Evgeny Khorov, D.Sc.

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COMMON INFORMATION

Researcher and consultant in wireless networks.

Areas of interest: Future Wi-Fi, 5G&6G Cellular Systems, Wireless Internet of things, dense deployment, MTC, routing, multiple access, AR/VR streaming, QoS, mathematical modeling& optimization.

Over 200 papers. Google Scholar: h-index 28, 4.3K citations. Scopus: h-index 21, 2.4K citations.

Russian Government Prize in Science and Technology for Young Scientists (2016), Scopus Award Russia (2018), Moscow Government Prize for young scientists (2013), multiple Best Paper Awards.

Contributor and Voting Member of IEEE 802.11 (develops next generation Wi-Fi).

Editor of the Year "Ad hoc Networks", 2020, Reviewer of many international journals.

Editor-in-Chief "Problems of Information Transmissions" since 2024.

TPC Chair of Globecom'18 WS on CA5GS, IEEE BlackSeaCom'19, IAB WS on Network Quality 2021. Executive Chair of WiFlex 2013, Inform. Technologies & systems (ITaS) Conf. & School 2014-2016.

Keynote/Tutorial/Panel speaker at a number of international scientific conferences, incl.: DCCN 2023, EnT 2023, IEEE Standards Summit 2022, IEEE CSCN 2021, IEEE PIMRC 2017&2019, NEW2AN 2018&2021, IEEE BlackSeaCom 2017, IEEE Globecom 2017, IEEE ICC 2016, IEEE ICACCI 2014, IEEE ISWCS 2014.

Experience in applying and leading research grants and industry projects. Has led projects funded by Russian Science Foundation, Russian Foundation for Basic Research, Ministry of Education and Science, British Council, Huawei, Quantenna Communications, etc.

Expert of the Russian Science Foundation, and FWO (Belgium). Member of Academic Councils of IITP RAS, and DREC MIPT. Member of the Scientific Council on Telecommunications of Russian Academy of Sciences. IEEE Senior Member.

WORK EXPERIENCE

Head of Wireless Networks Lab (early positions: Junior Researcher, Researcher, Senior Researcher, Leading Researcher)	**2008 – present time**

Institute for Information Transmission Problems (Kharkevich Institute) of the Russian Academy of Sciences

Has built a growing team of above 40 researchers.

Has developed new algorithms, protocols, mathematical models and simulation tools of various WLANs, cellular, sensor networks; found drawbacks and improved their efficiency, Scopus Award

Russia, 2018, Russian Government Prize in Science and Technology for Young Scientists, 2016).

Being a voting member of IEEE 802.11 has contributed to IEEE 802.11ax (Wi-Fi 6)

Has proposed Time Sensitive Communications in Wi-Fi and designed several methods for massive wireless TSN (IEEE PIMRC 2019 Best Paper Award)

Has developed pioneering approaches to model IEEE 802.11ah aka Wi-Fi HaLow (for IoT). For the paper on 802.11ah, received Best Cited Review Paper Award from Elsevier Computer Communications.

Together with Prof. I. F. Akyildiz prepared a project proposal and won a Megagrant. Has supervised the development of the first-ever prototype NOMA Wi-Fi (ACM Mobihoc'22 Best Demo Award)

Proposed and designed the xStream platform for cross-layer cooperation which manifold increases the number of users with high QoE in a cellular network. Has designed pioneering methods to improve QoE in cellular networks. (Best Cooperation Project awards from industrial partners)

Has introduced and studied a new type of queuing systems to model multimedia streaming via periodic reservations (Moscow Government Prize for young scientists).

Has designed and studied performance of the Scalable MESH and Proximity Based Groupcast in MANET routing protocols for QoS sensitive multimedia streaming. Has developed a theory of link management in multihop ad hoc networks (ISWCS 2012 Best Paper Award).

Has successfully led academic and industrial projects of total budget USD XX.XXX.XXX.

Head of Telecommunication Systems Lab, Associate Professor	**2017 – present time**

Higher School of Economics

Has established a lab, designed a research program, and prepared project proposals, one of which won a grant from RSF.

Deputy Head of Department & Full Professor	**2012 – present time**
(early position: Assistant Professor, Associate Professor)	

Moscow Institute of Physics and Technology.

Has significantly improved curriculum in *telecommunications*. Developed novel courses.

Lectures on 4 courses, supervises BS and MS students. Supervises 4 PhD students.

Some students won prizes at the Student Olympiad "Infotelecom".

Associate Professor	**2017 – 2022**

Moscow State University

Lectures on *Mathematical fundamentals of wireless networks protocols*

Deputy Head of Lab	**2016 – 2017**
(early position: Senior Research Scientist)	

Skolkovo Institute of Science and Technology

Center for Computational and Data-Intensive Science and Engineering

Has designed an MS educational program on the Internet of Things and new courses.

Visiting Research Fellow	**July 2015 – October 2015**

King's College London, Department of Mathematics and Natural Science

Has developed a method for performance evaluation of Wi-Fi networks in IoT scenarios.

Developer, Team Leader   **2007 – 2008**

NetCracker

Has created 2 modules for NetCracker OSS. Has implemented NetCracker OSS in MTS, Sprint.

Tutor   **2007 – 2008**

Moscow Institute of Physics and Technology

Kalashnikov Centre for Research and Innovation in Telecommunication

Has lectured on *Java Advance*. Was responsible for preparing learning material for courses and devising relevant practical activities.

EDUCATION

Moscow School of Management SKOLKOVO   **2021**

(Advanced Training Courses)

School of Research Program Management: Introduction.

Moscow Institute of Physics and Technology   **2022**

(Doctor of Science)

Thesis: *Research and Development of Wi-Fi Multiple Access Methods for IMT-2020 Scenarios*.

Specialization: *Telecommunication Systems, Networks and Devices*.

Moscow Institute of Physics and Technology &   2010 – 2012

Institute for Information Transmission Problems

(PhD Student)

Ph.D. (Candidate of Science). Thesis: *Performance evaluation of data transmission methods, which meet QoS requirements in wireless ad hoc networks*. Early defense at the second year.

Specialization: *Telecommunication Systems, Networks and Devices*.

Moscow Institute of Physics and Technology   2008 – 2010

(Master Student)

MS in Applied Physics and Mathematics. Graduated with honors. GPA 5.00 out of 5.00.

Thesis: *Multiple metrics usage in mesh networking*.

Moscow Institute of Physics and Technology   2004 – 2008

(Bachelor Student)

BS in Applied Physics and Mathematics. Graduated with honors. GPA 4.93 out of 5.00.

Thesis: *Channel Switch Time Distribution in ECMA-368 Networks*.

Evgeny Khorov received his BS and MS degrees with honors from Moscow Institute of Physics and Technology (MIPT) in 2008 and 2010, respectively, the Ph.D. degree in Telecommunications from Institute for Information Transmission Problems of the Russian Academy of Sciences (IITP RAS) in 2012, and the D.Sc. degree in Telecommunications from MIPT in 2022. In 2015 he studied Wireless Internet of Things as a Visiting Research Fellow in King's College London. Currently, Evgeny Khorov is the Head of Wireless Networks Lab established within a Megagrant Project at IITP RAS. Also, he leads the Telecommunication Systems Lab at Higher School of Economics (HSE).

Evgeny Khorov has developed numerous mathematical models of networking protocols and designed several algorithms and protocols described in over 200 papers, some of which received Best Demo Award from ACM Mobihoc (2022), Best Paper Awards from IEEE ISWCS (2012), Elsevier Computer Communications (2018), and IEEE PIMRC (2019). Evgeny Khorov has also received the Moscow Government Prize for Young Scientists (2013), Russian Government Prize in Science and Technology for Young Scientists (2016), and Scopus Award Russia (2018).

Evgeny has led many national and international projects sponsored by academia foundations (RSF, RFBR, Ministry of Science and Higher Education) and industry. For breakthrough results of the joint industrial projects, he was awarded as the Best Cooperation Project Leader many times. Evgeny Khorov is also a voting member and contributor of IEEE 802.11 that develops and standardizes Wi-Fi. He designed several improvements included in the 802.11ax standard, aka Wi-Fi 6. He also initiated activities in 802.11 towards the support of real-time applications, which is currently a target for 802.11be, aka Wi-Fi 7.

As a Deputy Chair and Full Professor at MIPT, Evgeny Khorov is responsible for the Telecommunication Program. He supervises BS, MS, and Ph.D. students. Two of his students, V. Loginov and A. Kureev, have received awards at telecommunication Olympiads. Apart from that, Evgeny Khorov has developed new courses on Wireless Networking Protocols. Three his Ph.D. students received Ph.D. degrees.

