25th International Conference on Distributed Computer and Communication Networks (DCCN 2022) – AGENDA
September 26 (Monday) – September 29 (Thursday), 2022

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: Dmitry Kozyrev.
Track B.Modeling of Distributed Systems and Networks. Chair: Konstantin Samouylov. Co-chair: Irina Kochetkova.
Track C. Distributed Systems Applications. Chair: Andrey Koucheryavy. Co-chair: Ammar Muthanna.

	TIME (Moscow time)	DAY 1: Opening, Plenary session
Monday, September 26, 2022	12:00–13:00	REGISTRATION (Room 220)
	13:00–13:15	**Conference Opening** (Room 700) **Chairman: *Vladimir Vishnevsky,*** ICS RAS
	13:15–13:30	**Welcome Speech: *Dmitry Novikov***, Director, ICS RAS **Welcome Speech: *Konstantin Samouylov,*** Director, AMCT Institute, RUDN
	13:30–14:30	**Metaverse and Digital Twins for Industrial Automation in Next Generation Applications** *Neeraj Kumar,* Department of Computer Science and Engineering, Thapar Institute of Engineering & Technology, India
	14:30–15:30	**Age-of-Information in UAV-assisted Wireless Networks** *Dushantha Nalin K. Jayakody,* COPELABS, Lusófona University, Portugal
	15:30–16:00	Coffee break
	16:00–17:00	**Towards 6G- Enabled Ultra Reliable Low Latency V2X Communications** *Ammar Muthanna,* The Bonch-Bruevich St. Petersburg State University of Telecommunications, Russia
	17:00–18:00	**Resource Loss Systems and Performance Analysis of Wireless Networks** *Konstantin Samouylov* , Institute of Applied Mathematics and Telecommunications, RUDN University, Russia

TIME (Moscow time)	DAY 2: Track sessions		
	A.1.1. Computer and Communication Networks: Architecture, Protocols and Technologies *Chairs: Prof. V.Vishnevsky, Prof. K.Samouylov*	**B.1.1. Analytical modeling of Distributed Systems and Networks** *Chairs: Prof. A.Dudin, Prof. O.Semenova*	**C.1.1. Distributed Systems Applications** *Chairs: Prof.Yu.Gaidamaka, Dr. D.Ostrikova*
11:00–11:15	**Yousif Hammadi, Riyadh Khlf Ahmed, Omar Mahmood, Ammar Muthanna** New filtering method to reduce PAPR and OOBE of UFMC in 5G communication system (ID 1442)	**Dharmaraja Selvamuthu, Vidyottama Jain, Raina Raj** Performance Analysis for Tethered HAP Systems: An Analytical Approach	**Sergey Melnikov, Konstantin Samouylov, Andrey Zyazin** Estimating a polyhedron method informativeness in the problem of checking the automaton by the statistical properties of the input and output sequences (ID 1417)
