



29TH  
INTERNATIONAL  
CONFERENCE ON  
**DCCN** 2026

# CONFERENCE PROGRAM

**21-25** SEP. 2026

MOSCOW • RUSSIA

Control, Computation,  
Communications



RUDN  
university



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**V.A. Trapeznikov Institute  
of Control Sciences of RAS**

ICS RAS, Russia, Moscow

**Peoples' Friendship  
University of Russia**

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Russia, Moscow

**National Research  
Tomsk State University**

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Yana Aleksandrova

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Prof. K.E. Samouylov

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| <b>M. Xie</b>            | City University of Hong Kong, Hong Kong                                                |
| <b>A. Zaslavsky</b>      | Deakin University, Australia                                                           |

# CONFERENCE PROGRAM

|                |                                                                                  |
|----------------|----------------------------------------------------------------------------------|
| <b>Track A</b> | Computer and Communication Networks:<br>Architecture, Protocols and Technologies |
| <b>Track B</b> | Analytical Modeling of Distributed Systems<br>and Networks                       |
| <b>Track C</b> | Distributed Systems Applications                                                 |

## Monday, September 21

|             |                                                                                                                                                                                       |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10:00–13:00 | <b>Registration</b><br>Room 220                                                                                                                                                       |
| 11:00–11:05 | <b>Conference Opening</b><br>Prof. Vladimir Vishnevsky, ICS RAS<br>University Club                                                                                                    |
| 11:05–11:15 | <b>Welcome Speech</b><br>Prof. Konstantin Samouylov, RUDN University<br>Prof. Dharmaraja Selvamuthu, Indian Institute<br>of Technology<br>University Club                             |
| 11:15–12:00 | <b>A New Green Paradigm for 5G and Beyond<br/>Communication Networks</b><br>Prof. Dush Nalin Jayakody, Lusófona University,<br>Portugal                                               |
| 12:00–12:45 | <b>Quantum Computing for Distributed<br/>Networks: New Paradigms in Control,<br/>Computation, and Communications</b><br>Prof. Mahmood Said Nasser Al-Bahri, Sohar<br>University, Oman |

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|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 12:45–14:00 | <b>Lunch</b><br>University Canteen                                                                                                                                       |
| 14:00–14:45 | <b>AI-Accelerated Embedded Machine Vision: Bringing Intelligence to the Edge</b><br>Prof. Mohammed Sharaf Sayed, Egypt-Japan University of Science and Technology, Egypt |
| 14:45–15:30 | <b>Turning the attacker's toolbox into a standardised instrument of AI assurance</b><br>Prof. Mohammad Hammoudeh, Aramco Cybersecurity, Saudi Arabia                     |
| 15:30–16:15 | <b>Maintainability Analysis of UAV Systems: an Analytical Approach</b><br>Prof. Dharmaraja Selvamuthu, Indian Institute of Technology, India                             |
| 16:30–18:00 | <b>Welcome Reception</b><br>University Canteen                                                                                                                           |

## Tuesday, September 22

- |             |                                 |
|-------------|---------------------------------|
| 10:00–13:00 | <b>Registration</b><br>Room 220 |
|-------------|---------------------------------|

### Track A Session A-1

**Room 208**  
Tue, 11:00–12:30

**Chairs:** Prof. A. Paramonov, Dr. E. Markova

- |             |                                                                                                                                          |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------|
| 11:00–11:15 | <b>Determinism-Enhanced Anomaly Detection for Zero-Trust Industrial Control Systems</b><br>Huiyao Dong, Mohammad Hammoudeh, Danish Vasan |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------|

- 11:15–11:30    **A Link Selection Algorithm for Improving TCP Throughput in 5G NTN Systems**  
Aleksey Rumiantsev, Maxim Susloparov, Artem Krasilov
- 11:30–11:45    **Performance of Cellular Ambient Internet of Things with Passive Energy Harvesting Devices**  
Varvara Manaeva, Anna Gaydamaka, Yves Adou, Ekaterina Markova, Yevgeni Koucheryavy
- 11:45–12:00    **Deep Reinforcement Learning Assisted Adaptive Weighting for Slice-Aware Multipath Routing in 5G Networks**  
Xuan Ngoc Nguyen, Alexander Paramonov
- 12:00–12:15    **Open End-to-End Emulation Environment for Service Prototyping in 5G and Emerging 6G Networks**  
Andrei Mulyar, Daniil Shembel, Nikita Korolyov, Anna Gaydamaka, Yevgeni Koucheryavy
- 12:15–12:30    **A Lightweight Zero-Trust Anomaly Detection Framework for IoT-Enabled 5G/6G Infocommunication Networks**  
Ayodele Emmanuel Abiola
- 12:30–13:15    **Lunch**  
University Canteen