Evgeny Khorov serves as the Editor-in-Chief of the "Problems of Information Transmissions" since 2024. Also, he is a recipient of the Ad Hoc Networks Editor of the Year 2020 Award. He gives keynotes & tutorials and participates in panels at large conferences (incl. IEEE PIMRC 2019 and 2017, IEEE Globecom 2017, IEEE ICC 2016, ISWCS 2014, NEW2AN 2018 and 2021, EnT 2023). He is a TPC Chair of the IEEE Globecom 2018 Workshop on Cloudified Architectures for 5G and beyond Systems, IEEE BlackSeaCom 2019, Executive Chair of WiFlex 2013. He serves as an expert of the Russian Science Foundation, and Research Foundation - Flanders (FWO). Apart from that, he was elected as a Member of Academic Council of IITP RAS. Also, he is a member of the Scientific Counsil of RAS on Telecommunications.

INVITED TALKS, KEYNOTES & TUTORIALS

T1.   E. Khorov. Towards Ultra Reliable Wi-Fi (Tutorial). IEEE BlackSeaCom 2024

T2.   E. Khorov. Towards Ultra-High Reliability of Wi-Fi 8 (Keynote). DCCN 2023

T3.   E. Khorov. Providing low latencies and consistently high data rates in Wi-Fi 8 networks (Invited talk). 2023 Engineering and Telecommunications Conference

T4.   E. Khorov. Wi-Fi 7 and its applications to robotic and vehicular communications. Networked Robotics Seminar (Invited Talk). Technology Innovation Institute, UAE

T5.   E. Khorov. Li-Fi and the IEEE 802.11bb standard. Invited Talk on the 3rd Training on Standardization, 2022

T6.   E. Khorov. Boosting Wi-Fi Performance Within the IEEE 802.11 Standard and Beyond. Invited talk, IEEE Standards Thessaloniki Summit 2022

T7.   Evgeny Khorov. Challenges and Open Issues in Wi-Fi 6 and Wi-Fi 7 (Keynote), New2an, Saint-Petersburg, 2021.

T8.   Evgeny Khorov, A very brief introduction to Wi-Fi 7 (Tutorial), IEEE CSCN 2021

T9.   Evgeny Khorov. Wi-Fi in the 2020s, IEEE PIMRC, Istanbul, 2019.

T10.   Evgeny Khorov. Youth as the Main Resource for Achieving National Goals (Panel), Moscow Financial Forum, Moscow, Russia, 2019.

T11.   Evgeny Khorov. How to successfully Develop Technologies for Wireless Networks in Russia? (Keynote) School of key researchers, Tomsk, Russia, 2019.

T12.   Evgeny Khorov. Communication between Applications and Networks for QoE-aware Slicing in 5G Systems (Keynote). NEW2AN, Saint-Petersburg, 2018.

T13.   Evgeny Khorov. Can 5G kill Wi-Fi? (Invited Talk). 5G Summit, Thessaloniki, Greece, 2018.

T14.   Evgeny Khorov. xStream: a new platform for Application-aware Adaptive Network Slicing in 5G Systems (Tutorial). IEEE Global Information Infrastructure and Networking Symposium (GIIS 2018), Thessaloniki, Greece, 2018.

T15.   Evgeny Khorov. Wi-Fi in the world of 5G. NI Summit, Moscow, 2018.

T16.   Evgeny Khorov. xStream: a novel protocol for cross-layer cooperation, Shanghai, 2018.

T17.   Latest advances of Low Power Wide Area networking technologies towards IoT. Panel at IEEE Globecom. Singapore, 2017.

T18.   Future Wi-fi (Tutorial). IEEE International Symposium on Personal, Indoor and Mobile Radio Communications, Montreal, Canada, 2017.

T19.   Wi-Fi for 5G: Faster and Smarter (Tutorial). IEEE BlackSeaCom, Istanbul, Turkey, 2017.

T20.   xStream: Communication between the Application and the Network, ICT Algorithm Design, 2017.

T21.   IEEE 802.11 in a 5G Landscape. Industrial panel at IEEE International Conference on Communications 2016. Kuala Lumpur, Malaysia, 2016.

T22.   Can we meet 5G requirements with the current protocol stack? ICT Algorithm Design, 2015.

T23.   Low Power Wi-Fi – How IEEE 802.11ah is transforming M2M (Tutorial, 2h). IEEE International Symposium on Wireless Communication Systems, Barcelona, Spain, 2014.

T24.   IEEE 802.11ah, an Enabling Technology for the Internet of Things. How Does it Work? (Tutorial, 3.5h). IEEE International Conference on Advances in Computing, Communications and Informatics. Delhi, India, September 2014.

T25.   Are you ready for the ICT revolution? (Keynote) The LVI Conference of Moscow Institute of Physics and Technology, Dolgoprudny, Russia, November 2013.

Journals Papers

J1.   K. Chemrov, D. Bankov, A. Lyakhov and **E. Khorov**, "A Scheduler for Real-Time Service in Wi-Fi 8 Multi-AP Networks with Parameterized Spatial Reuse," IEEE Communications Letters

J2.   A. Krasilov, I. Lebedeva, R. Yusupov, **E. Khorov**. Resource-Efficient Multicast URLLC Service in 5G Systems. Sensors 2024, 24, 2536

J3.   I. Levitsky, S. Tutelian, A. Kureev, **E. Khorov**. Precoder for Proportional Fair Resource Allocation in Downlink NOMA-MIMO Systems. Lecture Notes in Computer Science, 2024, 14123 LNCS, pp. 502–515

J4.   K. Glinskiy, A. Kureev, **E. Khorov**. ALPACA: An Asymmetric Loss Prediction Algorithm for Channel Adaptation Based on a Convolutional-Recurrent Neural Network in URLLC Systems. IEEE Access, 2024, 12, pp. 329–338

J5.   D. Bankov, A. Lyakhov, E. Stepanova, **E. Khorov**. Mathematical Models of Modern Power Save Mechanisms in Wi-Fi Networks. Journal of Communications Technology and Electronics, 2023, 68, pp. S224–S238

J6.   D. Shamsimukhametov, A. Kurapov, M. Liubogoshchev, **E. Khorov**. Indistinguishability of Traffic by Open TLS Parameters with Encrypted ClientHello. Journal of Communications Technology and Electronics, 2023, 68(12), pp. 1523–1529

J7.   A. Shashin, A. Krasilov, **E. Khorov**. Initial Parameters Selection for Serving Uplink URLLC Traffic of High-Mobility Users. Journal of Communications Technology and Electronics, 2023, 68(12), pp. 1515–1522

J8.   D. Zudin, M. Lyubogoshchev, **E. Khorov**. Efficient Virtualization of Network Resources in MU-MIMO Systems. Journal of Communications Technology and Electronics, 2023, 68(12), pp. 1530–1535

J9.   A. Barannikov, I. Levitsky, **E. Khorov**. False Protection of Real-Time Traffic with Quieting in Heterogeneous Wi-Fi 7 Networks: An Experimental Study. Sensors (Basel, Switzerland), 2023, 23(21)

J10.   D. Bankov, **E. Khorov**, A. Krasilov, A. Otmakhov. Analytical Model of 5G V2X Mode 2 for Sporadic Traffic. IEEE Wireless Communications Letters, 2023, 12(8), pp. 1449–1453

J11.   D. Bankov, P. Levchenko, A. Lyakhov, **E. Khorov**. On the Limits and Best Practice for NB-Fi: A New LPWAN Technology. IEEE Internet of Things Journal, 2023, 10(14), pp. 12352–12365

J12.   M. Liubogoshchev, D. Zudin, A. Krasilov, A. Krotov, **E. Khorov**. DeSlice: An Architecture for QoE-Aware and Isolated RAN Slicing. Sensors, 2023, 23(9), 4351

J13.   A. Shashin, A. Belogaev, A. Krasilov, **E. Khorov**. Adaptive parameters selection for uplink grant-free URLLC transmission in 5G systems. Computer Networks, 2023, 222, 109527

J14.   I. Pavlova, D. Bankov, **E. Khorov**, A. Lyakhov. On the Benefits of Listen before Talk Scheme for NB-Fi Networks. Sensors, 2023, 23(22).

J15.   I. Burtakov, A. Kureev, A. Tyarin, **E. Khorov**. QRIS: A QuaDRiGa-Based Simulation Platform for Reconfigurable Intelligent Surfaces. IEEE Access, 2023, 11, pp. 90670–90682.

J16.   **E. Khorov**, A. Krasilov, M. Susloparov, L. Kong. Boosting TCP & QUIC Performance in mmWave, Terahertz, and Lightwave Wireless Networks: A Survey. IEEE Communications Surveys and Tutorials, 2023, 25(4), pp. 2862–2891.

J17.   A. Tyarin, A. Kureev, **E. Khorov**. Study of the Characteristics of Reconfigurable Intelligent Surfaces with Imperfect Unit Cells. Journal of Communications Technology and Electronics, 2022,

67, pp. S159–S166.

