

22nd International Conference on Distributed Computer and Communication Networks (DCCN 2019) – AGENDA

September 23 (Monday) – September 27 (Friday), 2019

Organizers	
V.A. Trapeznikov Institute of Control Sciences of RAS (ICS RAS, Russia, Moscow)	Peoples’ Friendship University of Russia (RUDN University), Moscow, Russia
Venues	
September 23 (Monday) – September 24 (Tuesday), 2019 at ICS RAS	September 25 (Wednesday) – September 27 (Friday), 2019 at RUDN
65 Profsoyuznaya street, Moscow 117997, Russia	Faculty of Science, Ordzhonikidze str. 3, 115419 Moscow, Russia
Tracks	
Track A. Computer and Communication Networks and Technologies. Chair: Vladimir Vishnevsky. Co-chair: Dmitry Kozyrev.	
Track B. Analytical Modeling of Distributed Systems. Chair: Konstantin Samouylov. Co-chair: Irina Gudkova.	
Track C. Distributed Systems Applications. Chair: Andrey Koucheryavy. Co-chair: Daria Ostrikova.	

Monday, September 23, 2019		ICS RAS				ICS RAS
	09:00–10:30	Registration (Reception desk)				
	Rooms	ICS RAS - small conference hall			Reception desk	
	10:30–14:00	Plenary Session Chairmen: <i>Vladimir Vishnevsky</i> , ICS RAS and <i>Konstantin Samouylov</i> , RUDN			Registration	
	10:30–10:45	Welcome Speech <i>Dmitry Novikov</i> , Director, ICS RAS and <i>Vladimir Filippov</i> , Rector, RUDN				
	10:45–11:30	Scheduling Complex Applications in Cloud Environments – Research Trends and Challenges <i>Helen Karatza</i> , Aristotle University of Thessaloniki, Greece				
	11:30–12:15	Practical Overview of Communication Technologies for Industrial IoT Applications <i>Jiří Hošek</i> , Brno University of Technology, Czech Republic				
	12:15–12:30	Coffee Break				
	12:30–13:15	Robust and Autonomous mmWave-based Drone Interworking and Aerial Networking Technology <i>Sergey Andreev</i> , Tampere University of Technology, Finland				
	13:15–14:00	Methods for processing of Heterogeneous Data in IoT based Systems <i>Tatiana Atanasova</i> , Institute of Information and Communication Technologies, BAS, Bulgaria				
	14:00–14:15	GROUP PHOTO				
	14:15–15:00	Lunch Time				
	Rooms	Room 9	Room 10	Room 4	Reception desk	
	15:00–17:30	A.1.1. Computer and Communication Networks and Technologies <i>Chairs: Prof. U.Krieger, Prof. R.Meshcheryakov</i>	B.1.1. Analytical Modeling of Distributed Systems <i>Chairs: Prof. A.Dudin, Prof. M.Pagano</i>	C.1.1. Distributed Systems Applications <i>Chairs: Prof. J.Hosek, Prof. R.Kirichek</i>	Registration	
	15:00–15:15	Artem Volkov; Konstantin Proshutinskiy; ABUZAR B. M. ADAM; Abdelhamied Ateya; Ammar Muthanna; Andrey Koucheryavy SDN Load prediction algorithm based on artificial intelligence (ID 192)	Alexander Dudin; Sergey Dudin; Chesoong Kim OPTIMAL CONTROL BY THE QUEUE WITH RATE AND QUALITY OF SERVICE DEPENDING ON THE AMOUNT OF HARVESTED ENERGY AS A MODEL OF THE NODE OF WIRELESS SENSOR NETWORK (ID 99)	Rumen Ketipov; Georgi Kostadinov; Plamen Petrov; Iliyan Zankinski; Todor Balabanov Human-Computer Mobile Distributed Computing for Time Series Forecasting (ID 50)		
	15:15–15:30	Tadeusz Czachorski Multichannel diffusion approximation models for the evaluation of multichannel communication networks (ID 235)	Vladimir Vishnevsky; Olga Semenova; Tan Bui Adaptive cyclic polling systems: analysis and application to the broadband wireless networks (ID 181)	Van Dai Pham; Trung Hoang; Ruslan Kirichek; Maria Makolkina; Andrey Koucheryavy Minimizing the IoT System Delay with the Edge Gateways (ID 198)		

Tuesday, September 24, 2019		ICS RAS			ICS RAS	
	09:00-10:00	Registration (Reception desk)				
	Rooms	Room 9	Room 10	Room 4		Reception desk
