

ROZORA IRYNA

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Work Experience:

Head of Applied Statistics Department, Faculty of Computer Science and Cybernetics, Taras Shevchenko National University of Kyiv (TSNUK) 01.2022-current

Lectures and seminars on such subjects:

<i>Probability theory and Statistics,</i>	<i>Sampling Survey,</i>
<i>Simulation of Stochastic processes,</i>	<i>Computational Statistics with R,</i>
<i>Stochastic Processes,</i>	<i>Mathematical Methods for Complex</i>
<i>Actuarial mathematics</i>	<i>Systems Analysis</i>

Editor-in-Chief in journal “*Bulletin of Taras Shevchenko National University of Kyiv. Physics & Mathematics*”, <https://bphm.knu.ua/index.php/bphm> 2024-current

Managing Editor in journal “*Bulletin of Taras Shevchenko National University of Kyiv. Physics & Mathematics*”, <https://bphm.knu.ua/index.php/bphm> 2018-2023

Program Coordinator (Garant) of PhD Program on System Analysis and Data Science, TSNUK 2022-current

Associate professor(2010-2022), **Assistant of Applied Statistics Department** , 01.2005-12.2022
Faculty of Computer Science and Cybernetics, TSNUK

Actuary in “Oranta-Zhyttia” (part-time) 05.2007-03.2014
Collaborator of department of probability theory and mathematical statistics, 10.2001 -12.2004
Faculty of Mechanics and Mathematics, TSNUK

Education:

Defense of Doctoral dissertation (thesis) 09.2020

Specialization: Probability theory and Mathematical Statistics

Theme: “*Statistical properties of the estimators of impulse response functions*”

Scientific Supervisor: Prof., Doctor of Science Yu.V.Kozachenko ;

Defense of PhD dissertation (thesis) 09.2005

Specialization: Probability theory and Mathematical Statistics

Theme: “*Simulation of random processes and fields with given reliability and accuracy*”

Scientific Supervisor: Prof., Doctor of Science Yu.V.Kozachenko ;

Kyiv National Taras Shevchenko University,
Post-Graduate study 10.2002 -12.2005
Faculty of Mechanics and Mathematics, department of probability theory and mathematical statistics;

Kyiv National Taras Shevchenko University, 09.1997-06.2002
Master degree of Mathematics and Statistics, Diploma with distinction

Courses and some conferences:

PDMU (Problems and Decision Making under Uncertainties)	Since 2005 each year
BaNoCoss (International Conference on Survey Statistics), Helsinki (Finland), Orebro (Sweden)	2015, 2019, 2023
Workshops on Sampling Survey(BNU Network)	Since 2009 each year
MSTA (Modern Stochastics: Theory and Application), Kyiv	2006, 2010, 2012, 2018, 2021, 2025
ESCO	2022, 2026
International conference “Intelligent Solution” (IntSol)	2021,2023

Member of working group in projects:

Scientific Supervisor of the research project “Development of Methods for Modeling, Analysis, and Optimization of Production Systems Using Stochastic Models and Inventory Control Systems”	2026-2028
Scientific Supervisor of the research project “Development of Stochastic Models and Statistical Methods for System Analysis and Optimization in Healthcare and Socio-Economic Domains”	2023-2025
Double degree Master Program RealMaths (Taras Shevchenko National University of Kyiv and University of L’Aquila (Italy))	2018-currecnt
562013-EPP-1-2015-1-PL-EPPKA2-CBHE-SP-“Quality Assurance system in Ukraine: development on the base of ENQA Standards and Guidelines/ QUAERE”	2016- 2018

Family status

Married

Children

Daughter (2008), son (2011)

Languages:

Ukrainian–native, English, German

Hobbies:

Communications, travelling, making photos, dancing

Main publications:

1. Rozora, I., & Melnyk, A. (2026). On consistency for the estimator of impulse response function. *Journal of Numerical and Applied Mathematics*, 1, 33-44. <https://doi.org/10.17721/2706-9699.2026.1.03>
2. Rozora, I., & Melnyk, A. Statistical Estimation and Hypothesis Testing on Impulse Response Function. *Austrian Journal of Statistics*, 54(1), 2025, pp. 200–213. <https://ajs.or.at/index.php/ajs/article/view/1977>
3. Rozora, I., Mlavets, Y., Vasylyk, O., Polishchuk, V. On Convergence of the Uniform Norm and Approximation for Stochastic Processes from the Space $F\psi(\Omega)$, *Journal of Theoretical Probability*, 2024, 37(2), pp. 1627–1653. <https://doi.org/10.1007/s10959-023-01309-x>
4. Rozora, I., & Sheptukha, Y. Simulation of the fractional Brownian process with given accuracy and reliability. *Bulletin of Taras Shevchenko National University of Kyiv. Physical and Mathematical Sciences*, 2024, 78(1), 147–153. <https://doi.org/10.17721/1812-5409.2024/1.27>
5. Kozachenko, Y., Rozora, I. On Statistical Properties of the Estimator of Impulse Response Function. In: Malyarenko, A., Ni, Y., Rančić, M., Silvestrov, S. (eds) *Stochastic Processes, Statistical Methods, and Engineering Mathematics. Springer Proceedings in Mathematics & Statistics*, vol 408. Springer Cham.,2023, p.563-585, https://doi.org/10.1007/978-3-031-17820-7_25
6. Dzhoha, A., Rozora, I. Multi-armed bandit problem with online clustering as side information, *Journal of Computational and Applied Mathematics*, 2023, 427, 115132, <https://doi.org/10.1016/j.cam.2023.115132>
7. Dzhoha A. S., Rozora I. V. Beta upper confidence bound policy for the design of clinical trials // *Austrian Journal of Statistics*. 2023. Vol. 52, no. SI, P. 26–39
8. Rozora, I., Ianevych, T., Pashko, A., Zatula, D. Simulation of Stochastic Processes with Given Reliability and Accuracy (**Book chapter**) *Stochastic Processes: Fundamentals and Emerging Applications*, 2023, pp. 415–452.
9. Pashko A. , Rozora I., Mlavets Yu. and Bryla A. Upper bound of buffer content distribution for self-similar traffic models, *International Scientific Symposium “Intelligent Solution” (IntSol-2023)*, 13p.

