

# 28th International Conference on Distributed Computer and Communication Networks (DCCN 2025) – AGENDA

## September 22 (Monday) – September 25 (Thursday), 2025

### Organizers

V.A. Trapeznikov Institute of Control Sciences of RAS (ICS RAS, Russia, Moscow)

Peoples' Friendship University of Russia (RUDN University), Moscow, Russia

### Tracks

Track A. Computer and Communication Networks: Architecture, Protocols and Technologies. Chair: Vladimir Vishnevsky. Co-chair: O. Semenova.

Track B. Modeling of Distributed Systems and Networks. Chair: Konstantin Samouylov. Co-chair: Yuliya Gaidamaka.

Track C. Distributed Systems Applications. Chair: Sergey Portnoy. Co-chair: Andrey Tikhonyuk.

Monday, September 22, 2025	TIME (Moscow time)	<b>DAY 1: Opening, Plenary session</b> (Grand conference hall)
	09:00–10:00	<b>REGISTRATION</b> (Reception, Ground floor)
	10:00–10:10	<b>Conference Opening</b> (Small conference hall) <b>Chairman: Vladimir Vishnevsky</b> , ICS RAS
	10:10–10:20	<b>Welcome Speech: Dmitry Novikov</b> , Director, ICS RAS <b>Konstantin Samouylov</b> , Professor, RUDN University; <b>Dharmaraja Selvamuthu</b> , Professor, Indian Institute of Technology
	10:20–11:00	<b>Quantum Key Distribution for Blockchain Networks Scenarios: Current Trends and Future Research Directions</b> <b>Neeraj Kumar</b> , Thapar Institute of Engineering & Technology, India
	11:00–11:40	<b>Computing Centric Network — Next Generation Computing Infrastructure</b> <b>Ruslan Smelyansky</b> , Moscow State University, Russia
	11:40–12:00	<b>Coffee break</b>
	12:00–12:40	<b>On Queues with Working Breakdown and Interdependence Between Arrival and Service Processes</b> <b>Achyutha Krishnamoorthy</b> , Cochin University of Science & Technology, CMS College, India
	12:40–13:20	<b>The AI Cybersecurity Paradox in Computer Communication Systems: Overview, Applications and Lessons Learned</b> <b>Eugene Levner</b> , Holon Institute of Technology, Israel
	13:20–14:00	<b>Break</b>
	14:00–14:40	<b>Reliability Analysis of High-Altitude Platform Systems</b> <b>Dharmaraja Selvamuthu</b> , Indian Institute of Technology, India
	14:40–15:20	<b>Marked Markov Processes and Their Applications</b> <b>Vladimir Rykov</b> , Russian State University of Oil and Gas (Gubkin University), RUDN University, Russia
	15:20–15:40	<b>Break</b>
	15:40–16:20	<b>The Almost Lack of Memory Distributions and Their Applications</b> <b>Boyan Dimitrov</b> , Kettering University, USA

