List of publications

Peer-reviewed journal articles

[1] Dachian S., Nahapetian B.S., "*Inclusion-Exclusion Description of Random Fields*", Journal of Contemporary Mathematical Analysis (translated from "Natsional'naya Akademiya Nauk Armenii. Izvestiya. Matematika"), vol. 30, no. 6, pp. 50–61, 1995.

[2] Dachian S., "*Nonparametric Estimation for Gibbs Random Fields Specified Through One-Point Systems*", Statistical Inference for Stochastic Processes, vol. 1, no. 3, pp. 245–264, 1998.

[3] Dachian S., Nahapetian B.S., "*Description of Random Fields by Means of One-Point Conditional Distributions and Some Applications*", Markov Processes and Related Fields, vol. 7, no. 2, pp. 193–214, 2001.

[4] Dachian S., "*Estimation of Cusp Location by Poisson Observations*", Statistical Inference for Stochastic Processes, vol. 6, no. 1, pp. 1–14, 2003.

[5] Dachian S., Kutoyants Yu.A., "*On Cusp Estimation of Ergodic Diffusion Process*", Journal of Statistical Planning and Inference, vol. 117, no. 1, pp. 153–166, 2003.

[6] Dachian S., Nahapetian B.S., "*Description of Specifications by Means of Probability Distributions in Small Volumes under Condition of Very Weak Positivity*", Journal of Statistical Physics, vol. 117, no. 1–2, pp. 281–300, 2004.

[7] Dachian S., Kutoyants Yu.A., "*Hypotheses Testing: Poisson Versus Self-Exciting*", Scandinavian Journal of Statistics, vol. 33, no. 2, pp. 391–408, 2006.

[8] Dachian S., Kutoyants Yu.A., "*On the Goodness-of-Fit Tests for Some Continuous Time Processes*", in "Statistical Models and Methods for Biomedical and Technical Systems", eds. Vonta F. et al., pp. 385–403, Birkhäuser, Boston, 2008.

[9] Dachian S., Kutoyants Yu.A., "*Hypotheses Testing: Poisson Versus Stress-Release*", Journal of Statistical Planning and Inference, vol. 139, no. 5, pp. 1668–1684, 2009.

[10] Dachian S., Nahapetian B.S., "*On Gibbsianness of Random Fields*", Markov Processes and Related Fields, vol. 15, no. 1, pp. 81–104, 2009.

[11] Dachian S., "*On Limiting Likelihood Ratio Processes of Some Change-Point Type Statistical Models*", Journal of Statistical Planning and Inference, vol. 140, no. 9, pp. 2682–2692, 2010.

[12] Dachian S., "*Estimation of the Location of a* 0*-Type or* ∞*-Type Singularity by Poisson Observations*", Statistics. A Journal of Theoretical and Applied Statistics, vol. 45, no. 5, pp. 509–523, 2011.

[13] Dachian S., Negri I., "*On Compound Poisson Processes Arising in Change-Point Type Statistical Models as Limiting Likelihood Ratios*", Statistical Inference for Stochastic Processes, vol. 14, no. 3, pp. 255–271, 2011.

[14] Charras-Garrido M., Abrial D., De Goër J., Dachian S., Peyrard N., "*Classification Method for Disease Risk Mapping Based on Discrete Hidden Markov Random Fields*", Biostatistics, vol. 13, no. 2, pp. 241–255, 2012.

[15] Chernoyarov O.V., Rozanov A.E., Dachian S., "*Efficiency of Reception of the Random Pulse Signal of Arbitrary Form with Unknown Time Delay*", Bulletin of Moscow Power Engineering Institute, no. 2, pp. 98–102, 2015 (in Russian).

[16] Chernoyarov O.V., Salnikova A.V., Dachian S., Shepelev D.N., "*Adaptive Detection and Time and Power Parameters Estimation of the Low-Frequency Random Pulse with Inexactly Known Duration against White and Correlated Hindrances*", Applied Mathematical Sciences, vol. 9, no. 2, pp. 83–105, 2015.

[17] Dachian S., Yang L., "*On a Poissonian Change-Point Model with Variable Jump Size*", Statistical Inference for Stochastic Processes, vol. 18, no. 2, pp. 127–150, 2015.

[18] Dachian S., Kutoyants Yu.A., Yang L., "*On Hypothesis Testing for Poisson Processes. Regular Case*", Communications in Statistics — Theory and Methods, vol. 45, no. 23, pp. 6816–6832, 2016.