## Track A

### Session A-2

**Room 208**  
Tue, 13:15–14:45

**Chairs:** Prof. Y. Koucheryavy, Dr. A. Muthanna

- 13:15–13:30    **Mobility-Aware Service Migration for Joint QoS Improvement and AoI Minimization in Cloud-Based Networks**  
Alsarhan Mohammed Qahtan, Ksenia Vershinina, Ammar Muthanna, Andrey Koucheryavy

- |             |                                                                                                                                                                                          |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 13:30–13:45 | <b>Agentic Model Selection and Tuning for Probability-Informed Network Traffic Forecasting</b><br>Ariy Okonishnikov, Andrey Gorshenin                                                    |
| 13:45–14:00 | <b>Hybrid Time–Frequency Feature Fusion for CNN-Based Network Intrusion Detection on the UNSW-NB15 Dataset</b><br>Wasin Alkishri, Mahmood Al-Bahri, Nasser Al Musalhi, Muhammed Muthanna |
| 14:00–14:15 | <b>Balancing frequency-time resources of radio channel in 2-step random access procedure</b><br>Roman Rachugin, Nikita Stepanov, Andrey Turlikov                                         |
| 14:15–14:30 | <b>Dynamic Scanning for Large-Scale Network Security Monitoring</b><br>Andrey Minyaev, Artem Kulichkin, Sameh Alkattan                                                                   |
| 14:30–14:45 | <b>Adaptive State-Space Neural Expectation-Maximization Approach for Mobile Network Traffic Forecasting</b><br>Anton Vilyaev, Andrey Gorshenin                                           |
| 14:45–15:15 | <b>Coffee Break</b><br>Room 220                                                                                                                                                          |

## Track A

### Session A-3

**Room 208**  
Tue, 15:15–16:15

**Chairs:** Prof. K. Samouylov, Dr. A. Muthanna

- |             |                                                                                                                                                                                           |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 15:15–15:30 | <b>Распределение канальных ресурсов для оптимизации сквозной задержки в сетях интегрированного доступа и транзита</b><br>Antonina Parashchenko, Elisaveta Gaidamaka, Konstantin Samouylov |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

- 15:30–15:45    **Particle Swarm Optimization Method for Task Offloading in Serverless Mobile Edge Computing**  
Maksim Belov, Darya Vorobyova, Ammar Muthanna
- 15:45–16:00    **Reservation methods for IIoT traffic in Heterogeneous Wi-Fi Networks: Comparative Study**  
Maria Shlapak, Ekaterina Stepanova, Andrey Lyakhov
- 16:00–16:15    **System-Forming Factor for Artificial Intelligence Systems: A Security-Oriented Synthesis Methodology**  
Vyacheslav Burlov, Sergey Kapitsyn, Anastasia Lyubimova

**Track B**  
Session B-1.1

**Room 218**  
Tue, 11:00–12:30

**Chairs:** Prof. A. Dudin, Dr. E. Fedorova

- 11:00–11:15    **Multi-Server Queue with BMAP and MAP Arrivals, Heterogeneous Buffers, and Impatient Customers**  
Olga Dudina, Alexander Dudin
- 11:15–11:30    **Learning Hysteretic Routing Policies for Heterogeneous Queues with Switching Costs**  
Mostafa Ali, Dmitry Efrosinin
- 11:30–11:45    **Analysis of VR/XR Services Quality of Experience based on Retrial Queueing System with Feedback**  
Ekaterina Fedorova, Olga Lizyura, Anatoly Nazarov, Dharmaraja Selvamuthu, Harini Rajendran

