

The 4th International Professor's Day on ICT Algorithm Design
Huawei Russian Research Centre
in conjunction with *The Institute for Information Transmission Problems RAS*
Technical Program for Day 2nd, December 1st

	<u>Wireless & Network Algorithms</u> <u>Chair - Vladimir Lyashev</u> Sloboda Hall	<u>Information Theory</u> <u>Chair - Alexey Maevskiy</u> Kostroma Hall	<u>Non-linear Signal Processing</u> <u>Chair - Pavel Plotnikov</u> Vladimir Hall	<u>Media & Artificial Intelligence</u> <u>Chair - Ivan Mazurenko</u> Yaroslavl Hall
9:30-10:00	Andrey Ivanov, Kirill Andreev <i>(Skolkovo Institute of Science and Technology, IoT lab)</i> "Machine learning application in MIMO Detection"	Sergey Fedorenko <i>(Saint-Petersburg State University of Aerospace Instrumentation)</i> "Some aspects of classical and modern coding theory"	Sergey Zhidkov <i>(Cifrasoft, Chelyabinsk)</i> "Coded-Modulation Schemes Based on Orthogonal Transform Multiplexing with Memoryless"	Sergey Andreev <i>(Technical University of Tampere)</i> "High-rate multimedia applications in beyond-5g wireless networks"
10:00-10:30	Nikolay Zamarashkin <i>(The Institute of Numerical Mathematics, Russian Academy of Science)</i> "Why MAXVOL based Cross Approximation Algorithm based is the efficient optimization strategy"	Grigory Kabatiansky <i>(Skolkovo Institute of Science and Technologies)</i> "Compressed sensing methods for data transmission via multiple-access channels"	Alexander Gornov <i>(The Institute for System Dynamics and Control Theory, Siberian Branch of RAS)</i> "Practice numerical technology for optimal control problem"	Konstantin Vorontsov <i>(Moscow Institute of Physics and Technology)</i> "Topic Modeling of Large Text Collections: Theory, Technology, and Applications"
10:30-11:00	Nalin Jayakody <i>(Tomsk Polytechnic University)</i> "Non-Orthogonal Multiple Access for 5G Networks"	Arkady D'yachkov <i>(Moscow State University)</i> "Group Testing"	Oleg Litvinov <i>(Bauman Technical University)</i> "Potential characteristics of partially adaptive antenna arrays with discrete phase shifters and attenuators"	Michail Povolotsky, Irina Kunina <i>(The Institute for Information Transmission Problems, Russian Academy of Science)</i> "Segmentation of vehicle registration plates based on dynamic time warpin" "Blind radial distortion compensation from video using the fast Hough transform"
11:00-11:30	Dmitry Bankov <i>(The Institute for Information Transmission Problems, Russian Academy of Science)</i> "Is LoRaWAN suitable for reliable massive machine type communications?"	Denis Krotov <i>(Novosibirsk State University)</i> "Two-fold ballpackings in small hypercubes"	Ivan Malay "Test method of adaptive antenna arrays"	Dmitry Abulkhanov, Anastasia Ingacheva <i>(The Institute for Information Transmission Problems, Russian Academy of Science)</i> "Neural network-based feature point descriptors for registration of optical and SAR images" "Blur kernel estimation with algebraic tomography technique and intensity profiles of object boundaries"
11:30-11:45	Coffee Break			
11:45-12:15	Martin Kurras <i>(Fraunhofer Institute for Telecommunications,Heinrich Hertz Institute, HHI)</i> "Adaptive sectorization and beamforming with cylindrical arrays in cellular systems"	Peter Trifonov <i>(Peter the Great St. Petersburg Polytechnic University)</i> "Design and decoding of polar codes with big kernels"	Konstantin Lyalin <i>(National research University of Electronic Technology)</i> "Digital beamforming antenna array multi-channel single burst wideband calibration algorithm"	Boris Miller <i>(The Institute for Information Transmission Problems, Russian Academy of Science, Monash University, Melbourne, Victoria, Australia)</i> "Some novel statistical problems related to UAV controls"