[19] Dachian S., Kutoyants Yu.A., Yang L., "*On Hypothesis Testing for Poisson Processes. Singular Cases*", Communications in Statistics — Theory and Methods, vol. 45, no. 23, pp. 6833–6859, 2016.

[20] Chernoyarov O.V., Dachian S., Kutoyants Yu.A., "*On Parameter Estimation for Cusp-Type Signals*", Annals of the Institute of Statistical Mathematics, vol. 70, no. 1, pp. 39–62, 2018.

[21] Dachian S., Kordzakhia N., Kutoyants Yu.A., Novikov A., "*Estimation of Cusp Location of Stochastic Processes: a Survey*", Statistical Inference for Stochastic Processes, vol. 21, no. 2, pp. 345–362, 2018.

[22] Dachian S., Nahapetian B.S., "*On the Relationship of Energy and Probability in Models of Classical Statistical Physics*", Markov Processes and Related Fields, vol. 25, no. 4, pp. 649–681, 2019.

[23] Chernoyarov O.V., Dachian S., Kutoyants Yu.A., "*Poisson Source Localization on the Plane: Cusp Case*", Annals of the Institute of Statistical Mathematics, vol. 72, no. 5, pp. 1137–1157, 2020.

[24] Dachian S., Yang L., "*Simultaneous Testing of Change-Point Location and of a Regular Parameter by Poisson Observations*", Statistical Inference for Stochastic Processes, vol. 23, no. 3, pp. 465–487, 2020.

[25] Ostankov A.V., Shchetinin N.N., Dachian S., "*Methodology of Designing Micro-Strip Directional Couplers on Interdigitated Structures*", Bulletin of Voronezh State Technical University, vol. 16, no. 4, pp. 70–75, 2020 (in Russian).

[26] Amiri A., Dachian S., "*On Smooth Change-Point Location Estimation for Poisson Processes*", Statistical Inference for Stochastic Processes, vol. 24, no. 3, pp. 499–524, 2021.

[27] Antipov S.A., Kalinin Yu.E., Ostankov A.V., Khripunov E.G., Dachian S., "*A compact composite right/left-handed leaky wave scanning antenna*", Radiotekhnika, vol. 85, no. 6, pp. 34–39, 2021 (in Russian).

[28] Chernoyarov O.V., Dachian S., Kutoyants Yu.A., Zyulkov A.V., "*On Estimation Errors in Optical Communication and Location*", Automation and Remote Control, vol. 82, no. 12, pp. 2041–2075, 2021.

[29] Chernoyarov O.V., Ivanov V.A., Demina T.I., Dachian S., Salnikova A.V., "*Spatial-Time Relationships When Measuring the Range and the Velocity of Spacecrafts*", Engineering Letters, vol. 29, no. 3, pp. 1044–1059, 2021.

[30] Ostankov A.V., Nechaev A.S., Dachian S., "*Synthesis of Phased Array Antenna with Flat-Topped Directional Pattern*", Bulletin of Voronezh State Technical University, vol. 17, no. 3, pp. 78–84, 2021 (in Russian).

[31] Chernoyarov O.V., Dachian S., Farinetto C., Kutoyants Yu.A., "*Estimation of the Position and Time of Emission of a Source*", Statistical Inference for Stochastic Processes, vol. 25, no. 1, pp. 61–82, 2022.

[32] Kryukov D.Yu., Ostankov A.V., Chernyshev A.Yu., Dachian S., "*Improvement of Directivity Characteristics of Diffraction Radiation Antenna by Varying Profile of Radiating Opening*", Bulletin of Voronezh State Technical University, vol. 18, no. 1, pp. 79–90, 2022 (in Russian).

[33] Ostankov A.V., Ostankov S.A., Litvinov G.V., Dachian S., Shchetinin N.N., "*Single-Mode Approximation in the Problem of the Dielectric Leaky Wave Antenna Synthesis*", Bulletin of Voronezh State Technical University, vol. 18, no. 4, pp. 77–85, 2022 (in Russian).

[34] Ostankov A.V., Ryabchunov A.I., Dachian S., Makarov A.A., Slepneva M.A., "*Phased Antenna Array Synthesis Technique Employing Special Directional Patterns and Demonstrating Improved Performance*", International Journal on Communications Antenna and Propagation, vol. 12, no. 3, pp. 218–227, 2022.

[35] Ostankov A.V., Shchetinin N.N., Dachian S., "*Frequency Characteristics of Modified Microstrip Sub Lines Equivalent to Quarter-Wave Segments*", Bulletin of Voronezh State Technical University, vol. 18, no. 3, pp. 51–56, 2022 (in Russian).