Tuesday, September 23, 2025	TIME (Moscow time)	DAY 2: Track sessions	
	09:00–10:00	REGISTRATION (Reception, Ground floor)	
		<b>B.1.1. Analytical modeling of Distributed Systems and Networks</b> <i>Chairs: Dr. N. Markovich, Dr. S. Paul</i> Room 9	<b>A.1.1. Computer and Communication Networks: Architecture, Protocols and Technologies</b> <i>Chairs: Prof. R. Smeliansky, V. Pashkov</i> Room 10
	10:00–10:20	<b>Ádám Tóth, János Sztrik</b> Simulation of a Retrial Queueing System with Two-Way Communication and an Unreliable Server in Different Scenarios (ID 3287)	<b>Grigorii Alekseev, Ruslan Smeliansky, Evgeniy Stepanov</b> QoS-aware per-segment host-based load balancing of a non-stationary flow (ID 3329)
	10:20–10:40	<b>Olga Dudina, Alexander Dudin</b> Analysis of Queueing System with Slowdown of Non-priority Customers (ID 3316)	<b>Nhan Hoang Phuoc, Alexander Paramonov, Ammar Muthanna, Andrey Koucheryavy</b> Method for Dynamic Subchannel Selection in Heterogeneous Internet of Things Environments (ID 3418)
	10:40–11:00	<b>Natalia Markovich, Denis Leibman</b> Anomaly Detection in Random Graphs Evolving by Preferential Attachment (ID 3317)	<b>Arina Gazeeva, Dmitry Bankov, Andrey Lyakhov, Evgeny Khorov</b> A Scheduler for Real-Time Applications Service in Overlapping Wi-Fi 8 Networks (ID 3825)
	11:00–11:20	<b>Thresiamma N J, Salini S Nair, Jose K. P.</b> A Production Inventory System with N-Policy and Enhanced Production Rate (ID 3324)	<b>Victor Zyablov, Sergey Portnoy, Nikitin Sergey, Andrey Voloshin, Nikita Klyuev</b> A New Class of Codes with Error Localization: on improvement of decoding algorithms (ID 3380)
	11:20–11:40	Coffee break	
	11:40–12:00	<b>Anatoly Nazarov, Olga Lizyura, Svetlana Paul</b> Queueing Model of a Cell Operation with Retrials and State-Dependent Rate of Requests (ID 3330)	<b>Vasily Pashkov</b> DDoS Attack on Controller Detection Method Based on Machine Learning for Distributed Control Plane in Software Defined Networks (ID 3427)
	12:00–12:20	<b>Mei Liu, Alexander Dudin</b> Analysis of Retrial Queueing System with Heterogeneous Servers and Phase Type Distribution of Service Times (ID 3344)	<b>Dmitrii Aminev, Sergei Zakhazhevskiy, Dmitry Kozyrev, Hector Gibson Kinmanhon Houankpo</b> Реализация на ПЛИС циклического избыточного кодера по 32-битному полиному для стандартов IEEE 802.3 (ID 3460)
	12:20–12:40	<b>Komal Suwalka, Vidyottama Jain</b> A Markovian Framework for Availability-Aware Inter-HAPS Handoff in Aerial 6G Networks (ID 3701)	<b>Hussein Yasir, Zahraa Al-Kerea, Ammar Muthanna, Andrey Koucheryavy</b> Flexible load management algorithm in future 6G networks based on federated deep reinforcement learning (ID 3382)
	12:40–13:00	<b>Evsey Morozov, Ksenia Zhukova</b> Analysis of workload in a constant retrial rate M/G/1-type system (ID 3416)	<b>Kirill Glinskiy, Aleksandr Kasperovich, Aleksey Kureev, Aleksei Shashin, Maxim Susloparov, Roman Zlobin, Evgeny Khorov, Artem Krasilov</b> Improving Capacity for Real-Time Traffic in 5G NTN: Common and Unique Effects versus Terrestrial Systems (ID 3831)
	13:00–14:00	Break	