- 11:45–12:00    **Performance Analysis of a Semi-Open Queuing Network with Correlated Arrivals, Catastrophes, and Customer Impatience**  
Alexander Dudin, Olga Dudina
- 12:00–12:15    **Multi-Server Queue with Batch Markovian Arrival Process, Heterogeneous Servers, Phase Type Distribution of Service Times and Customers Search in the Buffer**  
Mei Liu, Alexander Dudin
- 12:15–12:30    **Analysis of deteriorating inventory MAP/PH(1)/PH(2)/2 System with Retrial**  
Bobina J. Mattam, Jose K. P.
- 12:30–13:15    **Lunch**  
University Canteen

**Track B**  
Session B-1.2

**Room 218**  
Tue, 13:15–14:45

**Chairs:** Prof. K. Samouylov, Prof. D. Selvamuthu

- 13:15–13:30    **Likelihood-Based Inference for Event-Driven Systems using Hawkes Processes with Middle-Censored Event Times**  
Prachi Singh, Sanjay Kumar Singh, Dharmaraja Selvamuthu
- 13:30–13:45    **A Numerical Study of the Transient Behaviour of a Retrial Queue with Orbital Search and Balking of Customers**  
Sajeev Nair, Smija Skaria, Sandhya E., Vidya V. Menon
- 13:45–14:00    **A Queueing Model for QoS and QoE Trade-off Analysis of XR Traffic in 5G/6G Networks**  
Elisaveta Gaidamaka, Khushi Sen, Konstantin Samouylov, Dharmaraja Selvamuthu

|             |                                                                                                                                                                |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 14:00–14:15 | <b>Mission-Phase Dependent Reliability and Maintainability Analysis of a UAV Using Semi-Markov Process</b><br>Khushi Sen, Dharmaraja Selvamuthu                |
| 14:15–14:30 | <b>Analysis of a k-out-of-n:G System with External Customer Service, Preemptive Priority and Working Vacation under N-Policy</b><br>Binumon Joseph, Jose K. P. |
| 14:30–14:45 | <b>Reliability Analysis of a k-out-of-n:G System with Preventive Maintenance, Irreparable Component Failures, and Spare Replenishment Policies</b><br>Jaya S.  |
| 14:45–15:15 | <b>Coffee Break</b><br>Room 220                                                                                                                                |

## Track B

### Session B-1.3

**Room 218**  
Tue, 15:15–16:30

**Chairs:** Prof. D. Efrosinin, Dr. A. Vlaskina

|             |                                                                                                                                                                   |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 15:15–15:30 | <b>Generalization and classification of two-queue JSQ–SLQ systems with zero and non-zero switch-over times</b><br>Evgeny Khityaev, Ivan Zaryadov                  |
| 15:30–15:45 | <b>Application of Optimal Scheduling in a Quantum Switch: A Practical Case</b><br>Mariia Makarova                                                                 |
| 15:45–16:00 | <b>A Method for Hierarchical Control of Mobile Robots with Pairwise Kinematic Constraints</b><br>Sekou Abdel Kader Diane, Vladimir Nazarkin, Aleksandra Bessonova |
| 16:00–16:15 | <b>Performance-Driven Operating Regime Selection in Proactive Management of Cyber-Physical Systems</b><br>Vladimir Artyushin, Maksim Shcherbakov                  |

16:15–16:30    **Optimal Control and Reinforcement Learning  
for Constrained Mobile Robot Navigation**  
Aleksandr Demokidov, Gleb Kiselev

**Track B**  
Session B-2.1

**Room 219**  
Tue, 11:00–12:30

**Chairs:** Prof. Y. Gaidamaka, Dr. O. Semenova

11:00–11:15    **On the analysis of the discrete-time system  
with batch service and Early Arrival discipline**  
Uliana Morozova, Igor Vasilyuk, Yuliya  
Gaidamaka

11:15–11:30    **A Study of Performance Variations of  
Specialized Distributed Computing Systems  
Using Multiple Parallel Task Queues**  
Pavel Golosov, Sergey Bolovtsov, Sergey  
Dubrovskiy, Ivan Gostev

11:30–11:45    **Improving the Reliability of Distributed Energy  
Systems based on Graph Neural Networks**  
Eduard Rayushkin, Maksim Shcherbakov