11:15–11:30	**Yves Adou, Ekaterina Markova, Yuliya Gaidamaka** Queueing system for analyzing the operation of 5G network with NS under preemption-based scheduler (ID 1279)	**Vidyottama Jain, Vladimir Vishnevsky, Dharmaraja Selvamuthu, Raina Raj** Analysis of Power Management in a Tethered High Altitude Platform using MAP/PH[3]/1 Retrial Queueing Model (ID 1746)	**Ekaterina Bobrikova, Ekaterina Medvedeva, Yuliya Gaidamaka, Sergey Shorgin** A machine learning approach for predicting SINR (ID 1282)
11:30–11:45	**Patatchona Keyala, Irina Yartseva, Yuliya Gaidamaka** Analytical model of data transmission through NarrowBand-IoT technology (ID 1270)	**Valentina Klimenok, Alexander Dudin** On the distribution of the number of consecutively lost customers in the BMAP/PH/1/N system (ID 1535)	**Gleb Kiselev, Daniil Weizenfeld, Yaroslava Gorbunova** VQA for response synthesis based on spatial actions (ID 1421)
11:45–12:00	**Margarita Orlova, Leonid Abrosimov** Performance modeling of multimedia traffic delivery in WLAN using simulation (ID 1265)	**Alexander Dudin, Sergei Dudin, Olga Dudina** Retrial Queuing System with Limited Processor Sharing Discipline (ID 1478)	**Dmitry Orlov** On Application of Source Code Analysis Ttechniques to HTML Pages Data Extraction (ID 1275)
12:00–12:15	**Anatoliy Botvinko, Konstantin Samouylov** Firewall simulator development for performance evaluation of ranging a filtration rules set (ID 1323)	**Ekaterina Bulinskaya** Stability of Some Applied Probability Models (ID 1268)	**Sergey Astafiev** Расчет матрично-аналитической модели суперкомпьютера в переходном режиме (ID 1272)
12:15–12:30	**Владимир Широков** Индустрия 4.0, система Mesh, модели и экосистема NG сетей (ID 1304)	**Anastasiya Keba, Людмила Нежельская** Probability density of the interval duration between events in the generalized MAP with its incomplete observability (ID 1185)	**Artur Sagdatullin** State Observer System Based on K-Means Clustering Machine Learning Model for Cyber-Security of Industrial Network (ID 1291)
12:30–12:45	**Vilmen Abramian, Andrey Larionov** Численное исследование вероятности идентификации RFID-метки с помощью RFID-считывателя, размещенного на БПЛА (ID 1437)	**Anastasia Gorbunova, Vladimir Vishnevsky** On Estimating the Average Response Time of High-Performance Computing Environments (ID 1222)	**Ayham Shahoud, Dmitriy Shashev, Stanislav Shidlovskiy** Spectrum and AI-based Analysis for a Flight Environment and Avoiding Virtual Obstacles Using Potential Field Method for Path Control (ID 1450)
12:45–13:00	**Konstantin Mikhailov, Alexey Abramov** Теория и практика определения уровня критичности инцидентов в цифровых инфраструктурах (ID 1202)		**Qazawat Zirak, Dmitriy Shashev** Collision Provenance using Decentralized Ledger as a Blockchain/Hashgraph in Swarm of Drones (ID 1451)
13:00–13:30	Break		