J18.   N. Korolev, I. Levitsky, **E. Khorov**. Performance Evaluation of Multi-Link Single-Radio and Multi-Radio Devices in Heterogeneous Wi-Fi 7 Networks. Journal of Communications Technology and Electronics, 2022, 67, pp. S211–S221.

J19.   A. Troegubov, V. Loginov, A. Lyakhov, **E. Khorov**. Study of the Collision Resolution Method in New Radio Unlicensed Networks with Multichannel Access of Type A. Journal of Communications Technology and Electronics, 2022, 67, pp. S248–S254.

J20.   V. Torgunakov, V. Loginov, **E. Khorov**, A. Lyakhov. Algorithm for Adaptive Selection of a Contention Window in IEEE 802.11bd Networks. Journal of Communications Technology and Electronics, 2022, 67, pp. S241–S247.

J21.   E. Endovitskiy, A. Klimakov, V. Loginov, **E. Khorov**, D.A. Shmelkin. Study of Implicit Sounding Feedback in Wi-Fi Networks. Journal of Communications Technology and Electronics, 2022, 67, pp. S233–S240.

J22.   S. Tutelian, **E. Khorov**. Joint Usage of OFDMA and NOMA for Uplink Transmissions in Wi-Fi Networks. Journal of Communications Technology and Electronics, 2022, 67, pp. S222–S232.

J23.   D. Bankov, A. Lyakhov, I. Pavlova, **E. Khorov**. On the Efficiency of Carrier Sense Multiple Access in NB-Fi Networks. Journal of Communications Technology and Electronics, 2022, 67, pp. S137–S143.

J24.   E. Stepanova, D. Bankov, **E. Khorov**, A.I. Lyakhov. Influence of the Clock Drift on the Efficiency of the Power Save Mechanisms in Wi-Fi Networks. Journal of Communications Technology and Electronics, 2022, 67, pp. S167–S175.

J25.   E. Zazhigina, R. Yusupov, **E. Khorov**, A. Lyakhov. Estimation of the Wi-Fi Network Capacity when Using Restricted Access Window with Short Slots. Journal of Communications Technology and Electronics, 2022, 67, pp. S176–S184.

J26.   A. Shashin, A. Belogaev, A. Krasilov, **E. Khorov**. Algorithm for Transmission Parameters Selection for Sporadic URLLC Traffic in Uplink. Journal of Communications Technology and Electronics, 2022, 67(12), pp. 1492–1499.

J27.   V. Loginov, A. Troegubov, A. Lyakhov, **E. Khorov**. Study of the Multichannel Access Method in Coexistence Scenarios of Two New Radio Unlicensed Operators. Journal of Communications Technology and Electronics, 2022, 67(12), pp. 1521–1530.

J28.   E. Korneev, M. Liubogoshchev, **E. Khorov**. Studying Cloud-Based Virtual Reality Traffic. Journal of Communications Technology and Electronics, 2022, 67(12), pp. 1500–1505.

J29.   P. Levchenko, D. Bankov, **E. Khorov**, A. Lyakhov. Performance Comparison of NB-Fi, Sigfox, and LoRaWAN. Sensors, 2022, 22(24), 9633.

J30.   D. Shamsimukhametov, A. Kurapov, M. Liubogoshchev, **E. Khorov**. Is Encrypted ClientHello a Challenge for Traffic Classification? IEEE Access, 2022, 10, pp. 77883–77897.

J31.   **E. Khorov**, A. Kureev, I. Levitsky and I. F. Akyildiz. A Phase Noise Resistant Constellation Rotation Method and Its Experimental Validation for NOMA Wi-Fi, in IEEE Journal on Selected Areas in Communications, vol. 40, no. 4, pp. 1346-1354, April 2022.

J32.   V. Loginov, **E. Khorov**, A. Lyakhov and I. F. Akyildiz, "CR-LBT: Listen-Before-Talk With Collision Resolution for 5G NR-U Networks," in IEEE Transactions on Mobile Computing, vol. 21, no. 9, pp. 3138-3149, 1 Sept. 2022, doi: 10.1109/TMC.2021.3055028.

J33.   N. Korolev, I. Levitsky and **E. Khorov**. Analytical Model of Multi-link Operation in Saturated Heterogeneous Wi-Fi 7 Networks. IEEE Wireless Communications Letters, 2022, doi:

10.1109/LWC.2022.3207946.

J34.   D. Shamsimukhametov, A. Kurapov, M. Liubogoshchev and **E. Khorov**. Is Encrypted ClientHello a Challenge for Traffic Classification? IEEE Access, vol. 10, pp. 77883-77897, 2022, doi: 10.1109/ACCESS.2022.3191431.

J35.   E. Endovitskiy, A. Kureev and **E. Khorov**. Reducing Computational Complexity for the 3GPP TR 38.901 MIMO Channel Model. IEEE Wireless Communications Letters, 2022.

J36.   V. Torgunakov, V. Loginov and **E. Khorov**. A Study of Channel Bonding in IEEE 802.11bd Networks. IEEE Access, vol. 10, pp. 25514-25533, 2022.

J37.   **E. Khorov** and I. Levitsky. Current Status and Challenges of Li-Fi: IEEE 802.11bb. IEEE Communications Standards Magazine, vol. 6, no. 2, pp. 35-41, June 2022, doi: 10.1109/MCOMSTD.0001.2100104.

J38.   Glinskiy, K.; Kureev, A.; Krasilov, A.; **Khorov, E.** PABAFT: Channel Prediction Approach Based on Autoregression and Flexible TDD for 5G Systems. Electronics 2022, 11, 1853. https://doi.org/10.3390/electronics11121853

J39.   Chemrov, K.; Bankov, D.; **Khorov, E.**; Lyakhov, A. Smart Preliminary Channel Access to Support Real-Time Traffic in Wi-Fi Networks. Future Internet 2022, 14, 296. https://doi.org/10.3390/fi14100296

J40.   I. A. Levistky, A. A. Tretiakov, and **E. M. Khorov**. A Study of Bandwidth Selection Algorithm with Allowed Preamble Puncturing in IEEE 802.11ax and IEEE 802.11be Networks. in Journal of Communications Technology and Electronics, 2022, Vol. 67, No. 6, pp. 742–750.

J41.   Endovitskiy, E.O., Kureev, A.A., Levitsky, I.A. and **E. M. Khorov**. Performance Evaluation of Downlink Non-Orthogonal Multiple Access in Wi-Fi Networks. J. Commun. Technol. Electron. 66, 1485–1490 (2021). https://doi.org/10.1134/S106422692112007X

J42.   D.V. Bankov, A.I. Lyakhov, **E.M. Khorov** et al. On the Use of Multilink Access Methods to Support Real-Time Applications in Wi-Fi Networks. J. Commun. Technol. Electron. 66, 1476–1484 (2021). https://doi.org/10.1134/S1064226921120056

J43.   Bankov, D.V., Levchenko, P.A., Lyakhov, A.I., **Khorov E.M.** Performance Evaluation of Channel Access in NB-Fi Networks. J. Commun. Technol. Electron. 67, 747–754 (2022). https://doi.org/10.1134/S1064226922060055

J44.   S. Tutelian, D., Bankov, D., Shmelkin, **E., Khorov**. IEEE 802.11ax OFDMA resource allocation with frequency-selective fading. Sensors, 21 (18), № 6099, 2021

J45.   **E. Khorov**, A. Krasilov, I. Selnitskiy, I. F. Akyildiz. A Framework to Maximize the Capacity of 5G Systems for Ultra-Reliable Low-Latency Communications in IEEE Transactions on Mobile Computing, vol. 20, no. 6, pp. 2111-2123, 1 June 2021

J46.   V. Molodtsov, A. Kureev and **E. Khorov**, Experimental Study of Smoothing Modifications of the MUSIC Algorithm for Direction of Arrival Estimation in Indoor Environments, in IEEE Access, vol. 9, pp. 153767-153774, 2021

J47.   M. Liubogoshchev, E. Korneev, **E. Khorov**. EVeREst: Bitrate Adaptation for Cloud VR. Electronics 10 (6), 678, 2021

J48.   V. Loginov, A. Troegubov, A. Lyakhov and **E. Khorov**, Enhanced Collision Resolution Methods With Mini-Slot Support for 5G NR-U, in IEEE Access, vol. 9, pp. 146137-146152, 2021

J49.   M. Liubogoshchev, K. Ragimova, A. Lyakhov, S. Tang and **E. Khorov**, Adaptive Cloud-Based Extended Reality: Modeling and Optimization, in IEEE Access, vol. 9, pp. 35287-35299, 2021

J50.   E. Zazhigina, R. Yusupov, **E. Khorov**, A. Lyakhov. Analytical Study of Periodic Restricted Access Window Mechanism for Short Slots. Electronics 10 (5), 549, 2021

J51.   A.A. Kureev, I.A. Levitsky, **E.M. Khorov**, Experimental Study of Constellation Rotation in NOMA Wi-Fi Networks. Journal of Communications Technology and Electronics 65 (12), 1525-1530

J52.   A.A. Belogaev, A.A. Elokhin, A.N. Krasilov, **E.M. Khorov**. Cost Optimization for Computing Resource Management in Intelligent Transportation Systems, Journal of Communications Technology and Electronics 65 (12), 1517-1524, 2020.