10. T.Ianevych, I.Rozora, A. Pashko, On one way of modeling a stochastic process with given accuracy and reliability, Monte Carlo Methods and Applications. 2022.– 28(2).– P. 135-147. DOI: 10.1515/mcma-2022-2110
11. A.O. Pashko, I.V. Rozora, O. Synyavska, Estimation of Hurst index and traffic simulation in book: Advances in Computer Science for Engineering and Education IV. Lecture Notes on Data Engineering and Communications Technologies. Vol.83 – Springer.– 2021 – P.37-46(**Book chapter**)
12. Shumeiko D., Rozora I. Handling Missing Values in Machine Learning Regression Problems, 2nd International Scientific Symposium "Intelligent Solutions" Workshop, IntSol 2021 2021, 3106, pp. 211–219, <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85126810033&partnerID=40&md5=67cd67da90a08f54b378275c5bfa3835>
13. Kozachenko Yu., Rozora I., Conditions for the sample continuity with probability one for square-Gaussian stochastic processes , Theor. Of Probab. And Mathem. Statist. №.101, c.154-166, 2020. DOI: <https://doi.org/10.1090/tpms/1118>
14. Kozachenko Yu., Rozora I., Construction of the Karhunen–Loève model for the input Gaussian process applied to the linear system, taking into account the output , Theory of Probab. and Mathem. Statist. №.99, c.104-115, 2019. DOI: [10.1090/tpms/1084](https://doi.org/10.1090/tpms/1084)
15. Kozachenko Yu., Rozora I., Conditions for the sample continuity with probability one for square-gaussian stochastic processes , Theor. Of Probab. And Mathem. Statist. №.101, c.154-166, 2020. DOI: <https://doi.org/10.1090/tpms/1118>
16. Kozachenko Yu., Rozora I., Construction of the Karhunen–Loève model for the input Gaussian process applied to the linear system, taking into account the output , theor. Of Probab. And Mathem. Statist. №.99, c.104-115, 2019. <https://doi.org/10.1090/tpms/1084>
17. Rozora I., Lyzhechko M. On the modeling of linear system input stochastic processes with given accuracy and reliability, Monte Carlo Methods Appl., 24(2), pp. 129-137 2018.
18. Rozora I. Statistical hypothesis testing for the shape of impulse response function, Communications in Statistics - Theory and Methods, vol.47(6), pp.1459-1474, 2018.
19. Kozachenko Yu., Pogoriliak O., Rozora I. and Tegza A. Simulation of Stochastic processes with given accuracy and reliability, ISTE Press, Elsevier, 2016, 346p. **Monograph**
20. Kozachenko Yu.V and Rozora I.V. A Criterion For Testing Hypothesis About Impulse Response Function, Statistics, optimization & information computing, vol. 4(3), pp. 214-232, 2016.
21. Kozachenko Yu.V and Rozora I.V. Cross-correlogram estimators of impulse response functions, Theory of Probab. and Mathem. Statist., 93, p.79-91, 2016.
22. Matsak, Ivan K. and Rozora, Iryna V. The asymptotic behavior of a counting process in the max-scheme. A discrete case, Georgian Mathematical Journal. – vol. 23(3), pp. 405-416, 2016.
23. Rozora I., Lukovych O. Mean estimation with robust calibrated estimators, Baltic - Nordic - Ukrainian Summer School on Survey Statistics, Kyiv, August 22-26, 2016 p.64-72.
24. Rozora I., Lukovych O., Stovba V. Mean Estimation Calibration Approach in Survey Sampling, Proceeding of the Workshop of Baltic-Nordic-Ukrainian Network on Survey Statistics, Tallinn, Estonia. p.95-103, 2014.
25. Yu. Kozachenko, Ye. Turchyn, I. Rozora, Properties of some Random series, Communication in Statistics-Theory and Methods. 40:19-20. P.3672-3683. 2011.
26. Kozachenko Yu.V., Pashko A.O. Rozora I.V. Simulation of stochastic processes and fields, Kyiv: “Zadruga”, 2007, 230p. **Monograph** (Ukrainian)
27. Yu. Kozachenko, Ye. Turchyn, I. Rozora On an expansion of random processes in series, Random Operators and Stochastic Equations, 2007, p.15-33.