	10:00–14:00	A.2.1. Computer and Communication Networks and Technologies <i>Chairs: Prof. K.Samouylov, Prof. T.Czachorski</i>	B.2.1. Analytical Modeling of Distributed Systems <i>Chairs: Prof. E.Bulinskaya, Prof. Yu.Gaidamaka</i>	C.2.1. Distributed Systems Applications <i>Chairs: Prof. S.Andreev, Prof. M.Sneps-Sneppe</i>		Registration and Welcome Tea
	10:00–10:15	Amir Mukhtarov; Oleg Pershin; Roman Ivanov A Problem of Optimal Location of Given Set of Base Stations in Wireless Networks with Linear Topology (ID 149)	Ekaterina Bulinskaya Discrete-Time Insurance Models. Optimization of their Performance by Reinsurance and Bank Loans (ID 134)	Eugene Shchetinin A robust algorithm for detecting shilling attacks on recommendation systems (ID 37)		
	10:15–10:30	Vyacheslav Begishev; Dmitri Moltchanov; Andrey Samuylov; Konstantin Samouylov Characterizing the Degree of LTE Involvement in Supporting Session Continuity in Street Deployment of NR Systems (ID 28)	Andrey Krasnov; Dmitrii Nikol'skii Statistical distributions of values of partial correlators of aggregated network traffic packets (ID 63)	Dmitry Namiot; Manfred Sneps-Sneppe On Physical Web for social networks (ID 43)		
	10:30–10:45	Sergey Dushin; Sergey Frolov The increasing of payload capacity of LPWAN using the distributed linear prediction algorithm (ID 170)	Ekaterina Lisovskaya; Yuliya Gaidamaka; Michele Pagano; Ekaterina Pankratova; Svetlana Moiseeva Heterogeneous Queueing System MAP/GI(n)/∞ with Random Customers’ Capacities (ID 208)	Oleg Boychenko; Ilya Gavrikov Potential Applications of Smart Contract Technology in Corporate Business Processes (ID 25)		
	10:45–11:00	Vladimir Sukhoverkhy Research results of the implementation developed network window system for Unix-compatible operating systems for remote control of the test bench. (ID 119)	Ekaterina Markova; Yves Adou; Anastasia Golskaia; Daria Ivanova; Luis Correia Retrial Queue for Modeling Best Effort Traffic with Minimum Bit Rate Guarantee Transmission under Network Slicing (ID 201)	Omar Mahmood; Abdukodir Khakimov; Ammar Muthanna; Alexander Paramonov Effect of heterogeneous traffic on quality of service in 5G network (ID 185)		
	11:00–11:15	Ekaterina Borevich; Serg Mescheryakov; Victor Yanchus Statistical Model of Computing Experiment on Digital Color Correction (ID 151)	Yves Adou; Ekaterina Markova; Irina Gudkova Approximate Product Form Solution for Performance Analysis of Wireless Network with Dynamic Power Control Policy (ID 161)	Alexandr Golubev; Peter Bogatencov; Grigore Secieru Medical Images data optimization algorithms for Mobile Applications (ID 17)		
	11:15–11:30	Shirokov Vladimir Модели и методы гибридной методологии для оценки и выбора параметров конвергентных сетей радиодоступа 5G (ID 126)	Igor Nikiforov Detection and Detectability of Changes in a Multi- parameter Exponential Distribution (ID 58)	Van Phu Tran A method for extracting metadata from heterogeneous data streams (ID 199)		
11:30–12:00	Coffee Break					
Tuesday, September 24, 2019	12:00–12:15	Nikolai Sokolov; Andrei Levakov; Andrei Sokolov Using a Step Distribution Function to Describe the Incoming Packet Flow (ID 54)	Udo R. Krieger; Natalia Markovich Modeling and Reliability Analysis of a Redundant Transport System in a Markovian Environment (ID 71)	Vladimir Vorobiev Telecommunication high-rise platforms and fracturing monitoring (ID 113)		
	12:15–12:30	Leonid Abrosimov; Margarita Rudenkova The performance evaluation of IEEE 802.11 for different sized DCF WLAN under unsaturated condition (ID 21)	Natalia Markovich; Rostislav Razumchik Cluster Modeling of a Lindley Process with an Application to Queueing (ID 73)	Konstantin Kostiukhin; Vladimir Galatenko Статический анализ исходных текстов программ в системах реального времени (ID 52)		