[36] Chernoyarov O.V., Dachian S., Farinetto C., Kutoyants Yu.A., "*Localization of Two Radioactive Sources on the Plane*", Statistical Inference for Stochastic Processes, vol. 27, no. 1, pp. 1–23, 2024.

[37] Chernoyarov O.V., Dachian S., Kutoyants Yu.A., "*On Misspecification in Cusp-Type Change-Point Models*", Journal of Statistical Planning and Inference, vol. 239, pp. 106290, 2025.

[38] Chernoyarov O.V., Dachian S., Kutoyants Yu.A., "*Localization of Moving Poisson Source on the Plane*", Annals of the Institute of Statistical Mathematics, vol. 78, no. 1, pp. 69–92, 2026.

[39] Amiri A., Dachian S., "*"Extension of Likelihood Ratio Analysis Method to Skorokhod M_1 Topology (with Application to Poissonian Smooth Change-Point Model)*", submitted.

Scientific degrees

[40] Dachian S., "*Une Approche vers la Description et l'Identification d'une Classe de Champs Aléatoires*", Ph.D. (Thèse de Doctorat), University of Paris 6, Paris, France, 1999.

[41] Dachian S., "*Quelques Contributions à la Statistique des Processus, à la Théorie des Champs Aléatoires et à la Statistique des Champs Aléatoires*", Habilitation (Habilitation à Diriger des Recherches), University Blaise Pascal, Clermont-Ferrand, France, 2012.

Proceedings

[42] Dachian S., "*Estimation des Positions des Singularités pour des Processus de Poisson*", Actes des XXXIV$^{\text{es}}$ Journées de Statistique, pp. 71–72, Belgium, Brussels, May 13–17, 2002.

[43] Dachian S., Negri I., "*On Gaussian Compound Poisson Type Limiting Likelihood Ratio Process*", in "Advances in Theoretical and Applied Statistics", 45th Meeting of the Italian Statistical Society (Italy, Padua, June 2010), eds. Torelli N. et al., pp. 29–39, Springer, Berlin, Heidelberg, 2013.

[44] Chernoyarov O.V., Lysina E.A., Marcokova M., Dachian S., "*Statistical Analysis of Fast Fluctuating Random Signals with Arbitrary-Function Envelope under Breach of Consistency of Discontinuous Information Parameter Estimate*", Proceedings of the 2015 International Siberian Conference on Control and Communications (SIBCON), Russia, Omsk, May 21–23, 2015.

[45] Dachian S., Yang L., "*Estimation and Testing of a Small Change Location in the Intensity of a Poisson Process*", Proceedings of the 2018 International Scientific Conference on Robust Statistics and Financial Mathematics, pp. 22–30, Russia, Tomsk, July 9–11, 2018.

[46] Dachian S., Kutoyants Yu.A., Yang L., "*On Hypotheses Testing for Poisson Processes: Regular and Singular Cases*", Proceedings of the 2019 International Scientific Conference on Robust Statistics and Financial Mathematics, pp. 11–19, Russia, Tomsk, July 4–6, 2019.

[47] Bardet J.-M., Brault V., Dachian S., Enikeeva F., Saussereau B., "*Change-Point Detection, Segmentation, and Related Topics*", ESAIM: Proceedings and Surveys, Journées MAS 2018 — Sampling and Processes (France, Dijon, August 29–31, 2018), eds. Cardot H. and Calka P., vol. 68, pp. 97–122, 2020.

[48] Chernoyarov O.V., Dachian S., Demina T.I., Makarov A.A., Salnikova A.V., "*Detecting the Abrupt Change in the Bandwidth of a Fast-Fluctuating Gaussian Random Process*", in "Software Engineering Application in Intelligent Systems", 4th CoMeSySo: Computational Methods in Systems and Software (Czechia, Vsetin, October 14–16, 2020), eds. Silhavy R. et al., pp. 527–541, Springer, Cham, 2020.

[49] Chernoyarov O.V., Dachian S., Korchagin Y.E., Trifonov M.V., Shepelev D.N., "*Detecting a Radio Signal with Unknown Parameters and Inexactly Known Envelope Shape*", Journal of Physics: Conference Series, APITECH-II 2020: Applied Physics, Information Technologies and Engineering (Russia, Krasnoyarsk, September 25 – October 4, 2020), vol. 1679, no. 2, pp. 022022, 2020.

[50] Chernoyarov O.V., Dachian S., Kutoyants Yu.A., Zulkov A.V., "*Pulse Signals Models in Optical Communication and Location*", Proceedings of the XXVI International Scientific and Technical Conference "Radiolocation, Navigation, Communications" (RLNC 2020), vol. 1, pp. 237–242, Russia, Voronezh, September 29 – October 1, 2020 (in Russian).