Tuesday, September 23, 2025		<b>B.1.2. Analytical modeling of Distributed Systems and Networks</b> <i>Chairs: Prof. S. Moiseeva, Dr. O. Semenova</i> Room 9	<b>A.1.2. Computer and Communication Networks: Architecture, Protocols and Technologies</b> <i>Chairs: Prof. A. Muthanna, Dr. V. Begishev</i> Room 10
	14:00–14:20	<b>Komal Suwalka, Nika Ivanova, Vidyottama Jain</b> Semi-Markov Approach for Efficient and Reliable Handoff Management in High-Altitude Platform Stations (ID 3839)	<b>Hussein Yasir, Zahraa Al-Kere, Ammar Muthanna</b> Edge Computing Platform for Telepresence Services based on artificial intelligence Algorithms (ID 3383)
	14:20–14:40	<b>Anton Karamyshev, Aleksander Antipov, Evgeny Khorov</b> Effective Capacity Approximations for G/G/s/k Queues under Strict QoS (ID 3823)	<b>Zahraa Al-Kere, Hussein Yasir, Ammar Muthanna</b> Distributed Intelligence Empowered 6G Networks: A Hybrid Optimization Perspective (ID 3384)
	14:40–15:00	<b>Natalia Markovich, Maksim Ryzhov</b> Detection of Stationarity and Local Dependence in Random Graphs Evolving by Preferential Attachment Model (ID 3250)	<b>M. V. Tiushev, R. L. Smelyansky</b> Routing in LEO Mega-Constellations with Dynamic Inter-Satellite Link Delays (ID 3458)
	15:00–15:20	<b>Людмила Нежелская, Илья Степаненко</b> Математическое ожидание длительности интервала между событиями в обобщенном полусинхронном потоке со случайным мертвым временем (ID 3322)	<b>Roman Rachugin, Artem Burkov, Andrey Turlikov</b> Evaluation of the effectiveness of using early feedback in a two-step random access procedure (ID 3377)
	15:20–15:40	Coffee break	
	15:40–16:00	<b>Bui Duy Tan, Olga Semenova</b> Adaptive Polling Mechanisms for Real-Time Polling Systems: From Cyclic to Arrival-Rate-Based Approaches (ID 3747)	<b>Eduard Sopin, Anastasia Daraseliya, Vyacheslav Begishev</b> On the Impact of the Traffic Structure on Random Access Models for LTE-M and NB-IoT Systems (ID 3376)
	16:00–16:20	<b>A. Tarasenko, Svetlana Moiseeva, Evgeny Polin</b> Асимптотический анализ бесконечнолинейной гетерогенной СМО при условии редких изменений случайной среды (ID 3419)	<b>Artem Makarov, Dmitry Namiot</b> On-Air Q&A Physical Proximity System (ID 3430)
	16:20–16:40	<b>Danil Parasotchenko, Svetlana Moiseeva, Ekaterina Pankratova</b> Исследование многопоточной ресурсной гетерогенной СМО в случайной среде (ID 3369)	<b>Aleksandr Roslyakov</b> Traffic Delay Analysis in the Fronthoul Segment of 5G Mobile Networks (ID 3323)