J53.   D. Bankov, **E. Khorov**, K. Kosek-Szott, M. Trebunia. Super Fast Link Set-up in Wi-Fi HaLow Networks. IEEE Communication Letters, 2020.

J54.   A. Karamyshev, **E. Khorov**, A. Krasilov, Ian F. Akyildiz, Fast and Accurate Analytical Tools to Estimate Capacity for URLLC in 5G Systems // Computer Networks, 2020, doi: https://doi.org/10.1016/j.comnet.2020.107331.

J55.   **E. Khorov**, A. Kureev, I. Levitsky, I. F. Akyildiz. Prototyping and Experimental Study of Non-Orthogonal Multiple Access in Wi-Fi Networks. IEEE Networks, 34 (4), pp. 210-217, 2020.

J56.   A. Kak, A. Kureev, **E. Khorov**, I. F. Akyildiz, "Radio access network design with software-defined mobility management," Wireless Networks, 1-14. 2020.

J57.   S. A. Tutelian, **E.M. Khorov**. Nonorthogonal Multiple Access for Servicing the Internet of Things and Web Traffic in Wi-Fi Networks. Journal of Communications Technology and Electronics 65(6), pp. 741-749, 2020.

J58.   Gerasin I.S., Krasilov A.N., **E.M. Khorov**. Dynamic Multiplexing of URLLC and eMBB Traffic in Uplink using Non-Orthogonal Multiple Access, Journal of Communications Technology and Electronics, Vol. 65, No. 6, 2020.

J59.   D. Bankov, **E. Khorov**, A. Lyakhov, and J. Famaey. Resource Allocation for Machine-Type Communication of Energy-Harvesting Devices in Wi-Fi HaLow Networks. Sensors, vol. 20, no. 9, 2020.

J60.   A.N. Krasilov, M.V. Susloparov, O.O. Filatov, **E.M. Khorov**, Performance Evaluation of TCP Data Transmission in 5G mmWave Networks, Journal of Communications Technology and Electronics, Vol. 65, No. 6, 2020

J61.   E Stepanova, D Bankov, **E Khorov**, A Lyakhov. On the Joint Usage of Target Wake Time and 802.11 ba Wake-Up Radio, IEEE Access 8, 221061-22107, 2020

J62.   A. Belogaev, A. Elokhin, A. Krasilov, **E. Khorov**, I.F. Akyildiz. Cost-effective V2X task offloading in MEC-assisted intelligent transportation systems, IEEE Access 8, 169010-169023, 2020

J63.   A. Krotov, A. Kiryanov, **E. Khorov**, Rate Control With Spatial Reuse for Wi-Fi 6 Dense Deployments. IEEE Access 8, 168898-168909, 2020

J64.   **E. Khorov**, I. Levitsky, I. F. Akyildiz. Current Status and Directions of IEEE 802.11be, the Future (Wi-Fi 7). IEEE Access, 2020.

J65.   **E. Khorov**, A. Lyakhov, A. Ivanov and I. F. Akyildiz. Modeling of Real-Time Multimedia Streaming in Wi-Fi Networks With Periodic Reservations. IEEE Access, vol. 8, pp. 55633-55653, 2020.

J66.   A. Kiryanov, A. Krotov, **E. Khorov**, I. F. Akyildiz. Enhancing the Energy Efficiency of Dense Wi-Fi Networks Using Cloud Technologies // Automation and Remote Control. 2020. Vol. 81, No. 1, pp. 82-95.

J67.   **E. Khorov**, A. Lyakhov, I. Nasedkin, R. Yusupov, J. Famaey and I. F. Akyildiz. Fast and Reliable Alert Delivery in Mission-Critical Wi-Fi HaLow Sensor Networks. IEEE Access, vol. 8, pp. 14302-14313, 2020.

J68.   **E. Khorov**, A. Kiryanov, A. Lyakhov, G. Bianchi. A Tutorial on IEEE 802.11ax High Efficiency WLANs. IEEE Communications Surveys & Tutorials, Vol. 21, Issue 1, Firstquarter 2019

J69.   A. Krasilov, **E. Khorov**, M. Tsaritsyn. On the Capacity of a 5G Network for URLLC. Journal of Communications Technology and Electronics 64(12), c. 1513-1516, 2019.

J70.   D. Bankov, **E. Khorov**, A. Lyakhov. LoRaWAN Modeling and MCS Allocation to Satisfy Heterogeneous QoS Requirements. Sensors 2019. Vol. 19. No. 19. P. 1-23.

J71.   **E. Khorov**, A. Krotov, A. Lyakhov, R. Yusupov, M. Condoluci, M. Dohler, I. F. Akyildiz. Enabling the Internet of Things With Wi-Fi Halow—Performance Evaluation of the Restricted Access Window. IEEE Access, Vol. 7, pp. 127402-127415, 2019.

J72.   D. Bankov, **E. Khorov**, A. Lyakhov, and M. Sandal. Enabling Real-Time Applications in Wi-Fi Networks. International Journal of Distributed Sensor Networks 2019, Vol. 15(5)

J73.   D. Bankov, **E. Khorov**, A. Lyakhov, M. Sandal. Approach to Real-Time Communications in Wi-Fi Networks. Journal of Communications Technology and Electronics, 64(8), pp. 880-889, 2019

J74.   S. Santi, L. Tian, **E. Khorov**, J. Famaey. Accurate Energy Modeling and Characterization of IEEE 802.11ah RAW and TWT, Sensors, 19(11), 2614, 2019

J75.   P.N. Kutsevol, V.A. Loginov, A.I. Lyakhov, and **E.M. Khorov**. Mathematical Modeling of Joint Operation of Wireless Local Area Networks and Fifth Generation Cellular Networks. // Automation and Remote Control, 2019, Vol. 80, No. 12, pp. 2163–2177

J76.   **E. Khorov**, A. Lyakhov, I. Nasedkin, R. Yusupov. Emergency Alert Delivery in a Heterogeneous Wi-Fi HaLow Network. Journal of Communications Technology and Electronics 64(12), c. 1517-1522, 2019

J77.   N. Zhirnov, A. Lyakhov, **E. Khorov**. Mathematical Model of a Network Slicing Approach for Video and Web Traffic. Journal of Communications Technology and Electronics, 64(8), pp. 890-899, 2019.

J78.   A. Kiryanov, A. Krotov, A. Lyakhov, E. Khorov. Algorithm for Dynamic Power Control and Scheduling in IEEE 802.11ax Infrastructure Networks. Journal of Communications Technology and Electronics 64(8), pp. 900-909, 2019.

J79.   E. Guzha, A. Ivanov, E. Kuznetsov, A. Lyakhov**, E. Khorov.** Generalized Mathematical Model of Reliable Multicast Transmission in Modern Wi-Fi Networks, Journal of Communications Technology and Electronics, 64(8), pp. 870-879, 2019

J80.   I. Akyildiz, A. Kak, **E. Khorov**, A. Krasilov, A. Kureev. ARBAT: A Flexible Network Architecture for QoE-aware Communications in 5G Systems. Computer Networks, 2018

J81.   Bankov, D.; **Khorov, E**.; Lyakhov, A.; Stepanova, E.; Tian, L.; Famaey, J. What Is the Fastest Way to Connect Stations to a Wi-Fi HaLow Network? Sensors 2018, 18, 2744.

J82.   V. Loginov, A. Lyakhov, **E. Khorov**. Coexistence of Wi-Fi and LTE-LAA Networks: Open Issues // Journal of Communications Technology and Electronics, 2018, Vol. 63, No. 12, pp. 1530–1537.

J83.   A. Belogaev, A. Krasilov, A. Lyakhov, **E. Khorov**. Analysis of the Differential Update Method for Control Information Dissemination in Wireless Networks // Journal of Communications Technology and Electronics, 2018, Vol. 63, No. 12, pp. 1538–1544.

J84.   **E. Khorov**, A. Krasilov, A. Krotov, A. Lyakhov. Will MCCA Revive Wireless Multihop Networks? //Computer Communications. Volume 104, May 2017, Pages 159–174.

J85.   A. Kiryanov, A. Lyakhov, **E. Khorov.** Analysis of Algorithms for Decentralized Dynamic Channel Resource Reservation for Data Streaming in Wi-Fi Networks. Journal of Communications Technology and Electronics, 2017, Vol. 62, No. 6, pp. 694–700

J86.   A. Ivanov, A. Lyakhov, **E. Khorov**. A mathematical model of transmitting a non-ordinary flow with periodic reservations and block acknowledgements in a channel with correlated noise, Automation and Remote Control, Volume 78, Issue 11, Pages 1978-1990, 2017.