11:45–12:00    **A Semi-Markov Reliability and Digital Twin  
Framework for Mission Readiness Evaluation  
of Repairable Tethered HAPS**  
Vidyottama Jain

12:00–12:15    **Analytical Modeling and Computer Aided  
Design of Distributed Transport  
Communication Systems**  
S. V. Mescheryakov, N. A. Solodilova, D. E.  
Bortyakov, D. Arus, D. I. Kovalev

12:15–12:30    **Adaptive Queue Scheduling in Polling Systems  
via Online Deep Learning**  
Bui Duy Tan, Olga Semenova

12:30–13:15    **Lunch**  
University Canteen

**Track B**  
Session B-2.2

**Room 219**  
Tue, 13:15–14:45

**Chairs:** Dr. I. Kochetkova, Dr. S. Paul

- 13:15–13:30    **Стохастическая модель сети пассивных устройств Ambient IoT со случайным расположением источников питания**  
Sergey Bogolyubov, Irina Kochetkova
- 13:30–13:45    **Распределение вероятностей числа периодов активности одномерного On/Off процесса**  
Anatoly Nazarov, Svetlana Paul, Alena Ivanova
- 13:45–14:00    **Модель энергопотребления вычислительного узла с механизмом автомасштабирования ресурсов при ограниченном числе пользователей**  
Ivan Lapatin, Dias Zhamsap, Kirill Malkov
- 14:00–14:15    **Модель бизнес-процесса в виде сети массового обслуживания с зависящей от состояния маршрутизацией**  
Konstantin Terentev, Irina Kochetkova, Konstantin Samouylov
- 14:15–14:30    **Анализ пикового возраста информации в мультисенсорных системах**  
Andrey Alekseev, Irina Peshkova
- 14:30–14:45    **Анализ G-сети с разнотипными нетерпеливыми положительными заявками и сигналами**  
Dzmitry Kopats

14:45–15:15      **Coffee Break**  
Room 220

**Track B**  
Session B-2.3

**Room 219**  
Tue, 15:15–16:30

**Chairs:** Prof. S. Moiseeva, D. N. Ivanova

- 15:15–15:30      **Mathematical Model in the Form of an M/M/1 Retrial Queue with Non-Persistent Primary Customers**  
Svetlana Moiseeva, Rushana Hamrayeva
- 15:30–15:45      **Event-dependent arrivals in the M/G/1 queues**  
Alexey Bergovin, Vladimir Ushakov
- 15:45–16:00      **A Computational Method for Analyzing Continuous-Time Markov Reward Chains**  
Alexander Andronov, Vladimir Vishnevsky, Nika Ivanova
- 16:00–16:15      **Положительная возвратность маркированного марковского процесса для системы надежности  $GI_{m \leq n} | GI |$**   
Vladimir Rykov, Nika Ivanova
- 16:15–16:30      **Stability condition for retrial queuing systems with limited service source**  
Anastasia Varakina, Ekaterina Fedorova

**Wednesday, September 23**

10:00–13:00      **Registration**  
Room 220

**Chairs:** Prof. R. Kirichek, Dr. E. Sopin

- 11:00–11:15     Synthetic Encrypted Traffic Generation with VAE-GAN: Capturing Complex Patterns for Realistic Network Modeling**  
Ahmed Abdelmoaty, Ali R. Abdallah, Mohamed Anbar, Hassan A. Hassan, Mohammed Muthanna, Mahmood Al-Bahri, Andrey Koucheryav
- 11:15–11:30     Evaluating unmanned systems first-person view control service quality requirements**  
Alexander Chenskiy, Aleksandr Berezkin, Roman Vivchar, Zahar Kulunchakov, Alyona Kozlova, Ruslan Kirichek
- 11:30–11:45     Modeling and Performance Evaluation of an Electromyographic Body Sensor Network for a Telepresence Suit**  
Alsarhan Mohammed Qahtan, Renata Sakhapova, Oleg Vtorov, Alexander Brushinin, Viktoria Dmitrieva, Artem Volkov, Andrey Koucheryav
- 11:45–12:00     Bio-Inspired 6-DoF Object Localization in Metaverse Environments Based on Gene Regulatory Networks**  
Mohammed Muthanna, Mahmood Al-Bahri, Maksim Martimyan, Ammar Muthanna, Andrey Koucheryav
- 12:00–12:15     Investigation of the relationship between subjective and objective assessments of quality of experience for augmented reality applications**  
Maria Makolkina, Artyom Sterlikov