Wednesday, September 24, 2025	TIME (Moscow time)	DAY 3: Track sessions	
		<b>B.2.1. Analytical modeling of Distributed Systems and Networks</b> <i>Chairs: Prof. S. Dharmaraja, Dr. R. Nekrasova</i> Room 9	<b>A.2.1. Computer and Communication Networks: Architecture, Protocols and Technologies</b> <i>Chairs: Prof. V. Vishnevsky, Dr. E. Barabanova</i> Room 10
	10:00–10:20	<b>Raina Raj, Ksenia Zhukova , Ruslana Nekrasova, Dharmaraja Selvamuthu</b> Performance Analysis of High-altitude Platforms using Multi-server Retrial Queues (ID 3673)	<b>Alexey Volchaninov, Dmitry Volkanov</b> Расширение функциональности имитационной модели сетевого процессорного устройства для исследования методов анализа классов трафика (ID 3333)
	10:20–10:40	<b>Oleg Lukashenko</b> On the conditional Monte Carlo method for the reliability estimation of the Gaussian degradation system with a changing degradation intensity (ID 3428)	<b>Nikita Nikiforov, Dmitry Volkanov</b> Метод распределения программы обработки сетевых пакетов на вычислительные блоки конвейера сетевого процессорного устройства (ID 3334)
	10:40–11:00	<b>Samaja S Nabothri, Jaya S</b> A Queuing Inventory Model with Production and Reuse of Perishable Goods (ID 3422)	<b>Olga Kochueva, Kirill Nikitin, Dmitrii Erokhin</b> Some approaches to building models of chemical processes based on machine learning (ID 3354)
	11:00–11:20	<b>Binumon Joseph, Jose K. P.</b> A MAP/PH/1 k-out-of-n: G System with External Customer Service under Non-Preemptive Priority, Working Vacation and N-Policy (ID 3328)	<b>Alexander Grebeshkov, Yana Batyrshina</b> Data relevance IoT node cache update inspired by epidemic-based model (ID 3285)
	11:20–11:40	Coffee break	
	11:40–12:00	<b>Bobina J. Mattam, Jose K. P.</b> A MAP/Ph Perishable Inventory System with an Unreliable Server having Two Modes of Service (ID 3325)	<b>Eugene Levner, Dmitry Tsadikovich, Vladimir Vishnevsky</b> Graph-based Model and Practical Algorithm for Combating Cyberattack Threats in DCCN (ID 3357)
	12:00–12:20	<b>Jaya S, Dhanya Shajin</b> Environment-Dependent Demand Fluctuation and Inventory Management in Dual Commodity Queueing Inventory System (ID 3421)	<b>Olga Morozova, Margarita Orlova, Iulianiya Dovgoshapko, Leonid Abrosimov</b> Traffic Hub: an extensive solution for network dataset analysis (ID 3304)
	12:20–12:40	<b>Ksenia Zhukova, Ruslana Nekrasova</b> On overflow probability asymptotic in a stable two-class retrial system with constant retrial rate (ID 3320)	<b>Dmitry Karavaev</b> Numerical simulation of flat directional fading based on Bessel filter for land-mobile satellite channels (ID 3306)
	12:40–13:00	<b>Anna Zaitseva, Anna Zhivtsova, Elizaveta Golos, Irina Yartseva, Yuliya Gaidamaka, Elizaveta Gaidamaka, Konstantin Samouylov</b> Discrete Time Markov Chain in Age of Information analysis for URLLC services in DECT-2020 New Radio (ID 3366)	<b>Elizaveta Barabanova, Konstantin Vytovtov, Artur Dvoretzky</b> Transient Analysis of a Multi-line Queueing System with Impatient Customers and Its Application to the Medical Information and Measurement Systems (ID 3563)

Wednesday,  
September  
24, 2025

13:00–13:20	Break	<b>Fengrui Guo</b> On Exponential Vector Autoregression Method for Data Transmission Channel Quality Forecasting (ID 3310)
13:20–13:40		<b>Alexandra Maidzhe, Ilya Bykonya</b> IoT-Based Fire Evacuation System Utilizing BLE Mesh Networking (ID 3426)
13:40–14:00		
	<b>B.2.2. Analytical modeling of Distributed Systems and Networks</b> <i>Chairs: Prof. Yu. Gaidamaka, Dr. N. Ivanova</i> Room 9	
14:00–14:20	<b>Uliana Morozova, Ekaterina Bobrikova, Yuliya Gaidamaka</b> Modeling of the DECT-2020 sink using a system with batch service (ID 3364)	
14:20–14:40	<b>Uliana Morozova, Yuliya Gaidamaka</b> Анализ пикового возраста информации в кластере сети DECT-2020 с трафиком URLLC и mMTC (ID 3365)	
14:40–15:00	<b>Nika Ivanova, Nikita Kalmykov, Vladimir Vishnevsky</b> Reliability Assessment of a Local Navigation System for Tethered Platform Using Risk Tree (ID 3405)	
15:00–15:20	<b>Mais Farkhadov, Olga Blinova, Ekaterina Pankratova</b> Эргатические системы управления с искусственным интеллектом (ID 3423)	
15:20–15:40	Coffee break	
15:40–16:00	<b>Gregory Cherepennikov</b> Assessment of cognitive load in the user interface using oculography methods (ID 3378)	
16:00–16:20	<b>Veronika Malysheva</b> The influence of external cognitive load on the perception of information in the interface (ID 3379)	
16:20–16:40	<b>Dzmitry Kopats</b> Нахождение ожидаемых доходов в нетерпеливых G-сетях с системами с контрольными и карантинными очередями (ID 3353)	