	12:30–12:45	Shagen Arutyunyan; Leonid Abrosimov Проблема управления сетевыми ресурсам при реализации грид-систем (ID 93)	Maxim Ryzhov; Natalia Markovich Random graph node classification by extremal index of PageRank (ID 96)	Dmitry Aminev; Dmitry Kozyrev; Ruslan Kirichek Анализ архитектур файловых систем для распределённых хранилищ (ID 240)		
	12:45–13:00	Elizaveta Barabanova; Konstantin Vytovtov; Victor Podlazov Model and algorithm of next generation optical switching systems based on 8x8 elements (ID 74)	Igor Kartashevskiy Solution of Lindley integral equation for correlated traffic (ID 184)	Konstantin Alikin; Vitaly Morozov Система обратной связи для удаленного источника питания с преобразованием напряжение-частота и оптоволоконной линией передачи (ID 4)		
	13:00–13:15	Konstantin Vytovtov; Elizaveta Barabanova Mathematical Model Of Four-Dimensional Communication Systems Based On Block Diagonal Matrix With 2x2 Blocks (ID 79)	Ivan Blagoev Application of time series techniques for random number generator analysis (ID 40)	Vera Pavlova; Ruslan Glushakov; Rustam Pirmagomedov Интернет Вещей в здравоохранении: новые возможности и актуальные проблемы (ID 36)		

Tuesday, September 24, 2019	13:15–13:30	Vasily Balashov Сравнение различных подходов к построению бортовых коммутируемых сетей (ID 144)	Igor Rodionov On estimation of Weibull-tail and log-Weibull-tail distributions for modeling end-to-end delay (ID 42)	Tatyana Nesenjuk Исследования применения RFID-индикации полимерных изоляторов в системе электроснабжения (ID 166)	Registration	ICS RAS
	13:30–13:45	Dmitrii Volchkov; Nina Bakanova Автоматизированный режим подготовки распорядительных документов в управленческой организации (ID 87)	Sergey Dudin; Olga Dudina; Alexander Dudin Исследование системы обслуживания с групповым марковским потоком, без буфера и дисциплиной полного отказа, обслуживанием фазового типа и использованием разделения процессора при превышении числом активных пользователей порогового значения (ID 11)	Ivan Brokarev; Sergei Vaskovskii Распределенная система сбора данных для задачи анализа компонентного состава природного газа (ID 46)		
	13:45–14:00	Maksim Kavalero A routing algorithm based on AQRERM with estimates of waiting time in the neighbor’s queue (ID 230)	Sergey Dudin; Olga Dudina; Alexander Dudin Исследование системы с распределением времени обслуживания фазового типа и использованием дисциплины разделения процессора при превышении лимита суммарной интенсивности обслуживания запросов (ID 9)	Igor Khromov Организм человека как элемент межсегментной коммуникации (ID 159)		
	14:00–15:00	Lunch Time				
	15:00–18:00	A.2.2. Computer and Communication Networks and Technologies <i>Chairs: Prof. A.Dvorkovich, Prof. C.Kim</i>	B.2.2. Analytical Modeling of Distributed Systems <i>Chairs: Prof. A.Melikov, Prof. A.Nazarov</i>	C.2.2. Distributed Systems Applications <i>Chairs: Prof. R.Meshcheryakov, Prof. L.Abrosimov</i>		
	15:00–15:15	Aleksandr Ivchenko; Lyubov Antyufrieva; Alexander Dvorkovich PPPoE - Adaptive Link-Layer Protocol for High-Speed Packet Networks (ID 195)	Anatoly Nazarov; Svetlana Paul; Olga Lizyura Asymptotic-Diffusion Analysis for Retrial Queue with Batch Poisson Input and Multiple Types of Outgoing Calls (238)	Oleg Evsutin; Roman Meshcheryakov; Vladimir Tolmachev; Andrey Iskhakov; Anastasia Iskhakova Algorithm for embedding digital watermarks in wireless sensor networks data with control of embedding distortions (ID 229)		
