



Curriculum Vitae

Vyzhva Z.O.

PERSONAL INFORMATION

Vyzhva Zoya Oleksandrivna



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Account (profile) in scientometric databases [Scopus](#), [ResearcherID](#)

female 06/06/1961 [citizenship](#) __Ukraine_____

Scientific degree (degree, specialty)	Doctor of Physical and Mathematical Sciences
Academic title	Full Professor
Position	Full Professor
Department	General Mathematics
Faculty / Institute	Mechanics and Mathematics

Academic disciplines in the teaching of which participated:

In current year	<ol style="list-style-type: none"> 1. "Mathematical Statistics", bachelor –3, lectures, practical classes (Institute of Geology Taras Shevchenko National University) 2. "Numerical Methods", bachelor -3, lectures, laboratory classes (Institute of Geology Taras Shevchenko National University) 3. "Statistical processing of geological information ", bachelor – 2 , lectures, practical classes (Institute of Geology Taras Shevchenko National University) 4. "Spectral Analysis", bachelor – 4 , lectures, laboratory classes (Institute of Geology Taras Shevchenko National University) 5. "Theory Probability", bachelor -1, 2, lectures, practical classes (Institute of Geology Taras Shevchenko National University) 6. "Modeling of random variables and processes", bachelor -5, lectures (Faculty of Mechanics and Mathematics)
In previous years	<ol style="list-style-type: none"> 1. "Differential Equations", bachelor – 2, lectures, practical classes (Faculty of Geology) 2. "Mathematical physics", "Theory of functions of a complex variable", bachelor – 2, lectures, practical classes (Faculty of Geology) 3. "Mathematical modeling in natural sciences", master-1, lectures, practical classes (Faculty of Mechanics and Mathematics) 4. "Higher Mathematics", bachelor –1, lectures, practical classes (Faculty of Philosophy) 5. "Mathematical Statistics", bachelor – 1, lectures, practical classes (Faculty of Sociology and Psychology) 6. "Discrete mathematics", bachelor –5, lectures, practical classes (Faculty of Mechanics and Mathematics) 7. "Statistical Simulation of Random Functions", master -1, lectures, practical classes (Faculty of Mechanics and Mathematics)

	8. "Geoinformatics", bachelor – 2, lectures (Faculty of Geology) 9. " Theory Probability", bachelor – 5, lectures, practical classes (Faculty of Mechanics and Mathematics)) 10. " Dynamic models in mathematical economics", bachelor – 4, lectures, practical classes (Faculty of Mechanics and Mathematics)) 11. " Statistical Simulation", bachelor – 5, lectures, practical classes (Institute of Geology Taras Shevchenko National University) 12. " Sample surveys", bachelor – 5, lectures, practical classes (Faculty of Mechanics and Mathematics)) 13. "Modeling of random variables and processes", bachelor -5, lectures (Faculty of Mechanics and Mathematics) 14. "Numerical Methods", bachelor -3, lectures, laboratory classes (Institute of Geology Taras Shevchenko National University) 15. "Statistical processing of geological information" , bachelor – 2 , lectures, practical classes (Institute of Geology Taras Shevchenko National University) 16. "Spectral Analysis", bachelor – 4 , lectures, laboratory classes (Institute of Geology Taras Shevchenko National University)
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EXPERIENCE OF SCIENTIFIC AND SCIENTIFIC -- PEDAGOGICAL WORK

Period (start last)	Stage (description)
Since 1.07.2015	Full Professor of the Department of General Mathematics _____
	Taras Shevchenko National University of Kyiv, Volodymyrska, 64, Kyiv, 01601 Ukraine
	Teaching, research
	Field of activity or sector Education and Science
Since 1.09.2003 to 30.06.2015	Associate Professor of the Department of General Mathematics _____
	Taras Shevchenko National University of Kyiv, Volodymyrska, 64, Kyiv, 01601 Ukraine
	Teaching, research
	Field of activity or sector Education and Science
Since 27.06.2000 to 31.08.2003	Senior Researcher of Mechanics and Mathematics Faculty
	Taras Shevchenko National University of Kyiv, Volodymyrska, 64, Kyiv, 01601 Ukraine
	Research
	Field of activity or sector Science
Since 1.06.1994 to 26.06.2000	Researcher of Mechanics and Mathematics Faculty
	Taras Shevchenko National University of Kyiv, Volodymyrska, 64, Kyiv, 01601 Ukraine
	Research
	Field of activity or sector Science
Since 9.01.1987 to 31.05.1994	Junior Researcher of Mechanics and Mathematics Faculty
	Taras Shevchenko National University of Kyiv, Volodymyrska, 64, Kyiv, 01601 Ukraine
	Research
	Field of activity or sector Science