12:15–12:30    **Toward a Comparative Analysis of State Space Models and Transformers for Network Anomaly Detection under Varying Context Lengths**

Dmitrii Stamplevskii, Andrey Gorshenin

12:30–13:15    **Lunch**

University Canteen

## **Track A**

### **Session A-5**

**Room 208**  
Wed, 13:15–14:45

**Chairs:** Prof. V. Vishnevsky, Dr. E. Sopin

13:15–13:30    **Modelling cable oscillations for tethered high-altitude telecommunication platform in the case of non-stationary wind flow**

Vladimir Vishnevsky, Evgeny Mikhailov

13:30–13:45    **Improving the efficiency of the satellite segment of the information network for maritime and river fleets**

Georgy Belikov, Leonid Abrosimov

13:45–14:00    **Methodological Approach to Forming an Integral Anomaly Criterion Based on the Analysis of Time Series of Technological Parameters**

Mikhail Shevchenko

14:00–14:15    **A Resource Queuing Systems for Modeling Data, Control, and Beam Allocation in 5G NR**

Artem Nazarin, Anna Zhivtsova, Eduard Sopin

14:15–14:30    **A Proximity Core for Multi-Technology Wireless Services**

Artem Makarov, Dmitry Namiot

14:30–14:45    **Score-Scaled Residual-Site Steering in Multimodal Diffusion Transformers**

Ibragim Idrisov, Dmitry Namiot

14:45–15:15    **Coffee Break**  
Room 220

## Track A

### Session A-6

**Room 208**  
Wed, 15:15–16:30

**Chairs:** Prof. E. Levner, Dr. A. Kushchazli

15:15–15:30    **The AI Overtrust Paradox in Cybersecurity: A Bayesian Threat Detection Model and Practical Algorithm**  
Boris Kriheli, Eugene Levner

15:30–15:45    **Rag Classifier for proactive Cyberattack Diagnostics**  
Alexandr Karpukhin

15:45–16:00    **BER Performance of SCMA with Large Codebooks**  
Dmitriy Pokamestov, Yakov Kryukov

16:00–16:15    **The Hidden Cost of Safety: Measuring Over-Refusal in Inference-Time Defenses for Multimodal LLMs**  
Bulat Nutfullin, Dmitry Namiot

16:15–16:30    **Using clock frequency synchronization to improve time synchronization accuracy**  
Nikolai Storozhuk, Roman Petriv

17:00–19:00    **Gala Dinner**  
University Canteen

## Track B

### Session B-1.4

**Room 218**  
Wed, 11:00–12:30

**Chairs:** Prof. S. Moiseeva, Dr. I. Peshkova

11:00–11:15    **Качество обслуживания гетерогенной приоритетной системы передачи данных**  
Natalya Chalykh, Svetlana Moiseeva

- |             |                                                                                                                                                                          |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11:15–11:30 | Расчет замкнутых сетей с многоканальными узлами методом полиномиальной аппроксимации<br>Vladimir Rybintsev                                                               |
| 11:30–11:45 | Система массового обслуживания с ненадежным прибором и уничтожением обслуживаемой заявки при его отказе<br>Alexandra Starovoytova, Alexander Moiseev                     |
| 11:45–12:00 | Сравнительный анализ методов экспоненциального расщепления и экспоненциального разложения распределений в регенеративном моделировании<br>Nikita Kalinin, Irina Peshkova |
| 12:00–12:15 | Дифференциальное уравнение для расчета стационарных вероятностей многоканальной системы массового обслуживания с повторными вызовами<br>Ivan Khomichkov                  |
| 12:15–12:30 | Применение рекурсивных моментных формул для односерверной системы с потерями<br>Evgenii Novikov                                                                          |
| 12:30–13:15 | <b>Lunch</b><br>University Canteen                                                                                                                                       |