J87.   L. Tian, **E. Khorov**, S. Latré, J. Famaey. Real-Time Station Grouping under Dynamic Traffic for IEEE 802.11ah. Sensors 2017, 17, 1559.

J88.   **Evgeny Khorov**, Anton Kiryanov, Alexander Krotov, Pierluigi Gallo, Domenico Garlisi, Ilenia Tinnirello. Joint Usage of Dynamic Sensitivity Control and Time Division Multiple Access in Dense 802.11ax Networks. // Lecture Notes in Computer Science, Vol. 10121, pp. 57 –71. Springer, Nov 2016.

J89.   Alexander Ivanov, **Evgeny Khorov,** Andrey Lyakhov, Ilya Solomatin. Mathematical Model of QoS-aware Streaming with Heterogeneous Channel Access in Wi-Fi Networks // Lecture Notes in Computer Science, 9870, Springer, Sep. 2016.

J90.   Dmitry Bankov, **Evgeny Khorov**, Alexey Kureev, Andrey Lyakhov. Improving Efficiency of Heterogeneous Wi-Fi Networks with Energy-Limited Devices// Lecture Notes in Computer Science, 9870, Springer, Sep. 2016.

J91.   I. Kargin, **E. Khorov**, A. Lyakhov. A mathematical method for packet loss ratio estimation for a multipath route in the presence of correlated errors. //Problems of Information Transmission. July 2015, Volume 51, Issue 3, pp. 299-305

J92.   **E. Khorov**, A. Lyakhov, A. Krotov, A. Guschin. A survey on IEEE 802.11ah: an Enabling Networking Technology for Smart Cities. //Computer Communications, Volume 58, March 2015, pp. 53–69, 2015. (Best Cited Review Paper Award)

J93.   **E.M. Khorov**. Choosing the channel reservation period in self-organizing wireless networks. //Journal of Communications Technology and Electronics, 2015, Vol. 60, No. 12, pp. 1372-1378.

J94.   A.G. Kiryanov, A.A. Kureev, A.I. Lyakhov, **E.M. Khorov**. Analysis of Logical Topology Construction Mechanisms in MANET. //Journal of Communications Technology and Electronics, 2015, Vol. 60, No. 12, pp. 1379–1388.

J95.   A.G. Kiryanov, V.A. Loginov, A.I. Lyakhov, **E.M. Khorov**. Analytical Model of a P-Persistent Method of Queue Management for Multimedia Streaming over Wireless Networks. //Journal of Communications Technology and Electronics, 2015, Vol. 60, No. 12, pp. 1389–1402.

J96.   Ivanov A.S. Lyakhov A.I. and **Khorov E.M.** Analytical Model of Batch Flow Multihop Transmission in Wireless Networks with Channel Reservations. //Automation and Remote Control. July 2015, Volume 76, Issue 7, pp. 1179-1192.

J97.   A. G. Kiryanov, A. I. Lyakhov, and **E. M. Khorov**, Modeling of RealTime Multimedia Streaming with Deterministic Access. //Journal of Communications Technology and Electronics, 2014, Vol. 59, No. 12, pp. 1501–1511.

J98.   **E. Khorov**, A. Krasilov, A. Lyakhov, D. Ostrovsky. Dynamic Resource Allocation for MCCA-Based Streaming in Wi-Fi Mesh Networks. //Lecture Notes in Computer Science, 2013, v. 8072, pp. 94-113.

J99.   A. Guschin, **E. Khorov**, A. Kiryanov, A. Lyakhov, A. Safonov. P-persistent Queue

Management to Overcome Channel Failures in IEEE 802.11 Networks for Real-time Multimedia Streaming. //Lecture Notes in Computer Science, 2013, v. 8072, pp. 70-80.

J100. A. Krasilov, A. Lyakhov, D. Ostrovsky, and **E. Khorov.** A Dynamic Channel Reservation Method for Multimedia Streaming in Wi-Fi Mesh Networks. //Automation and Remote Control, Volume 74, Issue 9, pp. 1460-1473, 2013.

J101. Kiryanov, A. G.; Lyakhov, A. I.; Safonov, A. A., **Khorov E.M.** A method to estimate efficiency of the connection control mechanisms in wireless self-organizing networks. //Automation and Remote Control, 2012, vol. 73, no. 5. P. 797–809.

J102. Lyakhov, A. I., Ostrovsky, D. M., **Khorov E.M.** Analytical study of the quality of links established by the neighborhood discovery protocol. //Journal of Communications Technology and Electronics, 2012, Vol. 57, no 12. pp. 1314-1321.

J103. Lyakhov, A. I.; Nekrasov, P. O.; Ostrovsky, D. M.; Safonov, A. A., **Khorov E.M.** Analysis of the joint use of the proactive and reactive methods of the topology information dissemination in ad-hoc wireless networks. //Journal of Communications Technology and Electronics, 2012, vol. 57, no 12, pp. 1322–1330.

J104. Kiryanov, A. G.; Lyakhov, A. I.; Nekrasov, P. O.; Platov D.A., Safonov, A. A., **Khorov E.M.** et al. Proximity-based Groupcast in MANET (GiM). //Journal of Communications Technology and Electronics, 2012, vol. 57, no 12, pp.1303–1313.

J105. Shvets E., Lyakhov A., Safonov A., **Khorov E.** Analytical model of IEEE 802.11s MCCA based streaming in the presence of noise. //ACM SIGMETRICS Performance Evaluation Review. 2011. V. 39. No. 2. P. 38-40.

J106. **E. Khorov**, A. Safonov. Multiple metrics in MANET with end - to - end QoS support for unicast and multicast traffic. //Lecture Notes in Computer Science, Vol. 6235, p. 251-262, Springer, 2010.

Proceedings

P1. S. M. Thampi, E. Sherly, S. Dasgupta, J. L. Mauri, J. H. Abawajy, **E. Khorov**, J Mathew (Eds). Applied Soft Computing and Communication Networks. Series: Lecture Notes in Networks and Systems (LNNS, volume 125), 2020.

P2. G. Bianchi, A. Lyakhov, **E. Khorov** (Eds.) Wireless Access Flexibility. First International Workshop, WiFlex 2013, Kaliningrad, Russia, September 4-6, 2013, Proceedings. Series: Lecture Notes in Computer Science, Vol. 8072. Subseries: Computer Communication Networks and Telecommunications. 1st Edition, 2013, XII, 159 p.

Conference Papers

C1. M. Mirzoian, V. Loginov, **E. Khorov**. M-TDLS: Enhancement of VR Quality of Service Using Coordinated OFDMA and Direct Links. 2023 IEEE Conference on Standards for Communications and Networking, CSCN 2023, pp. 408–412

C2. Y. Golubev, S. Tutelian, V. Loginov, **E. Khorov**. Reducing Duration of the MU-MIMO CSI Acquisition Procedure in Wi-Fi Networks With OFDMA. 2023 IEEE Conference on Standards for Communications and Networking, CSCN 2023, pp. 395–400

C3. A. Krasilov, A. Shamsutdinov, A. Shashin, **E. Khorov**. Efficient User Grouping for Grant-Free URLLC. 2023 IEEE International Black Sea Conference on Communications and Networking, BlackSeaCom 2023, pp. 312–317

C4. K. Chemrov, D. Bankov, **E. Khorov**, A. Lyakhov. Support of Real-Time Applications in Wi-Fi 8 with Multi-Ap Coordinated Parameterized Spatial Reuse. 2023 IEEE International Black Sea Conference on Communications and Networking, BlackSeaCom 2023, pp. 226–231

C5. K. Glinskiy, A. Krasilov, **E. Khorov**, A. Kureev. Performance of ML-Based Channel Prediction Algorithms for URLLC: Channel Model Matters. 2023 IEEE International Black Sea Conference on Communications and Networking, BlackSeaCom 2023, pp. 306–311.

C6. A. Kurapov, D. Shamsimukhametov, M. Liubogoshchev, **E. Khorov**. CloudETC: a Privacy-Preserving Encrypted Traffic Classification Platform for QoS in Wi-Fi. 2023 IEEE International Black Sea Conference on Communications and Networking, BlackSeaCom 2023, pp. 244–246.

C7. P. Yang, J. Lei, L. Kong, P. Zeng, **E. Khorov**. Policy Learning based Cognitive Radio for Unlicensed Cellular Communication. Proceedings - IEEE Global Communications Conference, GLOBECOM, 2022, pp. 1013–1018.