12:15-12:45	Alexander Sergienko <i>(Saint Petersburg Electrotechnical University, LETI)</i> "Noncoherent Reception of Short PSK/QAM Packets with Pilot Symbols "	Fedor Ivanov <i>(The Institute for Information Transmission Problems, Russian Academy of Science)</i> "A novel signal-code construction for multiple access system over vector-disjunctive channel"	Elena Dobychina <i>(Moscow Aviation Institute)</i> "Digital antenna arrays design"	Sergey Kuznetsov <i>(The Institute of System Programming, Russian Academy of Science)</i> "Perspectives of storage class memory for DBMS technology"
12:45-13:15	Yuriy Parshin <i>(Ryazan State Technical University)</i> "The problem of efficient receiving of ultra-low-power signal for IoT application"	Alexey Kreshchuk <i>(The Institute for Information Transmission Problems, Russian Academy of Science)</i> "Uncoordinated Multiple Access with Strong Interference from other Users"	Sergey Gousev "Digital signal processing for 5G"	Nickolay Penkrat, Sergey Sysoenko <i>(Saint-Petersburg State University)</i> "Fast ADAS solution. 3D Reconstruction"
13:15-14:15	Lunch			
14:15-14:45	Sergey Tikhomirov <i>(Saint-Petersburg State University)</i> "Recovering Signals from Irregular Samples"	Alexei Frolov <i>(Skolkovo Institute of Science and Technologies)</i> "Deep Learning-Based Channel Decoding"	Vladimir Andreev "Linearization of the power amplifier by predistortions"	Andrei Kopylov, Oleg Sereidin <i>(Tula State University)</i> " Computationally effective image and video processing algorithms"
14:45-15:15	Yuri Belov <i>(Saint Petersburg University, Chebyshev Lab)</i> "Recovering Signals from Irregular Samples"	Fabian Steiner <i>(Technical University of Munich)</i> "Non-Binary LDPC codes for Probabilistic Shaping"	Vladimir Koshur <i>(The Institute of space and informatic technologies SFU)</i> "Application of Artificial Intelligence and Neural Networks Technology for Design of Adaptive Numerical Methods of Global Optimization"	Victor Kazantsev <i>(Nizhny Novgorod State University)</i> " Living neuron network in microfluidic chip in vitro: toward "brain-on-chip" technology"
15:15-15:45	Vyacheslav Loginov <i>(The Institute for Information Transmission Problems, Russian Academy of Science)</i> "Coexistence between LTE and Wi-Fi in Unlicensed Spectrum"	Patrick Schulte <i>(Technical University of Munich)</i> "Some Fixed Length Distribution Matcher"	Gamlet Khanian <i>(Moscow Aviation Motors Institute)</i> " Effects of level quantization and threshold clipping in discrete spectral analysis"	Michael Nikiforov, Evgeniy Muratov <i>(Ryazan State Radio Engineering University)</i> "Algorithms of Stereo and Enhanced Vision for Embedded Systems"
15:45-16:15	Artem Krasilov <i>(The Institute for Information Transmission Problems, Russian Academy of Science)</i> "Is New Radio Enough for URLLC?"	Tobias Prinz <i>(Technical University of Munich)</i> "Polar Coded Probabilistic Amplitude Shaping"	Valery Strotov <i>(Ryazan State Radio Engineering University)</i> "Parametric system Identification using extended Kalman filtering"	Andrey Nasonov <i>(Moscow State University)</i> " Edge sharpening by grid warping as a post-processing method for image deblurring"
16:15-16:30	Coffee Break			
16:30-17:00	RTT Algorithm Lab	Lukas Holzbaur <i>(Technical University of Munich)</i> "Improved Decoding and Error Floor Analysis of Staircase Codes"	Round Table	Dmitry Votolin <i>(Moscow State University)</i> "Incredible improvement of depth cameras and its impact to near future"
17:00-17:30	Round Table	Round Table		Round Table
17:30-18:00				
18:00-18:30	Photographic Session Wrap-up			