## Track B

### Session B-1.5

**Room 218**  
Wed, 13:15–14:45

**Chairs:** Prof. V. Rykov, Prof. N. Markovich

- |             |                                                                                                               |
|-------------|---------------------------------------------------------------------------------------------------------------|
| 13:15–13:30 | Tail index estimation in poisson growing preferential attachment networks<br>Natalia Markovich, Maksim Ryzhov |
|-------------|---------------------------------------------------------------------------------------------------------------|

- 13:30–13:45    **Artificial Regeneration for a Two Input Flow G/M/1 Queue with Weibull Interarrivals**  
Sergey Astafiev, Irina Peshkova
- 13:45–14:00    **A Two-Commodity Queuing Inventory Model with Reuse of Perishable Goods and Production**  
Samaja S. Naboothri, Jaya S.
- 14:00–14:15    **Transient Analysis of Single Server Queue with State Dependent Breakdowns**  
Arivudainambi Deivasigamani, M. Malini
- 14:15–14:30    **Adaptive Traffic Signal Control via Stackelberg Game Theory and Q-Learning**  
Larbi Sabiha, Radjef Mohammed Said, Rahmoune Fazia
- 14:30–14:45    **Using the Pollaczek-Khinchine Formula for Delay Analysis in Multiservice Networks with Bursty and Self-Similar Traffic**  
Aleksandr Roslyakov, Maria Usacheva
- 14:45–15:15    **Coffee Break**  
Room 220

## Track B

### Session B-1.6

**Room 218**  
Wed, 15:15–16:30

**Chairs:** Prof. E. Morozov, Dr. R. Nekrasova

- 15:15–15:30    **Deep Sequence Machine Learning Models for Predicting Performance Characteristics of Retrial Tandem Queueing Systems**  
Minh Cong Dang, Olga Semenova
- 15:30–15:45    **Quasi-stationary distribution of virtual waiting time in a retrial queue**  
Ruslana Nekrasova
- 15:45–16:00    **A busy period analysis of M/G/1-type queue with general retrieval time**  
Ksenia Zhukova, Evsey Morozov

- 16:00–16:15 **QoE Modeling in 5G/6G Video Streaming: A Comparative Study of Accuracy, Complexity, and Energy Trade-offs**  
Antonina Parashchenko, Harini Rajendran, Konstantin Samouylov, Dharmaraja Selvamuthu
- 16:15–16:30 **Comparative analysis of UAV relative navigation methods in group flights: balancing accuracy and communication channel load**  
Evgenii Mikhov, Dmitry Dmitriev, Alexander Karavanov
- 17:00–19:00 **Gala Dinner**  
University Canteen

**Track C**  
Session C-1

**Room 219**  
Wed, 11:00–12:30

**Chairs:** Prof. R. Smeliansky, Prof. D. Namiot

- 11:00–11:15 **Quantization-Aware Training for Minority-Class Preserving Poultry Disease Detection on Edge Devices**  
Cong Minh Vu, Chidera Simon Agbasiere, Quang Hung Nguyen
- 11:15–11:30 **Quantitative Cyber Risk Assessment for Distributed Communication Systems Using ALM Distributions**  
Alexander Bochkov
- 11:30–11:45 **On the detection of rare events**  
Fedor Baryshnikov, Dmitry Namiot
- 11:45–12:00 **A Distributed Data Management and Machine Learning Framework for Electricity Consumption Forecasting in Power Grid Enterprises**  
Nikita Stepanov, Peter Panfilov, Anastasiya Radaeva, Anastasia Shatrova, Maksim Vinokurov

- 12:00–12:15    **Uncertain processes in industrial energy systems: Modelling and Prognosis**  
Alexandra Chudinova
- 12:15–12:30    **Comparative Study of Self-Organizing and Elastic Maps in Comparison with Soft Computing Paradigms in Intrusion Detection Systems**  
Dmitriy Zuev
- 12:30–13:15    **Lunch**  
University Canteen

