



Kateryna Hlyniana

(Ekaterina Glinyanaya)

Fellow researcher at the Department of the theory of stochastic processes

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Date of birth, Place of birth:

October 23, 1985 Ukraine

Education

- 2003-2009 Master degree in Mathematics, Institute of Mathematics, Economics and Mechanics of I. I. Mechnikov Odessa National University
- 2009-2013 Post graduate course in the Institute of mathematics of the NAS of Ukraine
- 2016 Candidate of Sciences in Mathematics (Institute of Mathematics, NAS of Ukraine)
Dissertation: Discrete-time stochastic flows. Supervisor: A. A. Dorogovtsev, Head of the Department of the theory of stochastic processes, Institute of Mathematics, NAS of Ukraine, Doctor of Science in Mathematics, Professor

Employment

- 2013-2019 Junior researcher at the Department of the theory of stochastic processes, Institute of Mathematics, NAS of Ukraine
- since 2020 Researcher at the Department of the theory of stochastic processes, Institute of Mathematics, NAS of Ukraine
- 2016-2019 Lecturer at O.O. Bogomolets National Medical University, courses in computer science
- since 2020 Lecturer at National Technical University of Ukraine 'Igor Sikorsky Kyiv Polytechnic Institute', courses in discrete mathematics
- 2021 Invited lecturer at School of Mathematics, Jilin University with mini-course 'Brownian motion and Stochastic differential equations'

Current Scientific Interests

Discrete-time stochastic flows, Flows of Brownian particles on the line with coalescence, Stochastic flows with singular interaction

Publications

1. Discrete analogue of the Krylov-Veretennikov expansion, Theory of Stochastic Processes, Volume 17(33), no.1, 2011, pages 39-49
2. Disordering asymptotics in the discrete approximation of an Arratia flow, Theory of Stoch. Processes, vol. 18(34), no.2, 2012, p. 8-14.
3. Semigroups of m-point motions of the Arratia flow, and binary forests, Theory of Stoch. Processes, vol. 19(35), no.2, 2014, p. 31-41
4. Krylov-Veretennikov representation for the m-point motion of a discrete-time flow, Theory of Stoch. Processes, vol. 20(36), no.1, 2015, p. 63-77
5. Ergodicity with respect to the spatial variable of discrete-time stochastic flows. Dopov. Nac. akad. nauk Ukr. 2015, 8:13-20 (Russ)
6. Spatial Ergodicity of the Harris Flows, Communications on Stochastic Analysis Vol. 11, No. 2, June 2017, p. 223πS231
7. On some random integral operators generated by an Arratia flow (A.A. Dorogovtsev, I.A. Korenovska, E.V. Glinyanaya), Theory of Stoch. Processes 22, no.2, 2017, 8-18
8. Limit theorems for the number of clusters of the Arratia flow (V.V. Fomichov, E.V. Glinyanaya), Theory of Stoch. Processes, vol. 23(39), no.2, 2018, p. 33-40
9. Mixing Coefficient for Discrete-Time Stochastic Flow, Journal of Stochastic Analysis: Vol. 1 : No. 1, 2020.

Participation at the conferences

1. Discrete analogue of the Krylov-Veretennikov expansion. 19-th International conference of young scientists "Lomonosov"(Moscow, 2012)
2. Ukraine science conference "Modern problems of probability and analysis"(Vorochta, Ukraine, 25Feb. - 3March, 2013).
3. Asymptotic of disordering in the discrete approximation of the Arratia flow. International mathematical conference "Bogolyubov readings DIF-2013. Differential equations, theory of functions and their applications" (June 23 πS 30, 2013 Sevastopol, Ukraine)
4. Geometry of discrete-time approximation of stochastic flows. Junior female researchers in probability (Potsdam and BerlinπS 10πS11 October 2013)
5. Discrete-time stochastic flows. 11th International Vilnius Conference on Probability Theory and Mathematical Statistics (Vilnius, Lithuania, 30 June - 4 July, 2014)

6. Discrete-time stochastic flow. Yu. V. Linnik Centennial Conference Analytical methods in number theory, probability theory and mathematical statistics (St.Petesburg, September). 2015
7. Discrete-time approximation of Harris flows and discrete-time analogue of Krylov-Veretennikov expansion. International Conference Stochastic Processes in Abstract Spaces (Kyiv, Ukraine 14-16 October, 2015).
8. Spatial ergodicity of the Harris flows. Symposium on Probability Theory and Random Processes 5-9 June, 2017, Euler International Mathematical Institute, St. Petersburg, Russia
9. Spatial properties of one-dimensional Brownian flows. 12th International Vilnius Conference on Probability Theory and Mathematical Statistics and 2018 IMS Annual Meeting on Probability and Statistics July 2-6, 2018 Vilnius, Lithuania
10. Asymptotic Properties Of The Number Of Clusters In A One-Dimensional System Of Brownian Particles. International Conference Stochastic Equations, Limit Theorems and Statistics of Stochastic Processes, dedicated to the 100th anniversary of I.I.Gikhman September 17-22, 2018, Kyiv, Ukraine
11. Asymptotic properties of number of clusters in coalescing stochastic flows. Mini-School at Jilin University, April 8-14, 2019, Changchun, China
12. Limit theorems for integrals with respect to the Arratia point process. Scientific conference 'Modern problems of Stochastic Analysis' dedicated to the 100th anniversary of the birth of academician S.Kh. Sirajdinov, September 20-21, 2020, Tashkent

Grants and Awards

1. National Academy of Sciences Grant for Young Scientists, 2017
2. Participant of the "Erasmus+ International Dimension" Program, Jena, Germany 2017-2018
3. Supreme Council of Ukraine Award for talented fundamental and applied research scientists 2018