C8. R. Zlobin, A. Kureev and **E. Khorov**. Receiver Design and Frame Format for Uplink NOMA in Wi-Fi. in proc. of IEEE INFOCOM 2022, Virtual, 2022

C9. R. Zlobin, A. Kureev, **E. Khorov**. A prototype of uplink NOMA Wi-Fi with successive interference cancellation: demo. ACM MobiHoc'22. Association for Computing Machinery, New York, NY, USA, 291–292. https://doi.org/10.1145/3492866.3561255 (**Best Demo Award**)

C10. I. Levitsky, Y. Okatev, and **E. Khorov**. Feasibility of simultaneous transmit and receive in Wi-Fi 7 multi-link devices: demo. ACM MobiHoc '22. Association for Computing Machinery, New York, NY, USA, 293–294. https://doi.org/10.1145/3492866.3561256

C11. M. Susloparov, A. Krasilov and **E. Khorov**. Providing High Capacity for AR/VR Traffic in 5G Systems With Multi-Connectivity. in Proc. of 2022 IEEE International Black Sea Conference on Communications and Networking, Sofia, Bulgaria, June 2022.

C12. A. Krasilov, I. Lebedeva, R. Yusupop and **E. Khorov**. Efficient Multiplexing of Downlink eMBB and URLLC Traffic With Massive MU-MIMO, in Proc. of 2022 IEEE International Black Sea Conference on Communications and Networking, Sofia, Bulgaria, June 2022.

C13. K. Glinskiy, A. Kureev and **E. Khorov**, SDR-based Testbed for Real-time CQI Prediction for URLLC, IEEE Conference on Computer Communications (INFOCOM), 2021, pp. 1-2.

C14. **E. Khorov**, A. Kureev and V. Molodtsov, FIND: an SDR-based Tool for Fine Indoor Localization, IEEE Conference on Computer Communications (INFOCOM), 2021, pp. 1-2

C15. D. Shamsimukhametov, M. Liubogoshchev, **E. Khorov** and I. F. Akyldiz, Are Neural Networks the Best Way for Encrypted Traffic Classification?, 2021 International Conference Engineering and Telecommunication (En&T), 2021, pp. 1-5, doi: 10.1109/EnT50460.2021.9681767.

C16. V. Torgunakov, V. Loginov and **E. Khorov**, A Study of the Impact of the Contention Window on the Performance of IEEE 802.11bd Networks with Channel Bonding, 2021 International Conference Engineering and Telecommunication (En&T), 2021, pp. 1-5, doi: 10.1109/EnT50460.2021.9681801.

C17. G. Korolev, A. Kureev, **E. Khorov** and A. Lyakhov, Enabling Synchronous Uplink NOMA in Wi-Fi Networks, 2021 International Conference Engineering and Telecommunication (En&T), 2021, pp. 1-5, doi: 10.1109/EnT50460.2021.9681799.

C18. N. Korolev, I. Levitsky and **E. Khorov**, Analyses of NSTR Multi-Link Operation in the Presence of Legacy Devices in an IEEE 802.11 be Network, 2021 IEEE Conference on Standards for Communications and Networking (CSCN), 2021, pp. 94-98, doi: 10.1109/CSCN53733.2021.9686164.

C19. **E. Khorov**, A. Kureev, I. Levitsky, I. F. Akyildiz, Prototyping NOMA Constellation Rotation

in Wi-Fi. // In proc. of IEEE INFOCOM 2020, Virtual Conference, 6-9 July, 2020

C20.   V.Loginov, V.Zhdanovsky, A.Lyakhov, **E. Khorov**, and A. Lyakhov, A Comparative Study on Multi-Channel Access Methods in 5G NR-U Networks // In proc. of IEEE BlackSeaCom 2020, 26-29 May, 2020

C21.   D. Bankov, **E. Khorov**, and A. Lyakhov, An Algorithm to Satisfy the QoS Requirements in a Heterogeneous LoRaWAN Network // In proc. of 25th IEEE Symposium on Computers and Communications (ISCC), Rennes, France, 7-11 July, 2020

C22.   E. Avdotin, D. Bankov, **E. Khorov**, and A. Lyakhov, Resource Allocation Strategies for Real-Time Applications in Wi-Fi 7 // In proc. of IEEE BlackSeaCom 2020, 26-29 May, 2020

C23.   I. Levitsky, Y. Okatev, **E. Khorov**. Study on Simultaneous Transmission and Reception on Multiple Links in IEEE 802.11 be networks, In Proc. of International Conference Engineering and Telecommunication (En&T) 2020

C24.   G. Korolev, A. Kureev, **E. Khorov**, D. Shmelkin. Performance Evaluation of Uplink NOMA in Wi-Fi Networks// In Proc. of International Conference Engineering and Telecommunication (En&T), 2020

C25.   I. Gerasin, A. Krasilov, **E. Khorov**. Flexible multiplexing of grant-free URLLC and eMBB in uplink. IEEE International Symposium on Personal, Indoor and Mobile Radio Communications, PIMRC, 9217168, 2020

C26.   A. Shahsin, A. Belogaev, A. Krasilov, **E. Khorov**. Adaptive Transmission Parameters Selection Algorithm for URLLC Traffic in Uplink, International Conference Engineering and Telecommunication (En&T), 2020

C27.   D. Bankov, K. Chemrov, **E. Khorov**. Tuning Channel Access to Enable Real-Time Applications in Wi-Fi 7. In Proc. of 12th International Congress on Ultra Modern Telecommunications and Control Systems and Workshops (ICUMT), 2020

C28.   E. Endovitskiy, **E. Khorov**, A. Kureev, I. Levitsky. Demo: Experimental Study of Capture Effect in Smartphones and Wi-Fi Access Points, IEEE Wireless Communications and Networking Conference, 2020

C29.   E. Avdotin, D. Bankov, **E. Khorov**, A. Lyakhov. Enabling Massive Real-Time Applications in IEEE 802.11be Networks //In proc. of IEEE PIMRC 2019, Stambul, Turkey, 8-11 September, 2019 (**Best Paper Award**)

C30.   P. Kutsevol, V. Loginov**, E. Khorov**, A. Lyakhov. New Collision Detection Method for Fair LTE-LAA and Wi-Fi Coexistence // In proc. of IEEE PIMRC 2019, Istanbul, Turkey, 8-11 September, 2019

C31.   P. Kutsevol, V. Loginov, E. Khorov, A. Lyakhov. Analytical Study of License-Assisted Access in 5G Networks. // In proc. of IFIP Networking 2019, Warsaw, Poland, 20-22 May, 2019

C32.   **E. Khorov**, A. Lyakhov, I. Nasedkin, R. Yusupov. Poster: Fast and Reliable Alert Delivery in Wi-Fi HaLow Sensor Networks //In proc. of IFIP Networking 2019, Warsaw, Poland, 20-22 May, 2019

C33.   K. Ragimova, V. Loginov, **E. Khorov**. Analysis of YouTube DASH Traffic. // In proc. of IEEE BlackSeaCom 2019, Sochi, Russia, 3-6 June, 2019

C34.   A. Belogaev, **E. Khorov**, A. Krasilov, D. Shmelkin, and S. Tang. Conservative Link Adaptation for Ultra Reliable Low Latency Communications // In proc. of IEEE BlackSeaCom 2019, Sochi, Russia, 3-6 June, 2019

C35.   **E. Khorov**, A. Kiryanov, A. Krotov. Cloud-based Management of Energy-Efficient Dense

IEEE 802.11ax Networks. // In proc. of IEEE BlackSeaCom 2019, Sochi, Russia, 3-6 June, 2019

C36.   **E. Khorov**, A. Krasilov, I. Selnitskiy, M. Tsaritsyn. Analysis of Capacity Bounds for Ultra Reliable Low Latency Communications. // In proc. of BalkanCom 2019, Skopje, North Macedonia, June 10-12, 2019

C37.   D. Bankov, **E. Khorov**, A. Lyakhov, E. Stepanova. IEEE 802.11ba — Extremely Low Power Wi-Fi for Massive Internet of Things — Challenges, Open Issues, Performance Evaluation // In proc. of IEEE BlackSeaCom 2019, Sochi, Russia, 3-6 June, 2019

C38.   E. Avdotin, D. Bankov, **E. Khorov**, A. Lyakhov. OFDMA Resource Allocation for Real-Time Applications in IEEE 802.11ax Networks // In proc. of IEEE BlackSeaCom 2019, Sochi, Russia, 3-6 June, 2019

C39.   **E. Khorov**, A. Kureev, I. Levitsky. NOMA Testbed on Wi-Fi. //In Proc. of 29th IEEE Annual International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC), Bologna, Italy, 9-12 September 2018

C40.   Dmitry Bankov, **Evgeny Khorov**, Andrey Lyakhov, Mark Sandal. Enabling Low Latency Communications in Wi-Fi Networks. //In Proc. of 29th IEEE Annual International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC), Bologna, Italy, 9-12 September 2018

C41.   Vyacheslav Loginov, Igor Kargin, **Evgeny Khorov**, Andrey Lyakhov. Study of Fast Multi-hop ALOHA with Instant Forwarding. //In Proc. of 29th IEEE Annual International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC), Bologna, Italy, 9-12 September 2018.