**Track C**  
Session C-2

**Room 219**  
Wed, 13:15–14:45

**Chairs:** Prof. L. Sevastianov, Prof. S. Portnoy

- 13:15–13:30    **Analysis of CNN Internal Representations for Non-Stationary Processes in Rolling Bearings**  
Nikita Kolovorotnyy
- 13:30–13:45    **Decentralized FPGA-Aware Task Scheduling in a Heterogeneous High-Performance Computing Cluster**  
Igor A. Kaliaev, Anatoly I. Kaliaev, Sergei A. Semenisty
- 13:45–14:00    **Дополнительная коррекция ошибок в каскадном коде с помощью полносвязных нейронных сетей**  
Sergey Portnoy, Alexey Efremov, Vladimir Kuzmin
- 14:00–14:15    **Иерархическая когнитивная архитектура управления для мобильной робототехнической платформы**  
Gleb Kuzmin, Gleb Kiselev

- 14:15–14:30    **Применение ИИ в синхронном взаимодействии информационных систем**  
Andrey Volokh, Aleksandr Belov
- 14:30–14:45    **Коды с локализацией ошибок: линейность конструкции и мягкое декодирование**  
Sergey Portnoy, Andrey Voloshin, Danil Raklanov, Ilia Chevtaev
- 14:45–15:15    **Coffee Break**  
Room 220

## Track C

### Session C-3

**Room 219**

Wed, 15:15–16:45

**Chairs:** Prof. V. Vishnevsky, Prof. N. Bakanova

- 15:15–15:30    **Балансировка трафика на основе емкости систем в конвергентных сетях связи высокоскоростных железных дорог**  
Sergey Portnoy, Nikita Klyuev
- 15:30–15:45    **Ресурсоёмкость Prometheus и Prom++ при вариации параметров синтетической нагрузки**  
Igor Buzhin, Sakharchuk Veronika, Danila Farutin, Roman Pozdnyakov
- 15:45–16:00    **Применение искусственного интеллекта в задачах статического анализа кода на примере анализатора misra-sa**  
Konstantin Kostiukhin, Mikhail Aristov
- 16:00–16:15    **Интеграция TinyML-моделей в POSIX-совместимую ОСРВ**  
Konstantin Kostiukhin, Anastasiia Sergeichik
- 16:15–16:30    **Реализация процессов контроля и мониторинга взаимодействия в системах учета публикационной результативности**  
Н.Б. Баканова, Д.В. Волчков

- 16:30–16:45    **Разработка пользовательского интерфейса для режимов управления взаимодействием в распределенной информационной системе**  
А.С. Баканов, Т.М. Зотова, Ю.А. Цапаева
- 17:00–19:00    **Gala Dinner**  
University Canteen

## Thursday, September 24

- 12:00–17:00    **Guided City Tour**  
Meeting point: Kropotkinskaya Metro Station  
(Line 1), Exit 1

## Friday, September 25

- 11:00–12:30    **Round Table with the participation of young scientists: Future networks, artificial intelligence and big data**  
Chairs: Prof. Vladimir Vishnevsky, Prof. Konstantin Samouylov  
Room 219
- 12:30–13:00    **Conference Closing**

# KEYNOTE SPEAKERS

## **Prof. Mahmood Said Nasser Al-Bahri**

Sohar University, Oman

Dr. Mahmood Said Nasser Al Bahri is an Assistant Professor at Sohar University, Oman, an Associate Fellow of the Higher Education Academy (AFHEA), Program Coordinator for Computing and Multimedia, and Editor-in-Chief of the Sohar University Journal for Engineering and Information Technology.



He received the Vice Chancellor's Award for Distinguished Teaching and is the author of the Arabic book Introduction to IoT. His research focuses on the Internet of Things, communication networks, and intelligent systems. He has published more than 76 research papers, presented at international conferences, and secured research funding from Omani government ministries. He has also supervised more than 15 final-year project teams, several of which received competitive funding from The Research Council, Oman.

## Prof. Mohammed Sharaf Sayed

Egypt-Japan University of Science and Technology, Egypt

Prof. Mohammed Sharaf Sayed received the B.Sc. degree in Electronics and Communications Engineering from Zagazig University, Zagazig, Egypt, in 1997 and the M.Sc. and Ph.D. degrees in Electrical and Computer Engineering from University of Calgary, Calgary, Canada in 2003 and 2008 respectively.



