

D. Moltchanov: full list of publications (as of 20.20.2018)

Journal publications (accepted and published)

1. Petrov, V., Lema, M., Gapeyenko, M., Antonkoglou, A., **Moltchanov, D.**, Sardis, F., Samuylov, A., Andreev, S., Joucheryavy, Y., Dohler, D., "Achieving End-to-End Reliability of Mission-Critical Traffic in Softwarized 5G Network," Accepted to IEEE JSAC, 2018.
2. V. Petrov, J. Kokkonen, **D. Moltchanov**, J. Lehtomaki, Y. Koucheryavy, M. Juntti, "The Last Meter Indoor Terahertz Wireless Access," Accepted to IEEE Communications Magazine, 2018.
3. Orsino, A., Kovalchukov, R., Samuylov, A., **Moltchanov, D.**, Andreev, S., Koucheryavy, Y., Valkama, M. "Caching-Aided Collaborative D2D Operation for Predictive Data Dissemination in Industrial IoT," Accepted to IEEE Communications Magazine.
4. Begishev, V., Petrov, V., Samuylov, A., **Moltchanov, D.**, Andreev, S., Koucheryavy, Y., & Samouylov, K. "Resource Allocation and Sharing for Heterogeneous Data Collection over Conventional 3GPP LTE and Emerging NB-IoT Technologies," Computer Communications, 2018.
5. **Moltchanov, D.**, Kustarev, P., Koucheryavy, Y. "Analytical approximations for interference and SIR densities in terahertz systems with atmospheric absorption, directional antennas and blocking," Physical Communication, 26, 21-30, 2018.
6. **Moltchanov, D.**, Kustarev, P., Kucharyavy, Y. "Analytical modeling and analysis of interleaving on correlated wireless channels," Computer Communications, 2018.
7. Petrov, V., Kokkonen, J., **Moltchanov, D.**, Lehtomaki, J., Juntti, M., Koucheryavy, Y. "The Impact of Interference from the Side Lanes on mmWave/THz Band V2V Communication Systems with Directional Antennas," IEEE Transactions on Vehicular Technology, 2018.
8. Maule, M., **Moltchanov, D.**, Kustarev, P., Komarov, M., Andreev, S., Koucheryavy, Y. "Delivering Fairness and QoS Guarantees for LTE/Wi-Fi Coexistence under LAA Operation," IEEE Access, 2018.
9. Petrov, V., Samuylov, A., Begishev, V., **Moltchanov, D.**, Andreev, S., Samouylov, K., Koucheryavy, Y. "Vehicle-based relay assistance for opportunistic crowdsensing over narrowband IoT (NB-IoT)," IEEE Internet of Things Journal, 2017.
10. Petrov, V., Solomitskii, D., Samuylov, A., Lema, M. A., Gapeyenko, M., **Moltchanov, D.** Koucheryavy, Y. "Dynamic multi-connectivity performance in ultra-dense urban mmWave deployments," IEEE Journal on Selected Areas in Communications, 35(9), 2038-2055, 2017.
11. V. Petrov, K. Mikhaylov, **D. Moltchanov**, S. Andreev, G. Fodor, J. Torsner, H. Yanikomeroğlu, M. Juntti, Y. Koucheryavy, "When IoT Keeps People in the Loop: A Path Towards a New Global Utility," IEEE Communications Magazine, 2017.