[51] Chernoyarov O.V., Litvinenko V.P., Matveev B.V., Dachian S., Melnikov K.A., "*The High-Speed Random Number Generator with the Specified Two-Dimensional Probability Distribution*", Proceedings of the 32nd European Modeling & Simulation Symposium (EMSS 2020), pp. 16–21, Greece, Athens, September 16–18, 2020.

[52] Chernoyarov O.V., Litvinenko V.P., Matveev B.V., Dachian S., Melnikov K.A., "*Digital Algorithm for Determining the Root-Mean-Square Signal*", Proceedings of the 32nd European Modeling & Simulation Symposium (EMSS 2020), pp. 22–27, Greece, Athens, September 16–18, 2020.

[53] Chernoyarov O., Dachian S., Glushkov A., Litvinenko V., Litvinenko Y., "*Fast Digital Devices for Accumulating and Measuring Parameters of Deterministic and Random Signals*", in "Software Engineering Perspectives in Informatics", CoMeSySo 2021: Computational Methods in Systems and Software, eds. Silhavy R. et al., pp. 572-583, Springer, Cham, 2021.

[54] Chernoyarov O.V., Ivanov V.A., Maksimov M.I., Dachian S., "*Phase-Based Estimation of the Harmonic Signal Frequency*", Journal of Communications, SSPS 2020: 2nd Symposium on Signal Processing Systems (Chine, Guangzhou, 11–13 juillet 2020), vol. 16, no. 4, pp. 126–131, 2021.

[55] Korchagin Y., Titov K., Dachian S., Demina T., Melnikov K., "*Efficiency of Detection of Ultra-wideband Signals Against Additive and Pulse Random Distortions*", in "Informatics and Cybernetics in Intelligent Systems", CSOC 2021: Computer Science On-line Conference, eds. Silhavy R., pp. 150–160, Springer, Cham, 2021.

[56] San K.M., Ostankov A., Rud' A., Salnikova A., Demina T., Dachian S., "*Special Shape Directional Pattern Synthesis Based on Antenna with a Comb Reflector*", Proceedings of the 6th International Conference on Frontiers of Signal Processing (ICFSP 2021), pp. 33–36, France, Paris, September 9–11, 2021.

[57] Chernoyarov O., Dachian S., Glushkov A., San K.M., Litvinenko V., "*The Algorithm for the Detection of Information Signals*", Journal of Physics: Conference Series, APITECH-IV 2022: Applied Physics, Information Technologies and Engineering (Uzbekistan, Bukhara, October 5–8, 2022), vol. 2388, no. 1, pp. 012073, 2022.

[58] Ostankov A., Nechaev A., Dachian S., Demina T., Faulgaber A., San K.M, "*Synthesizing the Sector Directional Pattern with Improved Quality Indicators*", Proceedings of the 14th International Conference "ELEKTRO 2022", pp. 1–5, Poland, Krakow, May 23–26, 2022.

[59] Chernoyarov O., Dachian S., Demina T., Ivanov V., "*Analysis of Potential Indicators of Radio Observation Efficiency Based on Information Characteristics*", AIP Conference Proceedings, IV International Conference on Modernization, Innovations, Progress: Advanced Technologies in Material Science, Mechanical and Automation Engineering: MIP: Engineering-IV-2022 (Russia, Krasnoyarsk, April 12–30, 2022), vol. 3021, no. 1, pp. 060022, 2024.

[60] Chernoyarov O., Dachian S., Kutoyants Yu.A., Salnikova A., "*On an Identification of a Source of Emission on the Plane: a Survey*", AIP Conference Proceedings, IV International Conference on Modernization, Innovations, Progress: Advanced Technologies in Material Science, Mechanical and Automation Engineering: MIP: Engineering-IV-2022 (Russia, Krasnoyarsk, April 12–30, 2022), vol. 3021, no. 1, pp. 060023, 2024.

[61] Ostankov A., Rud' A., Salnikova A., Demina T., Dachian S., "*Digital Simulation of Electromagnetic Wave Diffraction by a Rectangular Groove in a Conducting Screen*", AIP Conference Proceedings, IV International Conference on Modernization, Innovations, Progress: Advanced Technologies in Material Science, Mechanical and Automation Engineering: MIP: Engineering-IV-2022 (Russia, Krasnoyarsk, April 12–30, 2022), vol. 3021, no. 1, pp. 060024, 2024.