Prof. Sayed is currently the dean of the School of Electronics, Communications, and Computer Engineering, Egypt-Japan University of Science and Technology, Egypt. His research interests include Digital Systems Design, Embedded Systems, System-on-Chip, Machine Vision, Video Coding, and AI-Accelerators.

Prof. Sayed received several awards both in Canada and in Egypt. He has one US patent and seven contributions to the ITU/MPEG video coding standards, two of them included in the H.264 standard's reference hardware model. He authored and co-authored more than 120 international publications. Prof. Sayed managed and participated in several national/international research and development projects.

## Prof. Mohammad Hammoudeh

Aramco Cybersecurity,  
Saudi Arabia

Mohammad Hammoudeh is the Aramco Cybersecurity Chair Professor and an internationally recognised, award-winning expert in cybersecurity.



His work focuses on developing quantum-resilient architectures and AI-powered defence mechanisms to protect critical national infrastructure, with a particular emphasis on the security of operational technology (OT) and quantum-safe cryptography.

Prof. Mohammad Hammoudeh's mission is to fortify industrial control systems against emerging and next-generation cyber threats. Dr. Hammoudeh is the Founding Editor-in-Chief of ACM's Distributed Ledger Technologies journal.

## Prof. Dharmaraja Selvamuthu

Indian Institute of Technology,  
India

S. Dharmaraja has been with the Department of Mathematics at IIT Delhi since 2003 and is currently a Professor and joint faculty member of the Bharti School of Telecommunication Technology and Management.



He has served as Head of the Department of Mathematics, Institute Chair Professor, and Jaswinder & Tarvinder Chadha Chair Professor. He has also held visiting positions at universities in the USA, Canada, Colombia, Italy, Korea, and Australia. His research interests include applied probability, queueing theory, stochastic modeling, performance analysis of computer and communication systems, and financial mathematics.

He has published more than 150 papers, received over 2,500 citations with an H-index of 26, and supervised 13 Ph.D. scholars and 42 M.Tech./Integrated M.Tech. students. He serves as an Associate Editor of the International Journal of Communication Systems and Opsearch and is the author or co-author of several books and monographs on stochastic processes, probability, financial mathematics, statistics, and reliability.

## Prof. Dush Nalin Jayakody

Lusófona University, Portugal

Carnegie Mellon University,  
USA



Prof. Dush N. K. Jayakody is a Senior Member of IEEE and a Fellow of IET. He received his Ph.D. in Electronics and Communications Engineering from University College Dublin in 2014 and his MSc from Eastern Mediterranean University, Türkiye.

Prof. Jayakody was ranked among the top 2% of scientists worldwide in 2021–2025 according to the Stanford-Elsevier list and received the President Award for outstanding research performance in Sri Lanka. He is a Professor at Lusofona University, Portugal, a Researcher at INOV-INESC, University of Lisbon, and since 2025 a Visiting Professor at Carnegie Mellon University, USA. He has also held academic and research positions in several countries.

Prof. Jayakody has supervised more than 10 Ph.D. students and 5 postdoctoral researchers, secured nearly \$6 million in research funding, and received several Best Paper Awards. He has published nearly 300 peer-reviewed papers and books. His research interests include 5G and beyond wireless communications, SWIPT, NOMA, quantum and visible light communications, semantic communications, LDPC codes, and unmanned aerial vehicles.

# GENERAL INFORMATION

|                                                                                          |                               |
|------------------------------------------------------------------------------------------|-------------------------------|
| Registration                                                                             | Room 220, 2nd Floor           |
| Keynotes                                                                                 | University Club, 3rd Floor    |
| Track A                                                                                  | Room 208, 2nd Floor           |
| Track B                                                                                  | Room 218, Room 219, 2nd Floor |
| Track C                                                                                  | Room 219, 2nd Floor           |
| Coffee Breaks                                                                            | Room 220, 2nd Floor           |
| Lunches                                                                                  | University Canteen, 3rd Floor |
| Round Table                                                                              | Room 219, 2nd Floor           |
|  WC     | 2nd and 3rd Floors            |
|  WC     | 1st and 3rd Floors            |
|  Wi-Fi | sci - pfu                     |