12. M. Gapeyenko, A. Samuylov, M. Gerasimenko, **D. Moltchanov**, S. Singh, M. Akdeniz, E. Aryafar, N. Himayat, S. Andreev, Y. Koucheryavy, "On the Temporal Effects of Mobile Blockers in Urban Millimeter-Wave Cellular Scenarios," *IEEE Transaction on Vehicular Technology*, 2017.
13. A. Orsino, A. Samuylov, **D. Moltchanov**, S. Andreev, L. Militano, G. Araniti, Y. Koucheryavy, "Time-Dependent Energy and Resource Management in Mobility-Aware D2D-Empowered 5G Systems," *IEEE Wireless Communications Magazine*, vol. 24, no. 4, pp. 14-22, 2017.
14. A. Orsino, A. Ometov, G. Fodor, **D. Moltchanov**, L. Militano, S. Andreev, O. Yilmaz, T. Tirronen, J. Torsner, G. Araniti, A. Iera, M. Dohler, Y. Koucheryavy, "Effects of Heterogeneous Mobility on D2D-and Drone-Assisted Mission-Critical MTC in 5G," *IEEE Communications Magazine*, vol. 55, no. 2, pp. 79-87, 2017.
15. V. Petrov, M. Komarov, **D. Moltchanov**, J. Jornet, Y. Koucheryavy, "Interference and SINR in millimeter wave and terahertz communication systems with blocking and directional antennas", *IEEE Transactions on Wireless Communications*, vol. 16, no. 3, pp. 1791-1808, 2017.
16. S. Wirdatmadja, **D. Moltchanov**, S. Balasubramaniam, and Y. Koucheryavy, "Microfluidic System Protocols for Integrated On-Chip Communications and Cooling," *IEEE Access*, 2017.
17. V. Petrov, **D. Moltchanov**, M. Komar, A. Antonov, P. Kustarev, S. Rakheja, Y. Koucheryavy, "Terahertz Band Intra-Chip Communications: Can Wireless Links Scale Modern x86 CPUs?," Accepted to *IEEE Access*, 2017.
18. V. Petrov, J. Kokkonen, **D. Moltchanov**, J. Lehtomaki, Y. Koucheryavy, "Enabling Simultaneous Cooling and Data Transmission in Board-to-Board Communications," *Elsevier Physical Communications*, Vol. 22, pp. 8.-19, 2017.
19. Gerasimenko, M., **Moltchanov, D.**, Andreev, S., Koucheryavy, Y., "Adaptive Resource Management Strategy in Practical Multi-Radio Heterogeneous Networks," *IEEE Access*, 2016.
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21. A. Ometov, A. Orsino, L. Militano, **D. Moltchanov**, J. Araniti, E. Olshannikova, G. Fodor, S. Andreev, T. Olsson, A. Iera, J. Torsner, Y. Koucheryavy, "Towards Trusted, Social-Aware D2D Connectivity: Bridging Across Technology and Sociality Realms," *IEEE Wireless Communications Magazine*, 2015.
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24. **D. Moltchanov**, A. Antonov, A. Kluchev, M. Komar, P. Kustarev, K. Borunova, V. Petrov, A. Platonov, Y. Koucheryavy, "Statistical Traffic Properties and Model Inference for Shared Cache Interface in Multi-Core CPUs," IEEE Access, 2015.
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27. A. Ometov, A. Orsino, L. Militano, G. Araniti, **D. Moltchanov**, S. Andreev, "A novel security-centric framework for D2D connectivity based on spatial and social proximity", Elsevier Computer Networks, 2015.
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30. Samuilov, A., **Moltchanov, D.**, Andreev, S., Koucharyavy, Y., " Random Triangle: A Baseline Model for Interference Analysis in Heterogeneous Networks," IEEE Transactions on Vehicular Technology, 2015.
31. V. Petrov, **D. Moltchanov**, S. Balasubramaniam, Y. Koucheryavy, "Incorporating Bacterial Properties for Plasmid Delivery in Nano Sensor Networks," IEEE Transactions on Nanotechnology, vol. 14, no. 4, pp. 751-760, July, 2015.
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33. V. Petrov, S. Balasubramaniam, R. Lale, D. Moltchanov, P. Lio, Y. Koucheryavy, "Forward and Reverse Coding for Chromosome Transfer in Bacterial Nanonetworks," Elsevier Journal on Nano Communications Networks, vol. 5, pp. 15–24, March–June, 2014.
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38. **Moltchanov D.** "Distance distributions in random networks", Elsevier Ad Hoc Networks, V.10, N.6, pp. 1146-1166, Aug. 2012.
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Publications in conference proceedings

