation

**Chair: Anarova Shakhzoda**

DSc, Professor of the Department of Convergence of Digital Technologies

Room (Conference hall) – 807 F

**14:00 – 17:00 p.m**

Section 3	
1.	<i>Alimova Fotima, Rakhimov Giyosbek.</i> Time optimization in buyer-seller delivery relationships
2.	<i>Anarova Shahzoda, Mirzaakhmedova Sarvinoz.</i> Innovative Fractal Jewelry: Integrating L-Systems and Big Data for Design Excellence
3.	<i>Anarova Shahzoda, Qarshiyeva Soliha, Ismoilova Maftuna.</i> Statistical analysis of big data in databases using fractal theory
4.	<i>Anarova Shahzoda, Qarshiyeva Soliha, Ismoilova Maftuna.</i> Strength and stability analysis of load-bearing structures of a high-rise building
5.	<i>Anarova Shahzoda, Uralova Iroda.</i> Designing textile patterns with big data based on L-systems
6.	<i>Anarova Shakhzoda, Bekmurodova Mukhayo.</i> Digital Processing of Jacquard Fabrics Based on IFS Affine Transformation Method
7.	<i>Anarova Shakhzoda, Ismailova Saodat, Uralova Iroda.</i> Construction of patterns in interior building design based on IFS affine transformations
8.	<i>Egamberdiev Nodir, Sodiqov Vali, Yadgorov Feruz.</i> Models and Algorithms to Improve the Efficiency of Information Exchange Processes in Digital Transformation
9.	<i>Ibrokhimov Bakhrom, Khamidullaev Abdulbosit.</i> Digital innovative technologies of public administration
10.	<i>Ibrokhimov Bakhrom, Khamidullaev Abdulbosit.</i> The impact of the digital transformation process on the activities of enterprises
11.	<i>Ismailov Otabek, Mirzaxalilov Sanjar o'g'li, Xaldarova Gulzira.</i> The importance of digital transformation in sports medicine
12.	<i>Javliev Shakhzod, Turaev Khurshid, Akbarova Mohidil.</i> The Possibility of OpenMP Technology in Task and Data Parallelism
13.	<i>Kodirova Dilafruz.</i> Big Data in Digital Transformation: Use of big data analytics for pediatric healthcare improvements
14.	<i>Kuchkorov Temurbek, Yusupov Agzamjon, Khamzaev Jamshid.</i> Development and Application of IoT-Based Environmental Monitoring Systems for Enhanced Ecological Management and Sustainability

15.	<i>Malikova Nodira, Kuvnakov Avaz, Djurayev To'lg'in.</i> Prospects for the development of telecommunication technologies in logistics
16.	<i>Muradova Alevtina, Abdujapparova Mubarak, Khidirova Charos.</i> Using big data technology services
17.	<i>Rakhimov Mekhriddin, Ergashev Shakhboz, Karimberdiyev Jakhongir.</i> Analysis of load balancing algorithm in information systems
18.	<i>Rakhimov Mekhriddin, Javliev Shakhzod.</i> Accelerating CNN training on the MNIST dataset Using Parallel Computing Technologies
19.	<i>Sharipov Daler, Xurramova Ra'no.</i> Development of computer modeling of the process of harmful substances dispersion in the atmosphere
20.	<i>Sobir Yakubov, Daminova Barno.</i> Calculation of optimization of cylindrical shells loaded with axial compressive force
21.	<i>Tog'ayev Ilxom.</i> Computer-aided processing of the transcription model for uzbek language phonemes
22.	<i>Yakubov Sobir, Daminova Barno.</i> General formulation of the optimization problem for the elements of elastic structures
23.	<i>Yakubov Sobir, Daminova Barno.</i> Weight optimization of plates

#### **SECTION 4. Innovative approaches to modernization of economy**

**Chair: Saitkamolov Mukhammadkhoja**

DSc, Dean of the faculty Economics and Management in the sphere of  
information and communication technologies  
Room (Conference hall) – 318 C

**14:00 – 17:00 p.m**

<b>Section 4</b>	
1.	<i>Khudaynazarova Dilorom.</i> Digital economy as the main aspect of the research of digital transformation of economic relations.
2.	<i>Makhkamov Bakhtiyor.</i> Concept of digital transformation of the economy: Innovative approaches and economic development forecasting
3.	<i>Nazarova Gulchexra.</i> Innovative approaches to modernization of Economy
4.	<i>Rakhimova Sevara.</i> The Impact of Digital Government Development on Economic Growth

#### **SECTION 5. Current issues of cybersecurity in the digital world.**

**Chair: Gulomov Sherzod**

DSc, Dean of Cybersecurity faculty  
Room (Conference hall) – 310 D

**14:00 – 17:00 p.m**

<b>Section 5</b>	
1.	<i>Abdurakhimov Bakhtiyor, Allanov Orif, Turdibekov Bakhtiyor.</i> Ensuring the integrity of digital documents based on Blockchain



	technology
2.	<i>Ganiev Salim, Abdullayev Dilmurod.</i> Methods for predicting and eliminating attacks on computer networks
3.	<i>Ganiev Salim, Khamidov Sherzod.</i> Ensemble Classification Method for Unwanted Emails
4.	<i>Ganiyev Abdukhalil, Tojimatov Dostonbek.</i> A Cyber Threat Detection Model Based on the Intellectual Integration of IoC, Log, and Dark Web Monitoring Data in Cyber Intelligence Operations
5.	<i>Kerimov Komil, Azizova Zarina.</i> Protecting Web-Applications against XSS and SQLi Attacks
6.	<i>Khaydarov Elshod, Janxojaev Asqar, Ismatov Nozir.</i> Managing financial technology security risks based on blockchain technology
7.	<i>Mardiyev Ulugbek.</i> Lightweight cryptography in IoT security
8.	<i>Ochilov Nizomiddin, Abduhalimov Abdullaziz.</i> Tools for creating a safe environment for using browsers in distance learning assessment systems
9.	<i>Rustamov Doniyor.</i> Methods and models for identifying threats at the design stage of information systems
10.	<i>Tashev Komil.</i> Analysis of hardware implementation of packet classification algorithms

## SECTION 6. Prospects for the Development of Telecommunication Technologies

**Chair: Nosirov Khabibullo**

DSc, Dean of the Faculty of Radio and Mobile Communications

Room (Conference hall) – 108 A

**14:00 – 17:00 p.m**

Section 6	
1.	<i>Aripova Dilafruz.</i> Issues of developing services for mobile communication companies in the trend of m-government
2.	<i>Aripova Dilafruz.</i> Statistical methodology of developing services for mobile communication companies in the trend of m-government
3.	<i>Mirazimova Gulnora.</i> Prospects for increasing the performance of optical telecommunication systems
4.	<i>Normatova Dilbar, Almardanov Mukhriddin.</i> Comparative analysis of node deployment methods in wireless sensor networks
5.	<i>Pulatov Sherzod, Djumaniyazov Otabek.</i> Wireless sensor and Internet of Things features
6.	<i>Saparniyaz Tursimuratov.</i> Analyzing Reliability in Optical Transport Networks through Simulation Models