TRAINING AND INTERNSHIP

Period (start last)	Stage (description)
From 1.02.2019 to 31.03.2019	Institute of Geology Taras Shevchenko National University (Ukraine, Kyiv)
	Application of new methods of mathematical statistics to the problems of geoinformatics
From 28.03.2017 to 08.04.2017	Silesian Technikal University (Gliwice, Poland)
	Exchange of experience in teaching mathematical statistics
From 15.10.2010 to 15.11.2010	Subbotin Institute of Geophysics of the National Academy of Sciences of Ukraine (Kyiv)
	Application of new methods of mathematical statistics to the problems of geophysics

PERSONAL SKILLS

Name	Level (description)
Native language	Ukrainian
Foreign language	1 Russian
Foreign language	2 English B2

Communication competence	1. Gained good communication skills with students during classes at the university. 2. The ability to apply mathematical results to the study of applied problems gained during the implementation of state budget research topics, internship and participation in conferences
Organizational / managerial competence	
Digital competences	Information processing: basic level
Other computer skills	
Professional skills (not listed above)	1. Well acquainted with the process of monitoring student learning. 2. Well acquainted with the process of preparation of dissertations of different levels. 1 person have taken Ph.D. 3. I have the skills to work in specialized scientific councils
Areas of professional interest	Statistical modeling and approximation of homogeneous and isotropic random fields in multidimensional spaces and isotropic fields on a sphere using spectral decompositions. Modifications of Shannon's theorem for homogeneous in time and homogeneous isotropic in spatial coordinates random fields on a plane, in three-dimensional space, in multidimensional space, on a sphere and statistical modeling. Application of statistical modeling of random processes and random fields to solve problems of geophysical monitoring of ecological condition of territories.

ADDITIONAL INFORMATION

Name	(titles of publications, presentations, projects, conferences, seminars, names of awards and prizes, membership in academies, professional and scientific associations, etc.)
Publications	<p>Monographs:</p> <ol style="list-style-type: none"> Vyzhva Z. Statistical Simulation of Random Processes and Fields. - Kyiv: Geography literature publishing "Obrii", 2011, - 388 p. <p>Manuals:</p> <ol style="list-style-type: none"> Vyzhva Z. Statistical Simulation in Geology. Textbook for students. - K.: Electronic edition, 2019, -395 p. http://www.mechmat.univ.kiev.ua/wp-content/uploads/2020/03/posibnyk-vyzhva.z.o..pdf Vyzhva Z. Statistical Simulation of Random Processes and Fields in the Earth Sciences. Textbook on discipline: "Mathematical models in natural science".- Kyiv: Geography literature publishing "Obrii", 2007,- 160 p. Vyzhva Z. Statistical Simulation of 3D Random Fields in the Earth Sciences. Textbook on discipline: "Mathematical models in natural science". - Kyiv: Geography literature publishing "Obrii", 2004,- 46 p. Vyzhva Z. Statistical Simulation of Random Processes and Fields on the Plane in the Earth Sciences. Textbook on discipline: "Mathematical models in natural science". – Kyiv: Geography literature publishing "Obrii", 2004,- 59 p. <p>Scientific articles:</p> <ol style="list-style-type: none"> Vyzhva Z.O., Demidov V.K., Vyzhva A.S. The statistical simulation of dataset in 3-D area with spherical correlation function on Rivne NPP example// VISNYK OF TARAS SHEVCHENKO NATIONAL UNIVERSITY OF KYIV – GEOLOGY. – 2020. – No. 4 (91). – P. – . (Web of Science). Vyzhva Z.O., Demidov V.K., Vyzhva A.S. Statistical simulation of random field on 2D area with Whittle-Matern type correlation function in the geophysical problem of environment monitoring //VISNYK OF TARAS SHEVCHENKO NATIONAL UNIVERSITY OF KYIV – GEOLOGY. – 2019. – No. 3 (86). – P. 55 – 61. (Web of Science).