	15:15–15:30	Alexander Dvorkovich; Viktor Dvorkovich Synthesis of High-Performance Window Functions Using Minimization of Difference between its Waveform and Spectrum (ID 247)	Anastasia Galileyskaya; Ekaterina Lisovskaya; Ekaterina Fedorova Resource Queueing System with the Requirements Copying at the Second Phase	Anikina Evgenia; Kalashnikov Andrey Heterogeneous network security effective monitoring method (ID 101)		
	15:30–15:45	Viktor Dvorkovich; Alexander Dvorkovich Dolph-Chebyshev and Barcion-Temes Window Functions Modification (ID 234)	Ivan Lapatin; Anatoly Nazarov Asymptotic Analysis of the Output Process in Retrial Queue with Markov-Modulated Poisson Input under Low Rate of Retrials Condition (ID 237)	Dmitry Aminev; Vladimir Prokudin; Dmitry Kozyrev; Ruslan Kirichek Вопросы безопасности SDN в центре обработки данных (ID 236)		
	15:45–16:00	Gleb Verba; Kirill Bystrov; Viktor Dvorkovich; Gennady Gryzov The use of Intra Prediction method in wavelet-based video coding systems (ID 174)	Elena Danilyuk; Ekaterina Fedorova Negative Binomial Distribution Approximation in Retrial Queue M/M/1 with Collisions and Impatient Calls (ID 104)	Vishnevsky Vladimir; Kirichek Ruslan; Shirvanyan Artem Конструкция и требования к кабель-тросу для питания беспилотной привязной телекоммуникационной платформы (ID 243)		
	16:00–16:15	Fedor Konstantinov; Gennady Gryzov; Kirill Bystrov The use of Asymmetric Numeral Systems entropy encoding in video compression (ID 137)	Diana Tumashkina; Liudmila Nezhel'skaya Estimation of the Probability Density Parameters of the Interval Duration between Events in Correlated Semi-synchronous Event Flow of the Second Order by the	Adam Vas; Laszlo Toth Investigation of a hybrid sensor- and computational network for numerical weather prediction calculations (ID 16)		
16:15–16:45	Coffee-break			Registration	ICS RAS	
16:45–17:00	Gleb Verba; Kirill Bystrov Optimal quantization methods in problems of visual data multichannel wavelet-compression (ID 133)	Andrey Larionov, Vladimir Vishnevsky Performance analysis of IEEE 802.11 DCF wireless multihop networks using queueing systems with phase-type distributions of service time	Vladimir bogatyrev; Stanislav Bogatyrev; Sergey Aleksankov; Aleksey Derkach Model of cluster reliability with support of continuity of computational process in the migration of virtual machines (ID 136)			
17:00–17:15	Lyubov Antyufrieva; Aleksandr Ivchenko Adaptation of the frame synchronization algorithm of the second generation satellite broadcasting standard DVB-S2 for communication system (ID 228)	Agassi Melikov; Sevinj Aliyeva Mathematical Models of The Queueing Systems with MMPP Flow and Instantaneous Feedback (ID 138)	Kirill Mityagin An multiparameter intelligent monitoring system in intensive care (ID 120)			

Wednesday, September 25, 2019				Room 224	RUDN	
	09:00–10:00	Registration and welcome tea (Room 224)				Registration and Welcome Tea
			Room 214			
	10:00–14:00		C.3.1. Distributed Systems Applications Chairs: Prof. L.Sevastianov, Prof. D.Kulyabov			
	10:00–10:15		Alexander Grusho; Elena Timonina; Nick Grusho The bans in finite probability spaces and the problem of small samples (ID 231)			
	10:15–10:30		Alexander Grusho; Nick Grusho; Elena Timonina Information Flow Control on the Basis of Meta Data (ID 88)			
	10:30–10:45		Fedorenko Vladimir; Vladimir Samoylenko; Alexsey Vinogradenko; Samoylenko Irina; Anikuev Sergey; Sharipov Ildar Mathematical aspects of stable state estimation of the radio equipment in terms of communication channel functioning (ID 97)			
	10:45–11:00		Hilquias Viana; Ivan Zaryadov; Dmitry Kulyabov Some aspects of using the general renovation as the active queue management mechanism (ID 100)			