C42.   I. F. Akyildiz, **E. Khorov**, A. Kiryanov, D. Kovkov, A. Krasilov, M. Liubogoshchev, D. Shmelkin, and S. Tang. xStream: A New Platform Enabling Communication between Applications and the 5G Network// In Proc. of IEEE Globecom - CA5GS, Abu Dhabi, UAE, 2018.

C43.   **E. Khorov**, A. Ivanov, A. Lyakhov, I. F. Akyildiz. Cloud Control to Optimize Real-Time Video Transmission in Dense IEEE 802.11aa/ax Networks. In Proc. of IEEE MASS, 2018 (**Invited paper**)

C44.   Dmitry Bankov, **Evgeny Khorov**, Andrey Lyakhov, Andrey Didenko. OFDMA Uplink Scheduling in IEEE 802.11ax Networks // In Proc. of IEEE International Conference on Communications, USA, 2018.

C45.   **Evgeny Khorov**, Aleksey Kureev, Ilya Levitsky, Sergei Tutelian. Scheduling for Downlink Non-Orthogonal Multiple Access in Wi-Fi Networks. //In Proc. of Modern Network Technologies, MoNeTec?-2018, Moscow, Russia, 25-26 October 2018.

C46.   **Evgeny Khorov**, Artem Krasilov, Alexey Malyshev. Radio Resource and Traffic Management for Ultra-Reliable Low Latency Communications // In proc. of IEEE Wireless Communications and Networking Conference (WCNC 2018), Barcelona, Spain, 2018.

C47.   Alexander Ivanov, **Evgeny Khorov**, Egor Kuznetsov, Andrey Lyakhov. Mathematical Study of QoS-aware Multicast Streaming in Wi-Fi Networks // In proc. of IEEE Wireless Communications and Networking Conference (WCNC 2018), Barcelona, Spain, 2018.

C48.   **Evgeny Khorov**, Andrey Lyakhov, Ruslan Yusupov. Two-Slot Based Model of the IEEE 802.11ah Restricted Access Window with Enabled Transmissions Crossing Slot Boundaries // In proc. of 19th IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM 2018), June 12-15, 2018, Chania, Greece.

C49.   Aleksey Kureev, Ilya Levitsky, **Evgeny Khorov**, Andrey Lyakhov. Testbed to Study the Capture Effect: Can We Rely on This Effect in Modern Wi-Fi Networks // In proc. of IEEE International Black Sea Conference on Communications and Networking, Batumi, Georgia, 2018.

C50. **E. Khorov**, A. Lyakhov, N. Zhirnov. Analytical Study of Adaptive Video Generation in CCTV over Public Wireless Networks // In proc. of IEEE International Black Sea Conference on Communications and Networking, Batumi, Georgia, 2018

C51. **Evgeny Khorov**, Anton Kiryanov, Alexander Krotov. Joint Power Control and Time Division to Improve Spectral Efficiency in Dense Wi-Fi Networks // In proc. of IEEE International Black Sea Conference on Communications and Networking, Batumi, Georgia, 2018

C52. Andrey Belogaev, **Evgeny Khorov**, Artem Krasilov, Andrey Lyakhov. Analytical study of incremental approach for information dissemination in wireless networks // In proc. of IFIP Wireless Days, 2018.

C53. Dmitry Bankov, **Evgeny Khorov**, Andrey Lyakhov, Ekaterina Stepanova. Clock Drift Impact on Target Wake Time in IEEE 802.11ax/ah Networks. In Proc. of IEEE En&T 2018, Moscow, Russia, 2018.

C54. Dmitry Bankov, **Evgeny Khorov**, Andrey Lyakhov, Ekaterina Stepanova. Fast Centralized Authentication in Wi-Fi HaLow Networks In proc. of IEEE International Conference on Communications (ICC) 2017, Paris, France, 2017

C55. Dmitry Bankov, Andrey Didenko, **Evgeny Khorov**, Vyacheslav Loginov, Andrey Lyakhov. IEEE 802.11ax Uplink Scheduler to Minimize Delay: a Classic Problem with New Constraints //In Proc. of IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (IEEE PIMRC'17), Montreal, Canada, 2017.

C56. Dmitry Bankov, **Evgeny Khorov**, Andrey Lyakhov. Mathematical Model of LoRaWAN Channel Access with Capture Effect //In Proc. of IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (IEEE PIMRC'17), Montreal, Canada, 2017.

C57. **Evgeny Khorov**, Artem Krasilov, Mikhail Liubogoshchev, Suwen Tang. SEBRA: SAND-Enabled Bitrate and Resource Allocation algorithm for network-assisted video streaming. //In Proc. of WiMob 2017, Rome, Italy, 2017.

C58. Dmitry Bankov, Aleksey Kureev, **Evgeny Khorov**, Andrey Lyakhov. Improving Effciency of Heterogeneous Wi-Fi Networks with Joint Usage of TIM Segmentation and Restricted Access Window //In Proc. of IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (IEEE PIMRC'17), Montreal, Canada, 2017.

C59. Dmitry Bankov, **Evgeny Khorov**, Andrey Lyakhov, Ekaterina Stepanova. Fast Centralized Authentication in Wi-Fi HaLow Networks. In Proc. of IEEE International Conference on Communications, pp 2979–2984, Paris, France, 2017.

C60. **Evgeny Khorov**, Artem Krasilov, Alexey Malyshev. Radio Resource Scheduling for Low-Latency Communications in LTE and beyond. In Proc. of IEEE/ACM International Symposium on Quality of Service, Vilanova i la Geltru, Spain.

C61. Dmitry Bankov, **Evgeny Khorov**, Andrey Lyakhov. Mathematical Model of LoRaWAN Channel Access. In Proc. of IEEE 18th International Symposium on "A World of Wireless, Mobile and Multimedia Networks" (WoWMoM), Macao, 2017.

C62. **Evgeny Khorov**, Artem Krasilov, Alexey Malyshev. Reliable Low Latency Communications in LTE Networks. In Proc. of IEEE International Black Sea Conference on Communications and Networking, Istambul, Turkey, 2017

C63. **Evgeny Khorov**, Anton Kiryanov, Nikolay Zhirnov. SAND-inspired Cross-layer Approach for CCTV in 5G Networks // International Conference on Engineering and Telecommunication (EnT), Moscow, Russia, November 29-30, 2017.

C64. Dmitry Bankov, **Evgeny Khorov**, Andrey Lyakhov. On the Limits of LoRaWAN Channel

Access. // In Proc. of IEEE En&T 2016, Moscow, Russia, 2016.

C65.   **Evgeny Khorov**, Viacheslav Loginov, Andrey Lyakhov. Several EDCA Parameter Sets for Improving Channel Access in IEEE 802.11ax Networks // In Proc. of 2016 ISWCS, IEEE press, Poznan, Poland, September 2016.

C66.   Andrey Belogaev**, Evgeny Khorov**, Artem Krasilov, Andrey Lyakhov. Study of the enhanced algorithm for control information dissemination in Wi-Fi Mesh networks // In Proc. of IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC'16), Spain, 2016.

C67.   Alexander Ivanov, **Evgeny Khorov**, Egor Kuznetsov, Andrey Lyakhov. Modeling Leader-based Multicast Transmission via Periodic Reservations in Wi-Fi networks // In Proc. of 2016 ISWCS, IEEE press, Poznan, Poland, September 2016.

C68.   Dmitry Bankov, **Evgeny Khorov**, Andrey Lyakhov. The Study of the Distributed Control Method to Hasten Link Set-up in IEEE 802.11ah Networks. // In Proc. of XV International Symposium "Problems of Redundancy in Information and Control Systems", St. Petersburg, September 2016.

C69.   Dmitry Bankov, **Evgeny Khorov**, Andrey Lyakhov, Sigurd Schelstraete. Beacons in Dense Wi-Fi Networks: How to Befriend with Neighbors in the 5G World? // In Proc. of IEEE WoWMoM, Portugal, June 2016.

C70.   **Evgeny Khorov**, Alexander Ivanov, Andrey Lyakhov, Vitaly Zankin. Mathematical Model for Scheduling in IEEE 802.11ad Networks. // In proc. of IFIP Wireless and Mobile Networking Conference, Colmar, France, 2016.

C71.   **Evgeny Khorov**, Anton Kiryanov, Andrey Lyakhov. QoS-aware Streaming With HCCA TXOP Negotiation in Overlapped Wi-Fi Networks //In proc. of IFIP Wireless Days - 2016, Toulouse, France, 2016.

C72.   **Evgeny Khorov**, Viacheslav Loginov, Andrey Lyakhov. On Throughput Estimation with TXOP Sharing in IEEE 802.11ah Networks //In proc. of IEEE BlackSeaCom - 2016, Varna, Bulgaria, June 2016.

