

# 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.
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- [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  $\infty$ -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.
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- [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*, to appear.
- [27] Chernoyarov O.V., Dachian S., Farinetto C., Kutoyants Yu.A., “*Estimation of the Position and Time of Emission of a Source*”, submitted.
- [28] Chernoyarov O.V., Dachian S., Kutoyants Yu.A., Zyulkov A.V., “*On Estimation Errors in Optical Telecommunications: a Review*”, submitted.

## Scientific degrees

- [29] 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.
- [30] 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

- [31] Dachian S., “*Estimation des Positions des Singularités pour des Processus de Poisson*”, *Actes des XXXIV<sup>es</sup> Journées de Statistique*, pp. 71–72, Belgium, Brussels, May 13–17, 2002.
- [32] 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.
- [33] 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.
- [34] 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.
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- [37] 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.
- [38] 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.
- [39] 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.
- [40] 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).
- [41] 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 Perspectives 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.
- [42] 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 (China, Guangzhou, July 11–13, 2020), to appear.