	11:00–11:15		Andrey Gorshenin; Mariia Lebedeva; Svetlana Lukina; Alina Yakovleva On handling the missing values in precipitation records using machine learning algorithms (ID 125)			
	11:15–11:30		Budko Pavel; Fedorenko Vladimir; Alexsey Vinogradenko; Vladimir Samoylenko; Pedan Alexey Approach to the intellectual monitoring of the technical condition of difficult dynamic objects on the basis of the systems of a polling (ID 162)			
	11:30–12:00	Coffee Break at RUDN Dining Hall				
	12:00–12:15		Olga Kantor Параметрическая идентификация линейных зависимостей в условиях неопределенности исходных данных (ID 83)			
12:15–12:30		Olga Kantor; Semen Spivak; Bella Khashper Оценка погрешности экспериментальных данных в задачах параметрической идентификации линейных моделей (ID 115)				
12:30–12:45		Dmitriy Divakov; Alexandre Egorov; Konstantin Lovetskiy; Anton Sevastianov; Leonid Sevastianov Leaky Modes in Laser-printed Integrated Optical Structures (ID 190)				
12:45–13:00		Nikolay Tretyakov; Leonid Sevastianov; Alexander Zorin States with minimum dispersion of observables in Kuryshkin-Wodkiewicz quantum mechanics (ID 212)				
13:00–13:15		Vladimir Melezhik; Leonid Sevastianov Calculation of Probability Density Distribution of Ultracold Atoms and Molecules in Waveguide-like Traps (ID 225)				
Wednesday, September 25, 2019	13:15–13:30		Peter Trefilov; Rinat Galin; Mariya Romanova Simulation modeling of Strapdown Inertial Navigation Systems (SINS) for dynamic object in different correction modes (ID 216)	Lunch	RUDN	
	14:00–15:00					
	15:30–18:30	Guided City Bus Tour				

Thursday, September 26, 2019					Room 224	RUDN
	09:00–10:00	Registration and welcome tea (Room 224)				
		Room 208	Room 214			
	10:00–13:00	A.4.1. Computer and Communication Networks and Technologies <i>Chairs: Prof. T.Atanasova, Prof. V.Vishnevsky</i>	B.4.1. Analytical Modeling of Distributed Systems <i>Chairs: Prof. A.Andronov, Prof. V.Rykov</i>			
	10:00–10:15	Attila Kuki Modeling of a Two-Way Communication System with a Special Searching for Customers (ID 172)	Diana Santalova; Alexander Andronov Estimation of the parameters of continuous-time finite Markov chain (ID 51)			
	10:15–10:30	Valeriy Naumov; Vitalii Beschastnyi; Daria Ostrikova; Yuliya Gaidamaka 5G New Radio System Performance Analysis Using Limited Resource Queuing Systems with Varying Requirements (ID 189)	Vladimir Rykov; Boyan Dimitrov Renewal Redundant Systems Under the Marshall-Olkin Failure Model. Sensitivity Analysis			
	10:30–10:45	Yurii Orlov; Anastasia Ivchenko; Natalia Podzharaya; Vsevolod Shorgin; Aliaksandr Birukou; Yuliya Gaidamaka; Konstantin Samouylov On the stability of D2D connection with the use of kinetic equation for SIR empirical distribution function density (ID 34)	Armen Stepanyants; Valentina Viktorova Reliability Analysis of Systems with Hybrid Recovery and Imperfect Built-in-Test (ID 76)			
	10:45–11:00	Yuriy Zaychenko; Volodymyr Vasyliev; Dmytro Vishtal; Natalia Lyubashenko Accurate and interval estimates of the probability of network service availability for communication networks (ID 106)	Elmira Kalimulina Rate of convergence of Markov Queueing Systems with dynamic routing (ID 158)			
	11:00–11:15	Kinh Hoang Communication network system modeling for application in ship (ID 44)	Galina Zverkina Об одной системе восстановления с тёплым резервом (ID 142)			
	11:15–11:30	Pavel Mikheev; Pavel Pristupa; Sergey Sushchenko Performance of transport connection with selective failure mode when competing for throughput of data transmission path (ID 239)	Mikhail Fedotkin; Evgeniy Kudryavtsev Изучение числовых характеристик имитационной модели адаптивного управления конфликтными потоками неоднородных требований (ID 26)			