59. A. Ivchenko, Y. Orlov, A. Samouylov, **D. Molchanov**, Y. Gaidamaka, "Characterizing Time-Dependent Variance and Coefficient of Variation of SIR in D2D Connectivity," In *Proc. NEW2AN'17*, 2017.
60. V. Petrov, M. Gapeyeko, **D. Moltchanov**, S. Andreev, Y. Koucheryavy, "On Feasible Deployment Alternatives for On-Demand UAV-based mmWave Access Points," *2017 IEEE Wireless Communications and Networking Conference*, 2017.
61. Y. Orlov, E. Kirina-Lilinskaya, A. Samuylov, A. Ometov, **D. Moltchanov**, Y. Gaimamaka, S. Andreev, K. Samouylov, "Time-Dependent SIR Analysis in Shopping Malls Using Fractal-Based Mobility Models," *International Conference on Wired/Wireless Internet Communication*, pp. 16-25, 2017.
62. V. Begishev, A. Samuylov, **D. Moltchanov**, K. Samouylov, "Modeling the Process of Dynamic Resource Sharing Between LTE and NB-IoT Services," *International Conference on Distributed Computer and Communication Networks*, 2017, pp. 1-12.
63. R. Kovalchukov, A. Samuilov, **D. Moltchanov**, A. Ometov, S. Andreev, Y. Koucheryavy, "Modeling Three-Dimensional Interference and SIR in Highly Directional mmWave Communications," *IEEE GLOBECOM 2017*, Dec. 4-8, 2017.
64. S. Fedorov, Y. Orlov, A. Samuylov, **D. Moltchanov**, Y. Gaidamaka, K. Samouylov, S. Shorgin, "SIR Distribution In D2D Environment With Non-Stationary Mobility Of Users 31st European Conference on Modeling and Simulation, May 23-26, Budapest, Hungary, 2017.
65. Y. Orlov, D. Zenyuk, A. Samuylov, **D. Moltchanov**, S. Andreev, O. Romashkova, Y. Gaidamaka, K. Samouylov, "Time-Dependent SIR Modeling For D2D Communications In Indoor Deployments," *31st European Conference on Modeling and Simulation*, May 23-26, Budapest, Hungary, 2017.

66. V. Petrov, A. Pyattaev, **D. Moltchanov**, Y. Koucharyavy, "Terahertz band communications: Applications, research challenges, and standardization activities," In Proc. ICUMT, pp. 183-190, JUFO 1.
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75. A. Nguyen, M. Komarov, **D. Moltchanov**, "Coverage and Network Requirements of a Flash Crowd Monitoring System Using Users' Devices," In Proc. NEW2AN Conference, 2016.
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83. V. Begishev, R. Kovalchukov, A. Samuylov, A. Ometov, **D. Moltchanov**, Y. Gaidamaka, S. Andreev, "An Analytical Approach to SINR Estimation in Adjacent Rectangular Cells," In Proc. NEW2AN 2015: 446-458.
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85. S. Wirdatmadja, **D. Moltchanov**, P. Bolcos, J. Valiaho, J. Kreutzer, P. Kallio, and Y. Koucheryavy. "Data Rate Performance of Droplet Microfluidic Communication System," In Proc. ACM Nanocom, 2015.
86. V. Petrov, **D. Moltchanov**, Y. Koucheryavy, "Interference and SINR in Dense Terahertz Networks," In the Proceedings of the IEEE 82nd Vehicular Technology Conference (IEEE VTC2015-Fall), Boston, MA, USA, September 2015, Best Student Paper Award awarded to V. Petrov.
87. P. Boronin, **D. Moltchanov**, Y. Koucheryavy, "A molecular noise model for THz channel," In the Proceedings of the IEEE International Conference on Communications (IEEE ICC), London, UK, June 2015.
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113. Bohnert T., Monteiro E., Koucheryavy Y., **Moltchanov D.**, “Non-Parametric and self-tuning measurement-based admission control,” IFIP Networking 2007, Atlanta, GA, USA, pp.664-667.
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