Tuesday, September 27, 2022

Tuesday, September 27, 2022		A.1.2. Computer and Communication Networks: Architecture, Protocols and Technologies *Chairs: Prof. A.Koucheryavy, Dr. A.Muthanna*	B.1.2. Analytical modeling of Distributed Systems and Networks *Chairs: Prof. A.Andronov, Prof. V.Rykov*	C.1.2. Distributed Systems Applications *Chairs: Prof. D.Namiot, Prof. D.Kulyabov,*
	13:30–13:45	**A.E. Koucheryavy, M.A. Makolkina, A.I. Paramonov, A.I. Vybornova, A.S.A. Muthanna, R.A. Dunaytsev, S.S. Vladimirov, V.S. Elagin, O.A. Markelov, O.I. Vorozheykina, A.V. Marochkina, L.S. Gorbacheva, B.O. Pankov, B.N. Anvarzhonov** A First-Priority Set of Telepresence Services and a Model Network for Research and Education (ID 1635)	**Alexander Andronov, Iakov Dalinger, Nadezda Spiridovska** Service system with non-replenish queue (ID 1192)	**Maxim Fomin** Semantic aspects of data sparsity description in multidimensional information system (ID 1277)
	13:45–14:00	**Mohammed Hasan Alwan, Yousif I. Hammadi, Mamoon A. Muhi, Omar Abdulkareem Mahmood, Alexey Tselykh, Mohammed Saleh Ali Muthanna** Optical Multi-Carrier Generation using Nested Electro-Absorption Modulators (ID 1513)	**Anatoly Yermakov, Anar Shukmanova, Timour Paltashev, Aasso Ziro, Aisha Mamyrova** The Markov Model of the Information Security Protocol Based on the Needham-Schroeder Protocol for One-time Keys (ID 1295)	**Dmitry Namiot** On Model Inversion Attacks (ID 1210)
	14:00–14:15	**Dmitry Kukunin, Aleksandr Berezkin, Ruslan Kirichek** Code Division Based on M-sequences and Its Optimization (ID 1531)	**Anatoly Yermakov, Aisha Mamyrova** Closed Stochastic Network of the Needham-Schroeder model for Oil Pipeline Data Transmission (ID 1296)	**Dmitry Namiot** On monitoring of machine learning models (ID 1218)
	14:15–14:30	**Aleksandr Berezkin, Dmitry Kukunin, Alexey Slepnev, Ruslan Kirichek** Efficient data coding methods based on neural networks (ID 1532)	**Vladimir Rykov, Nika Ivanova** Reliability of a Load-Sharing k-out-of-n System Under Decreasing of Components Residual Lifetime (ID 1186)	**Bienvenue N'dah Mouale Moutouama, Dmitry Kozyrev** Application of convolutional neural networks for image detection and recognition based on a self-written generator (ID 1283)
	14:30–14:45	**Nikita Polyakov, Anna Platonova** Characterizing the Effects of Base Station Variable Capacity on 5G Network Slicing Performance (ID 1238)	**Nika Ivanova** Reliability Analysis of a k-out-of-n System in Case of Full Repair After Its Failure (ID 1293)	**Van Trong Nguyen, Fedor Pashchenko, Bui Truong An, Duc Tiep Le** Improvement of CNN-Based Model for Object Classification in Aero Photographs (ID 1198)
	14:45–15:00	**Emil Khayrov, Vladislav Prosvirov, Anna Platonova** Traffic arrival model for millimeter wave 5G NR systems (ID 1263)	**Oleg Lukashenko** On the reliability estimation of the FBM multi-phase degradation system (ID 1260)	**Bui Truong An, Van Trong Nguyen, Fedor Pashchenko, Tran Duc Hieu, Pham Thi Nguyen** Neuro-Fuzzy Model Based on Multidimensional Membership Function (ID 1206)
	15:00–15:15	**Vladislav Prosvirov, Emil Khayrov** A Model for 5G Millimeter Wave Service Rate Abstraction (ID 1266)	**Konstantin Vytovtov, Elizaveta Barabanova, Vladimir Vishnevsky** Modeling and analysis of the multi-channel queueing system transient behavior for piece-wise constant arrival rates (ID 1258)	**Olga Kochueva** Fuzzy Classification Model Based on Genetic Algorithm (ID 1231)
	15:15–15:30		**Aleksandr Moshnikov** Comparison of approaches to component reliability allocation for distributed control systems (ID 1257)	**Yurii Orlov, Voronina Maria** The error correction method in the problem of automatic authorship identification of literary text (ID 1242)
	15:30–16:00	Break		

Tuesday, September 27, 2022			B.1.3. Analytical modeling of Distributed Systems and Networks *Chairs: Prof. D.Efrosinin, Prof. V.Rykov*	
	16:00–16:15		**Dmitry Efrosinin, Natalia Stepanova** Average cost minimization in a multi-server retrial queueing system with a controllable reserve group of servers (ID 1229)	
	16:15–16:30		**Alexandra Borodina** Speed-up simulation for reliability analysis of Wiener degradation process with random failure threshold (ID 1255)	
	16:30–16:45		**Agassi Melikov, Ramil Mirzayev** Метод расчета характеристик системы обслуживания с гибридной политикой пополнения запасов от двух источников (ID 1216)	
	16:45–17:00		**Andrei Zorine** О периоде занятости и загрузке системы обслуживания с разделением времени в случайной среде (ID 1243)	
	17:00–17:15		**Vladimir Vishnevsky, Konstantin Vytovtov, Elizaveta Barabanova, Georgiy Vytovtov** Transient Behaviour of Finite-Source Single-Line Queueing Systems With Jumps of Network Traffic (ID 1458)	
	17:15–17:30		**Galina Zverkina** On asymptotic analysis of quasi-regenerative processes (ID 1253)	
	17:30–17:45		**Alexander Koshelev, Galina Zverkina** О методе моделирования случайной величины с помощью её интенсивности (ID 1240)	
	17:45–18:00		**Олег Ткачев** Определение среднего времени работы до отказа беспроводной сенсорной сети (ID 1179)	