Thursday, September 26, 2019	11:30–12:00	Coffee Break				
	12:00–12:15	Dmitry Kochetkov, Nail Sadekov Вызовы информационного общества	Lusine Meykhanadzhyan; Ivan Zaryadov Stationary Characteristics of the G/MSP/n/∞ Queue with General Renovation (ID 94)			
	12:15–12:30	Maxim Fomin; Sergey Shorokhov The Construction of Time-Series Data in the Multidimensional Information System Designed Using the Cluster Method (ID 179)	Tatyana Bushkova Resource Queueing System with Paired Requests and Their Parallel Service (ID 68)			
	12:30–12:45	Dmitry Poluektov; Michail Polovov; Petr Kharin; Martin Stusek; Krystof Zeman; Pavel Masek; Irina Gudkova; Jiri Hosek; Konstantin Samouylov On the Performance of LoRaWAN in Smart City: End Device Design and Communication Coverage (ID 200)	Gheorghe Mishkoy; Lilia Mitev Algorithms and numerical results for DD priority discipline with semi-Markov switching (ID 56)			
	12:45–13:00	Victor Pasenchuk Android testable architecture overview and usage in biometric security systems (ID 233)	Dmitry Kozyrev; Duy Phuong Nguyen Расчёт характеристик надёжности лётного модуля привязной мультироторной беспилотной высотной платформы на основе гексакоптера (ID 245)			
			B.4.2. Analytical Modeling of Distributed Systems <i>Chairs: Prof. E.Morozov , Prof. S.Stepanov</i>			

Thursday, September 26, 2019	13:00–13:15		Ivan Tsitovich Group Polling Method Upon the Independent Activity of Sensors in Unsynchronized Wireless Monitoring Networks (ID 98)		Registration	RUDN
	13:15–13:30		Alexandra Borodina; Evsey Morozov; Oleg Lukashenko On estimation of rare event probability in degradation process with light-tailed stages (ID 175)			
	13:30–13:45		Alexander Rumyantsev; Evsey Morozov; Irina Peshkova On Failure Rate Comparison of Finite Multiserver Systems (ID 156)			
	13:45–14:00		Taisia Morozova; Evsey Morozov A Multiclass Retrial System With Coupled Orbits And Mixed Service Interruptions (ID 60)			
	14:00–15:00	Lunch				
	15:00–15:15		Mariia Maltseva Асимптотический анализ N-модели с приоритетом (ID 188)			RUDN
	15:15–15:30		Ksenia Zhukova Large deviation approximation for a constant retrial rate system (ID 177)			
	15:30–15:45		Sergey Stepanov; Mikhail Stepanov; Hanna Zhurko The Modeling of Call Center Functioning in Case of Overload (ID 129)			
	15:45–16:00		Yuriy Obzherin; Stanislav Sidorov; Mikhail Nikitin Hidden Markov model of information system with component-wise storage devices (ID 155)			
	16:00–16:15		Ruslana Nekrasova On verification of stability of multi-orbit system with general retrials: simulation approach (ID 157)			
	16:15–16:45	Coffee Break				
	16:45–17:00		Veronika Antonova; Liudmila Zhilyakova; Nikolay Kuznetsov; Natalya Grechishkina Evaluation of Information Transmission Resource While Processing Heterogeneous Traffic in Data Networks (ID 105)			
	17:00–17:15		Fedor Rodionov; Maria Kocheganova Построение математической модели класса систем двухрежимного циклического управления перекрестком (ID 78)			
	17:15–17:30		Alexander Grebeshkov Cognitive Network States Analysis under Vertical Handover with Markov Chains Model (ID 59)			
	18:00–21:00	Conference dinner, RUDN dining hall				

Friday, September 27, 2019	Room 214		RUDN
	10:00–12:00	<div>Round Table: On applications of the distributed systems (Круглый стол по вопросам приложений распределённых систем)</div> <div><i>Chairs: prof. Vladimir Vishnevsky, prof. Konstantin Samouylov</i></div>	
	12:00–12:15	Conference Closing	