Name	(titles of publications, presentations, projects, conferences, seminars, names of awards and prizes, membership in academies, professional and scientific associations, etc.)
	<p>3. Vyzhva Z.O., Demidov V.K., Vyzhva A.S. About statistical simulation methods of random fields on the sphere by the aircraft magnetometry data //VISNYK OF TARAS SHEVCHENKO NATIONAL UNIVERSITY OF KYIV – GEOLOGY. – 2018. – No. 3 (82). – P. 107 – 113. (Web of Science).</p> <p>4. Vyzhva Z.O., Demidov V.K., Vyzhva A.S., Fedorenko K.V. Statistical simulation of 2D random field with Cauchy correlation function in the geophysics problem of environment monitoring //VISNYK OF TARAS SHEVCHENKO NATIONAL UNIVERSITY OF KYIV – GEOLOGY. – 2017. – No. 1 (76). – P. 93 – 99. (Web of Science).</p> <p>5. Vyzhva Z., Vyzhva A., Fedorenko K. Statistical simulation of 4D random fields by means of Kotelnikov-Shannon decomposition //Geoinformatica Polonica.- 2016.- No. 2.- P. 73-83.</p> <p>6. Vyzhva, Z. O., Fedorenko, K.V..About Statistical Simulation of 4D Random Fields by Means of Kotelnikov-Shannon Decomposition. Columbia International Publishing // Journal of Applied Mathematics and Statistics. - 2016.-Vol. 3.- No. 2. - P. 59-81. doi:10.7726/jams.2016.1006. http://jams.uscip.us/PublishedIssues.aspx</p> <p>7. Vyzhva, Z. O., Fedorenko, K.V., Vyzhva, A.S. The advanced procedure of statistical simulation of seismic noise in the multidimensional area for determination the frequency characteristics of geological environment // VISNYK OF TARAS SHEVCHENKO NATIONAL UNIVERSITY OF KYIV – GEOLOGY.- 2015.- No. 69 (2).- P. 79-86. (Web of Science)</p> <p>8. Vyzhva, Z.O., Vyzhva, A.S., Demidov V. K. The investigation of chalk layer density on Rivne NPP industrial area territory by Monte Carlo method using Cauchy's models // Visn. Kyiv University. Geology. - 2014.- No. 65 (2).- P. 62-67.</p> <p>9. Vyzhva, Z.O., Vyzhva, A.S., Demidov V. K. The investigation of chalk layer density on Rivne NPP industrial area territory by Monte Carlo method using 3D models //Geoinformatica.- 2014.- No. 3 (51). - P. 47-56.</p> <p>10. Vyzhva, Z. O., Fedorenko, K.V., Vyzhva, A.S. The statistical simulation of seismic noise in the multidimensional area for determination the frequency characteristics of geological environment //Visn. Kyiv University. Geology.-2014. - No. 64 (1). - P. 62-68.</p> <p>11. Vyzhva, Z. O. The statistical simulation of 4-D seismic noise for frequency characteristics of geological environment determination //Visn. Kyiv University. Geology.- 2013.- No. 30(2). - P. 19-24.</p> <p>12. Vyzhva Z., Fedorenko K. Statistical simulation of 3D random fields by means of Kotelnikov-Shannon decomposition //Theor. Probability and Math. Statist. - 2013.- No. 88. - P. 17-31. (Scopus).</p> <p>13. Vyzhva, Z. O., Fedorenko, K.V. About Statistical Simulation of 4D Random Fields on 3-D Euclid space //Visn. Kyiv University. Mathematics and Mechanics.-2013. - No. 30(2). - P. 19-24.</p> <p>14. Vyzhva, Z. O. The statistical simulation of 3-D seismic noise for frequency characteristics of geological environment determination //Visn. Kyiv University. Geology.- 2013.- No. 60. - P. 69-73.</p> <p>15. Vyzhva, Z. O., Kendzera, O.V., Fedorenko, K.V., Vyzhva, A.S. The frequency characteristics of under-building-site geological environment determination by using the statistical simulation of seismic noise by the example of Odessa city //Visn. Kyiv University. Geology.- 2012.- No. 58. - P. 57-61.</p> <p>16. Vyzhva, Z. O. The statistical simulation of 2-D seismic noise for frequency characteristics of geological environment determination //Visn. Kyiv University. Geology.- 2012.- No.59. - P.</p>