	TIME (Moscow time)	DAY 3: Track sessions		
		A.2.1. Computer and Communication Networks: Architecture, Protocols and Technologies *Chairs: Prof. V.Bogatyrev, Dr. I.Kochetkova*	**B.2.1. Analytical modeling of Distributed Systems and Networks** *Chairs: Prof. A.Nazarov, Prof. S.Moiseeva*	
Wednesday, September 28, 2022	11:00–11:15	**Anastasia Ageeva, Elena Makeeva, Irina Kochetkova, Andrey Gorshenin** Analyzing Impact of Path Loss Models on eMBB Bit Rate Degradation under Priority URLLC Transmission in 5G Network (ID 1292)	**Anatoly Nazarov, Tuan Phung-Duc, Svetlana Paul, Olga Lizyura** Two-Way Communication Retrial Queue with Markov Modulated Poisson Input and Multiple Types of Outgoing Calls (ID 1624)	
	11:15–11:30	**Oleg Brekhov, Alex Klimenko** The estimation of microchip testing process duration based on extended fault injection method (ID 1297)	**Anatoly Nazarov, Svetlana Paul, Tuan Phung-Duc, Mariya Morozova** Analysis of Tandem Retrial Queue with Common Orbit and MMPP Incoming Flow (ID 1251)	
	11:30–11:45	**Vladimir Bogatyrev, Stanislav Bogatyrev, Anatoly Bogatyrev** Multipath redundant transmission with traffic heterogeneity in terms of the criticality of network delays (ID 1199)	**Danil Plaksin, Ekaterina Fedorova, Olga Lizyura, Dmitriy Shashev, Svetlana Moiseeva** Математическое моделирование передачи данных в сети FANET в виде RQ-систем (ID 1233)	
	11:45–12:00	**Vladimir Bogatyrev, Stanislav Bogatyrev, Anatoly Bogatyrev** Cluster With Functional Heterogeneity Of Nodes With Requests Of Different Criticality to Delays (ID 1205)	**Svetlana Paul, Ksenia Shulgina, Olga Lizyura, Dmitriy Shashev** Исследование циклических систем с повторными вызовами в ключе построения сетей передачи данных (ID 1250)	
	12:00–12:15	**Vladimir Bogatyrev, Stanislav Bogatyrev, Anatoly Bogatyrev** The timeliness of the reserved service in the cluster with the regulation of the time of destruction of overdue requests in the node queues (ID 1193)	**Anatoly Nazarov, Tuan Phung-Duc, Svetlana Paul, Olga Lizyura** Асимптотически-диффузионный анализ RQ-системы MMPP/M/1 с разнотипными вызываемыми заявками (ID 1234)	
	12:15–12:30	**Vladimir Bogatyrev, Anatoly Bogatyrev, Stanislav Bogatyrev** Reliability of a redundant computer system, taking into account the features of restoring information of various criticality to loss (ID 1203)	**Svetlana Paul, Ksenia Shulgina, Olga Lizyura, Dmitriy Shashev** Исследование циклических систем с повторными вызовами в ключе построения сетей передачи данных (ID 1250)	
	12:30–12:45	**Dmitrii Aminev, Dmitry Kozyrev, Evgenia Bogdanova** Analysis and formalization of requirements of URLLC, mMTC, eMBB scenarios for the physical and data link layers of a 5G mobile transport network (ID 1171)	**Svetlana Moiseeva, Ekaterina Pakulova, Artem Ryndin, Irina Turenova** Математическая модель мультипотоковой системы передачи данных (ID 1246)	

12:45–13:00	**Alexander Grebeshkov** IIoT information processing model for transfer learning with data quality management (ID 1200)	**Татьяна Бушкова, Svetlana Moiseeva** Гауссовская аппроксимация для ресурсной гетерогенной СМО (GI+2M)(v)/GI/∞ (ID 1247)
13:00–13:30	Break	