Thursday, September 25, 2025	TIME (Moscow time)	DAY 4: Track sessions, Round Table and Conference Closing	
		<b>C.1.1. Distributed Systems Applications</b> <i>Chairs: Prof. S. Portnoy, Dr. A. Tikhonyuk</i> Room 6	<b>B.3.1. Analytical modeling of Distributed Systems and Networks</b> <i>Chairs: Prof. K. Samouylov, Dr. E. Fedorova</i> Room 7
	10:00–10:20	<b>Andrey Tikhonyuk, Sergey Portnoy, Victor Zyablov</b> One Approach on Improved Communication Secrecy (ID 3604)	<b>Ekaterina Fedorova, Elena Bulgakova, Anastasia Varakina</b> Asymptotic analysis of retrial queue with constant retrial rate and priority customers (ID 3321)
	10:20–10:40	<b>Ivan Gostev, Pavel Golosov, Sergey Bolovtsov, Marina Polukoshko</b> Прогнозирование и устранение критических ситуаций в специализированных распределенных вычислительных системах на основе интеллектуального агента (ID 3361)	<b>Vladimir Rybintsev</b> Модификация метода полиномиальной аппроксимации для повышения точности расчета замкнутых сетей (ID 3282)
	10:40–11:00	<b>Konstantin Kostiukhin</b> Построение системы мониторинга для выявления атак по сторонним каналам (ID 3247)	<b>Anatoly Yermakov, Aisha Mamyrova, Timour Paltashev, Auzhan Sakabekov, Boris Kupriyanov, Marzhan Naukenova, Kuanysh Zhenissov</b> Analysis and development of Markov models of three-phase systems with partial combination of services based on Z-transforms (ID 3305)
	11:00–11:20	<b>Egor Vorobyev, Dmitry Namiot</b> Evasion Attacks on Image Segmentation Models (ID 3284)	<b>Natalya Khaustova, Svetlana Moiseeva, Ekaterina Pakulova</b> Математическая модель СМО с абсолютным приоритетом и нетерпеливыми заявками (ID 3362)
	11:20–11:40	Coffee break	
	11:40–12:00	<b>Sergej Samborskij</b> Особенности использования санитайзеров для разработки встраиваемых систем (ID 3340)	<b>Ivan Khomichkov</b> Об одном методе исследования многоканальной системы массового обслуживания с повторными вызовами (ID 3336)
	12:00–12:20	<b>Narek Maloyan, Dmitry Namiot</b> Adversarial Attacks on LLM-as-a-Judge Systems: Insights from Prompt Injections (ID 3339)	<b>Alexey Bergovin, Vladimir Ushakov</b> Об одной системе обслуживания с профилактиками прибора (ID 3327)
	12:20–12:40	<b>Andrew Toutov, Mais Farkhadov, Natalia Toutova</b> GPU-Aware Placement of Virtual Machines in Heterogeneous Data Centers (ID 3429)	<b>Yaroslav Zotov</b> Разработка инструментальной платформы для создания стендов полунатурного моделирования (ID 3312)
	12:40–13:00	<b>Artem Mileshein, Victor Piskovski</b> Хранилище секретов WireGuard на основе распределенного реестра (ID 3307)	<b>Eugene Yu. Shchetinin, Leonid Sevastianov, Anastasiia Tiutiunnik</b> Detection of coronary artery stenosis using artificial intelligence methods (ID 3300)
	13:00–13:20	<b>Mouale B.M.N. , Hector Gibson Kinmanhon Houankpo, Soro M., Dmitry Kozyrev</b> Dynamic Warehouse Workflow Optimization via Reinforcement Learning: Integrating Q-Learning and Priority-Based Routing (ID 3742)	
	13:20–14:00	<b>Round Table with the participation of young scientists: Future networks, artificial intelligence and big data (Круглый стол с участием молодых ученых по вопросам сетей, искусственного интеллекта и больших данных)</b> <i>Chairs: Prof. Vladimir Vishnevsky, Prof. Konstantin Samouylov</i> Room 6	
	14:00–14:20	Conference Closing	