Name	(titles of publications, presentations, projects, conferences, seminars, names of awards and prizes, membership in academies, professional and scientific associations, etc.)
	<p>65-67.</p> <p>17. Vyzhva, Z.O., Vyzhva, A.S., Demidov V. K. The statistical simulation of random processes and 2-D fields on aerial magnetometry //Visn. Kyiv University. Geology. - 2012. - No.56. - P. 52-55.</p> <p>18. Vyzhva, Z. O., Fedorenko, K.V. About the statistical simulation of random fields on the plane with Cauchu's correlations functions // Visn. Kyiv University. Mathematics and Mechanics. - 2012. - No. 28. - P. 16-22.</p> <p>19. Vyzhva, Z.O., Vyzhva, A.S., Demidov V. K. The statistical simulation of random fields on the plane by splain approximation (on aerial magnetometry data example) // Visn. Kyiv University. Geology. - 2010. - No.51. - P. 31-36.</p> <p>20. Vyzhva, Z.O., Vyzhva, A.S. The statistical simulation of stationar random processes // Visn. Kyiv University. Mathematics and Mechanics. - 2010. - No.24. - P. 33-39.</p> <p>21. Vyzhva, Z.O., Vyzhva, S.A., Demidov V. K. 3-D statistical simulation by randomization method in monitoring problems of environment //Geoinformatica. – 2008. - No. 2. - P. 78-85.</p> <p>22. Vyzhva, Z.O., Zrazhevsky O.G. About statistical simulation of random fields on the plane //Visn. Kyiv University. Mathematics and Mechanics. – 2008. - No.19-20. - P. 43-47.</p> <p>23. Vyzhva, Z.O., Vyzhva, S.A., Demidov V. K. The Statistical Simulation of 3-D random fields in monitoring problems of environment /Zb. Nauk. Prats. "Theoretical and apply aspect of geoinformatica". - Kyiv. – 2006. - P. 173-184.</p> <p>24. Vyzhva Z. Statistical simulation of random processes with exponential tipe correlation functions // Visn. Kyiv University. Mathematics and Mechanics. – 2006. - No. 15-16. - P. 85-89.</p> <p>25. Vyzhva Z. About statistical simulation of periodical stationar random processes (part 2) //Visn. Kyiv University. Mathematics and Mechanics. – 2004. - No. 11-12. - P. 20-24.</p> <p>26. Vyzhva, Z.O., Vyzhva, S.A., Demidov V. K. The statistical simulation of karst suffosion processes on territory potentially dangerous objects // Geoinformatica. – 2004. - No. 2. - P. 78-85.</p> <p>27. Vyzhva, Z.O., Vyzhva, S.A. The application of statistical simulation of periodical random processes in geology // Geoinformatica. – 2004. - No. 2. - P. 46-52.</p> <p>28. Vyzhva Z. About statistical simulation of periodical stationar random processes (part 1) // Visn. Kyiv University. Mathematics and Mechanics. – 2004. - No. 9-10. - P. 85-91.</p> <p>29. Vyzhva Z. About Approximation of 3-D Random Fields and Statistical Simulation //Random Operator and Stochastic Equation. – 2003. - Vol. 4, No. 3. – P. 255-266. (Scopus).</p> <p>30. Vyzhva, Z. O. Statistical Modeling of Random Fields on a Plane with a Uniform Interpolation Grid //Dopovidi Nats. Akad. Nauk Ukr. Mat. Prirodozn. Tekh. Nauki. – 2003. - No. 5. – P. 7-12.</p> <p>31. Vyzhva, Z.O., Vyzhva, S.A. About application of statistical simulation of 3D random fields on geophysical monitoring problems of environment //Visn. Kyiv University. Geology. – 2003. - No.26. – P. 7-10.</p> <p>32. Vyzhva, Z.O., Vyzhva, S.A. About application of statistical simulation of random fields with</p>

Name	(titles of publications, presentations, projects, conferences, seminars, names of awards and prizes, membership in academies, professional and scientific associations, etc.)
	<p>irregular interpolation greed in geophysical problems //Geoinformatica. – 2002. - No. 4. – P. 35-40.</p> <p>33. Vyzhva, Z.O., Vyzhva, S.A. The application of statistical simulation of 2D random fields on geophysical monitoring problems of environment //Visn. Kyiv University. Geology. – 2002. - No.23. – P. 9-13.</p> <p>34. Vyzhva, Z.O., Khalikulov, S. I. The Kotelnikov-Shannon theorem for homogeneous on time and homogeneous random fieldson a sphaera and statistical simulation //Visn. Kyiv University. Mathematics and Mechanics. – 2001. - No. 6. – P. 66-71.</p> <p>35. Vyzhva, Z.O., Vyzhva, S.A. The prospects of application statistical simulation of random processes with irregular interpolation greed by geophysical monitoring organization //Visn. Kyiv University. Geology. – 2001. - No.19. – P. 71-74.</p> <p>36. Vyzhva Z. Statistical simulation of random fields with irregular interpolation greed //Visn. Kyiv University. Mathematics and Mechanics. – 2001. - No. 7. – P. 15-18.</p> <p>37. Vyzhva, Z.O., Vyzhva, S.A. About one method of statistical simulation of periodical stationar random processes by resolving geological problems //Visn. Kyiv University. Geology. – 2000. - No. 17. - P. 57-59.</p> <p>38. Vyzhva, Z.O., Vyzhva, S.A. Statistical simulation of homogeneous isotropic random fields by resolving geografiical problems /Kyiv-lytck, Ukraine and global processes: Geography measure: Zb. Nauk. Prats v 3-h tomah. – 2000. - Tom 2. – P. 99-102.</p> <p>39. Vyzhva Z. O., Yadrenko, M. I. The Statistical Simulation of Isotropic Random Fields on the Sphere //Visn. Kyiv University. Mathematics and Mechanics. – 2000. - No. 5. - P. 5-11.</p> <p>40. Vyzhva Z.O. On Approximation of Isotropic Random Fields on the Sphere and Statistical Simulation //Theory of Stochastic Processes.- 1997. - Vol. 3(19), No. 3-4. – P. 463-467.</p>
Membership in organizations	