Wednesday, September 28, 2022		A.2.2. Computer and Communication Networks: Architecture, Protocols and Technologies **Chairs: Prof. S.Stepanov, Dr. E.Sopin**	B.2.2. Analytical modeling of Distributed Systems and Networks **Chairs: Prof. J.Sztrik, Prof. I.Peshkova**	
	13:30–13:45	**Sergey Stepanov, Mikhail Stepanov, Fedor Kroshin** Numerical Analysis of Full-Available Group of Servers with Dependence of Call Repetition on the Type of Call Blocking (ID 1184)	**Ádám Tóth, János Sztrik** Performance analysis of a finite-source retrial queueing system with two-way communication, catastrophic breakdown and impatient customers using simulation (ID 1207)	
	13:45–14:00	**Dmitrii Nikol'skii, Andrei Krasnov** Network traffic preparation for its states analysis by the aggregated data packets partial correlations method (ID 1235)	**Alexander Rumyantsev, Irina Peshkova** Artificial Regeneration in Supercomputer Queueing Model (ID 1237)	
	14:00–14:15	**Anastasia Daraseliya, Eduard Sopin** On the analysis of a resource loss system with the waiting buffer (ID 1241)	**Irina Peshkova** Extreme behavior of waiting times in GI/G/1 with Exponential-Pareto service times (ID 1254)	
	14:15–14:30	**Eugene Yu. Shchetinin, Anastasia Glushkova, Leonid Sevastianov** Automatic detection of anomalies in electrocardiograms with generative deep learning (ID 1170)	**Ruslana Nekrasova, Dmitry Efrosinin, Evsey Morozov** Stability analysis of an unreliable two-class retrial system with constant retrial rates (ID 1239)	
	14:30–14:45	**Eugene Yu. Shchetinin, Anastasia Glushkova, Blinkov Yury** Towards the effectiveness of the adversarial attacks on robustness of medical images recognition by deep neural networks (ID 1183)	**Stepan Rogozin, Evsey Morozov** A unified regenerative stability analysis of some non-conventional queueing models (ID 1248)	
	14:45–15:00	**Igor Buzhin, Maxim Bessonov, Yuriy Mironov, Antonova Veronika** Methodology for a comprehensive assessment of the quality of telecommunication services of transport networks using SDN/NFV technologies (ID 1187)	**Evgeniy Kudryavtsev, Mikhail Fedotkin** Изучение процесса адаптивного управления конфликтными потоками Кокса-Льюиса путем имитационного моделирования (ID 1252)	
	15:00–15:15	**Aleksander Kalachikov** Performance evaluation of MU-MIMO precoding with user selection on 5G-NR channel model (ID 1189)	**Sergey Vasilyev, Mohamed Adel Bouatta, Galina Tsareva** Numerical analysis of large-scale queueing system with a small parameter (ID 1259)	
	15:15–15:30		**Elizaveta Barabanova, Konstantin Vytovtov, Vladimir Vishnevsky, Iskander Khafizov** Analysis of photonic switches using queueing theory and simulation modelling (ID 1433)	
	15:30–16:00	Break		

Wednesday, September 28, 2022			B.2.3. Analytical modeling of Distributed Systems and Networks *Chair: Prof. N.Markovich, Prof. A.Mandel*	
	16:00–16:15		**Natalia Markovich, Maksim Ryzhov** Estimation of the Tail Index of PageRanks in Random Graphs (ID 1177)	
	16:15–16:30		**Natalia Markovich, Maksim Ryzhov** Clusters of Exceedances for Evolving Random Graphs (ID 1194)	
	16:30–16:45		**Alexander Mandel, Viktor Laptin** Inventory Control with Returns and Controlled Markov Queueing Systems (ID 1211)	
	16:45–17:00		**Alexander Mandel, Viktor Laptin** Controlled Markov Queueing Systems under Uncertainty (ID 1212)	
	17:00–17:15		**Hilquias Cravid, Ivan Zaryadov, Tatiana Milovanova** Queuing system with threshold-based general renovation mechanism (ID 1223)	
	17:15–17:30		**Sergey Vorobeychikov, Andrey Pupkov** Non-asymptotic Confidence Estimation of the Autoregressive Parameter in ARMA(1,q) Model (ID 1204)	
	17:30–17:45		**Rostislav Razumchik, Lusine Meykhanadzhyan** Existence of stationary queue-size distributions in the systems that work only on the biggest batches of customers (ID 1281)	

	TIME (Moscow time)	DAY 4: Round Table and Conference Closing
Thursday, September 29, 2022	11:00–13:00	**Round Table with the participation of young scientists: Future networks 2030, artificial intelligence and big data (Круглый стол с участием молодых ученых по вопросам сетей 2030, искуственного интеллекта и больших данных)** *Chairs: P rof. Vladimir Vishnevsky, Prof. Konstantin Samouylov*
	13:00–13:15	**Conference Closing**