C73.   **Evgeny Khorov**, Anton Kiryanov, Andrey Lyakhov. Analysis of Multiplexed Streaming via Periodic Reservations of Wireless Channel // In proc. of IEEE BlackSeaCom - 2016, Varna, Bulgaria, June 2016.

C74.   Alexander Ivanov, **Evgeny Khorov**, Andrey Lyakhov, Ilya Solomatin. Modeling Joint Usage of Random and Deterministic Channel Access in Wi-Fi Networks //In proc. of Wireless Communications and Mobile Computing 2016, Cyprus, 2016

C75.   Alexander Ivanov, **Evgeny Khorov**, Egor Kuznetsov, Andrey Lyakhov. Mathematical Model of QoS-aware Multicast Transmission via Periodic Reservations // In proc. of IEEE Wireless Communications and Networking Conference (WCNC 2016), Doha, Qatar, 2016

C76.   **Evgeny Khorov**, Alexander Krotov, Andrey Lyakhov. Modelling Machine Type Communication in IEEE 802.11ah networks. //In Proc. of IEEE International Conference on Communications - Workshop on 5G & Beyond - Enabling Technologies and Applications. London, UK, June 2015.

C77.   **Evgeny Khorov**, Anton Kiryanov, Andrey Lyakhov. IEEE 802.11ax: How to Build High Efficiency WLANs. // In Proc. of IEEE En&T 2015, Moscow, Russia, 2015

C78.   Alexander Ivanov, **Evgeny Khorov**, Andrey Lyakhov. Analytical Model of QoS-aware Streaming in Wi-Fi Networks via Periodic TXOPs. //In Proc. IEEE Globecom 2015 **-** ETFWLALN. San Diego, USA, December 2015.

C79.	**Evgeny Khorov**, Alexander Ivanov, Andrey Lyakhov, Vitaly Zankin. Modelling Channel Access in Millimetre Wave Wi-Fi. //In Proc. International Symposium on Wireless Communication Systems (ISWCS). Brussels, Belgium. August 2015.

C80.	Dmitry Bankov, **Evgeny Khorov**, Andrey Lyakhov. Is it Worth to Predict Overflows during Video Streaming over Wireless Networks? //In Proc. of IEEE BlackSeaCom. Constanta, Romania, May 2015.

C81.	Andrey Belogaev, **Evgeny Khorov**, Artem Krasilov, Andrey Lyakhov. Study of the group-based approach to disseminate control information in wireless network. //In Proc. International Symposium on Wireless Communication Systems (ISWCS). Brussels, Belgium. 2015.

C82.	Dmitry Bankov, **Evgeny Khorov**, Andrey Lyakhov. The Study of the Centralized Control Method to Hasten Link Set-up in IEEE 802.11ah Networks. //In Proc. of European Wireless 2015, Budapest, Hungary. May 2015.

C83.	Igor Kargin, **Evgeny Khorov**, Andrey Lyakhov. On PLR Estimation for a Multipath Route with Failure Correlation. //In Proc. of European Wireless 2015, Budapest, Hungary. May 2015.

C84.	**Evgeny Khorov**, Alexander Ivanov, Andrey Lyakhov. QoS Support for Bursty Traffic in Noisy Channel via Periodic Reservations. //In proc. of IFIP Wireless Days – 2014. Rio-de-Janeiro, Brazil. November 2014.

C85.	Dmitry Bankov, **Evgeny Khorov**, Andrey Lyakhov. Fast Quality Assessment of Videos Transmitted over Lossy Networks. //In Proc. of IEEE En&T 2014, Moscow, Russia, 2014.

C86.	**Evgeny Khorov**, Anton Kiryanov, Vyacheslav Loginov, Andrey Lyakhov. Head-of-Line Blocking Avoidance in Multimedia Streaming over Wireless Networks. //In proc. of IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC'14), USA, 2014.

C87.	**Evgeny Khorov**, Artem Krasilov, Alexander Safonov, Pablo Serrano, Ilenia Tinnirello. Making IEEE 802.11Wireless Access Programmable. //Future Network and Mobile Summit 2013 Conference Proceedings, Lisbon, Portugal, 2013.

C88.	**Khorov E.**, Kiryanov A., Lyakhov A., Ostrovsky D. Analytical Study of Neighborhood Discovery and Link Management in OLSR. //IFIP Wireless Days 2012, Dublin, Ireland, 2012.

C89.	**Khorov E.**, Kiryanov A., Lyakhov A., Safonov A. Analytical Study of Link Management in IEEE 802.11s Mesh Networks. //International Symposium on Wireless Communication Systems (ISWCS), Paris, France, 2012. P. 786-790. (**Best paper award**).

C90.	**Khorov E.**, Lyakhov A., Safonov A. Flexibility of Routing Framework Architecture in IEEE 802.11s Mesh Networks. //Proc. 8th IEEE International Conference on Mobile Ad-hoc and Sensor Systems (IEEE MASS 2011), Valencia, Spain, October 17-21, 2011.

C91.	A. Safonov, A. Lyakhov, **E. Khorov.** "Channel Switch Time Distribution in ECMA-368 Networks". //Proc. IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC'08), France, 2008.

IEEE 802.11 Proposals

S1.	**Khorov	E.**,	et	al.	Enhancements	for	massive	TSN.	URL	https://mentor.ieee.org/802.11/dcn/22/11-22-0887-02-00be-enhancements-for-massive-tsn.pptx

S2.	**Khorov E.**, et al. Conditional STR. URL: https://mentor.ieee.org/802.11/dcn/21/11-21-1887-00-00be-conditional-str.pptx

S3. **Khorov E.**, et al. CR BSR for RTA. URL: https://mentor.ieee.org/802.11/dcn/21/11-21-1028-00-00be-cr-bsr-for-rta.docx

S4. **Khorov E.**, et al. OBSS EDCA Parameter Sets for RTA. URL: https://mentor.ieee.org/802.11/dcn/20/11-20-1897-04-00be-obss-edca-parameter-sets-for-rta.pptx

S5. **Khorov E.**, et al. Performance evaluation of Real Time Communication over Wi-Fi. URL: https://mentor.ieee.org/802.11/dcn/18/11-18-1947-04-0rta-performance-evaluation-of-real-time-communication-over-wi-fi.pptx

S6. **Khorov E.**, et al. NOMA. URL: https://mentor.ieee.org/802.11/dcn/18/11-18-1957-03-0eht-noma.pptx

S7. **Khorov E.**, et al. Enabling Frame Body Capture Effect, 2017, URL: https://mentor.ieee.org/802.11/dcn/17/11-17-1728-01-000m-enabling-frame-body-capture-effect.pptx

S8. **Khorov E**. Wireless Time Sensitive Networks, 2017. URL: https://mentor.ieee.org/802.11/dcn/17/11-17-1734-01-0wng-wtsn.pptx

S9. **Khorov E.**, et al. CR_CID_122_576_972_2598 (Adaptive RTS/CTS), 2016. URL: https://mentor.ieee.org/802.11/dcn/16/11-16-1211-02-00ax-cr-cid-122-576-972-2598.docx

S10. **Khorov E.**, et al. Rules for 2 EDCA parameters, 2016. URL: https://mentor.ieee.org/802.11/dcn/16/11-16-0998-03-00ax-rules-for-2-edca-parameters.pptx

S11. **Khorov E.**, et al. Channel Access Efficiency, 2016. URL: https://mentor.ieee.org/802.11/dcn/16/11-16-0684-02-00ax-channel-access-efficiency.pptx

S12. **Khorov E.**, et al. Random Access RU Allocation in the Trigger Frame, 2016. URL: https://mentor.ieee.org/802.11/dcn/16/11-16-0582-03-00ax-random-access-ru-allocation-in-the-trigger-frame.pptx

S13. **Khorov E.**, et al. Considerations on Trigger Frame for Random Access Procedure, 2016. URL: https://mentor.ieee.org/802.11/dcn/16/11-16-0399-01-00ax-considerations-on-trigger-frame-for-random-access-procedure.pptx

S14. **Khorov E.**, et al. Multiple NAVs for Spatial Reuse, 2015. URL: https://mentor.ieee.org/802.11/dcn/15/11-15-1348-00-00ax-multiple-navs-for-spatial-reuse.pptx

S15. **Khorov E.**, et al. Beacon Collision Avoidance, 2016. URL: https://mentor.ieee.org/802.11/dcn/16/11-16-0017-00-00ax-beacon-collision-avoidance.pptx

S16. **Khorov E.**, et al. Results for beacon collisions, 2016. URL: https://mentor.ieee.org/802.11/dcn/16/11-16-0297-02-00ax-results-for-beacon-collisions.pptx

S17. **Khorov E.**, et al. TDMA for Eliminating Hidden Station Effect in Dense Networks, 2016. URL: https://mentor.ieee.org/802.11/dcn/16/11-16-0018-02-00ax-tdma-for-eliminating-hidden-station-effect-in-dense-networks.pptx