

## PERSONAL INFORMATION

**Alexander Kolesnik**


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Sex :Male | Date of birth (D/M/Y) : 10/12/1957 | Nationality : Moldova

**SCIENTIFIC TITLE AND DEGREES:**

- 2010** Doctor Habilitat in Physical and Mathematical Sciences, Institute of Mathematics of the National Academy of Sciences of Ukraine, Kyiv, Ukraine. **Thesis:** *Distributions of Markovian random evolutions in the Euclidean spaces  $R^m$*  (in Russian).
- 1997** Associate Professor, Institute of Mathematics of the Academy of Sciences of Moldova, Chisinau, Moldova
- 1991** Ph.D. (Candidate) in Physical and Mathematical Sciences, Institute of Mathematics of the National Academy of Sciences of Ukraine, Kyiv, Ukraine. **Thesis:** *The equations of Markovian random evolutions* (in Russian).

**Positions Abroad:** Visiting Professor, University “La Sapienza”, Rome, Italy (1994, 1997, 2004);

Scholarship Holder, NATO-CNR Guest Fellowship Programme, University “La Sapienza”, Rome, Italy (1999);

Scholarship Holder, Deutscher Akademischer Austauschdienst (DAAD), University Erlangen-Nurnberg, Erlangen, Germany (2000).

**WORK EXPERIENCE:**

Jan 2020 – present	Principal Researcher (Professor), Institute of Mathematics and Computer Science, Chisinau, Moldova
Jun 2015 – Dec 2019	Head of the Laboratory "Mathematical Modelling", Institute of Mathematics and Computer Science of the Academy of Sciences of Moldova, Chisinau, Moldova
Sep 2006 – May 2015	Leading Researcher (Professor), Institute of Mathematics and Computer Science of the Academy of Sciences of Moldova, Chisinau, Moldova
Jul 1993 – Sep 2006	Senior Researcher (Associate Professor), Institute of Mathematics and Computer Science of the Academy of Sciences of Moldova, Chisinau, Moldova
Jan 1992 – Jul 1993	Researcher (Assistant Professor), Institute of Mathematics of the Academy of Sciences of Moldova, Chisinau, Moldova
Sep 1988 – Nov 1991	Ph.D. Researcher, Institute of Mathematics of the Academy of Sciences of Ukraine, Kiev, Ukraine
Sep 1987 – Sep 1988	Specialized Researcher, Institute of Mathematics of the Academy of Sciences of Ukraine, Kiev, Ukraine
Jan 1987 – Sep 1987	Senior Engineer-Programmer, Institute of Mathematics of the Academy of Sciences of Moldova, Chisinau, Moldova
Nov 1985 – Jan 1987	Engineer-Programmer, Institute of Mathematics of the Academy of Sciences of Moldova, Chisinau, Moldova
Sep 1983 – Oct 1985	Military Service
Oct 1980 – Sep 1983	Engineer-Programmer, Institute of Mathematics of the Academy of Sciences of Moldova, Chisinau, Moldova
Sep 1975 – Sep 1980	Student, Moldova State University, Faculty of Mathematics and Cybernetics, Chisinau, Moldova

**SCIENTIFIC INTERESTS:** Probability Theory, Mathematical Statistics, Stochastic Processes, Random Evolutions, Stochastic Dynamical Systems, Finite-Velocity Diffusion Processes, Transport Processes, Random Walks, Stochastic Processes in Random Environments, Partial Differential Equations in Stochastic Models, Statistical Physics, Wave Processes, Probabilities on Algebraic Structures

**TEACHING EXPERIENCE:** Associate Professor, Dr. hab.,: Teaching in: Chisinau Polytechnic Institute (course of Mathematics), Chisinau Theoretical Liceum “Dmitri Cantemir” (courses of Mathematical Logic, Set Theory, Probability Theory)

**Communication skills** ▪ good communication skills gained through my experience

**Organisational / managerial skills** ▪ leadership (currently responsible for a team of 12 persones)

**Mother tongue(s)** Ukrainian, Russian

**Other languages:** English, Roumanian,

SELF-ASSESSMENT					
	Information processing	Communication	Content creation	Safety	Problem solving
English	Good	Good	Good	Good	Good
Russian	Excellent	Excellent	Excellent	Excellent	Excellent

- Kolesnik A.D. *Markov Random Flights*. CRC Press, 2021, London. **(Book)**
- Kolesnik A.D. Linear combinations of the telegraph random processes driven by partial differential equations. *Stoch. Dynam.*, 2018, **18**, no. 4, 1850020, 24 pp. Curriculum Vitae Replace with First name(s) Surname(s)
- Kolesnik A.D. Slow diffusion by Markov random flights. *Physica A: Statist. Mech. Appl.*, 2018, **499**, 186-197.
- Kolesnik A.D. Asymptotic relation for the transition density of the three-dimensional Markov random flight on small time intervals. *J. Statist. Phys.*, 2017, **166**, 434-452.
- Kolesnik A.D. Integral equation for the transition density of the multidimensional Markov random flight. *Theory Stoch. Process.*, 2015, **20(36)**, 42-53.
- Kolesnik A.D. The explicit probability distribution of the sum of two telegraph processes. *Stoch. Dynam.*, 2015, **15**, no. 2, ID 1550013, 32 pp.
- Kolesnik A.D. Probability distribution function for the Euclidean distance between two telegraph processes. *Adv. Appl. Probab.*, 2014, **46**, 1172-1193.
- Kolesnik A.D. Probability law for the Euclidean distance between two planar random flights. *J. Statist. Phys.*, 2014, **154**, 1124-1152.
- Kolesnik A.D., Ratanov N. *Telegraph Processes and Option Pricing*. Springer, 2013, Heidelberg. **(Book)**
- Kolesnik A.D., Pinsky M.A. Random evolutions are driven by the hyperparabolic operators. *J. Statist. Phys.*, 2011, **142**, 828-846.
- Kolesnik A.D. The explicit probability distribution of a six-dimensional random flight. *Theory Stoch. Process.*, 2009, **15(1)**, 33-39.
- Kolesnik A.D. Asymptotic relation for the density of a multidimensional random evolution with rare Poisson switchings. *Ukrain. Math. J.*, 2008, **60**, 1915-1926.
- Kolesnik A.D. Random motions at finite speed in higher dimensions. *J. Statist. Phys.*, 2008, **131**, 1039-1065.
- Kolesnik A.D. A limit theorem for symmetric Markovian random evolutions in  $\mathbb{R}^m$ . *Theory Stoch. Process.*, 2008, **14(1)**, 69-75.
- Kolesnik A.D. A note on planar random motion at finite speed. *J. Appl. Probab.*, 2007, **44**, 838-842.
- Kolesnik A.D. A four-dimensional random motion at finite speed. *J. Appl. Probab.*, 2006, **43**, 1107-1118.
- Kolesnik A.D., Orsingher E. A planar random motion with an infinite number of directions controlled by the damped wave equation. *J. Appl. Probab.*, 2005, **42**, 1168-1182.
- Kolesnik A.D. and Orsingher E. Analysis of a finite-velocity planar random motion with reflection. *Theory Probab. Appl.*, 2002, **46**, 132-140.
- Kolesnik A.D. Weak convergence of a planar random evolution to the Wiener process. *J. Theoret. Probab.*, 2001, **14**, 485-494.
- Kolesnik A.D. The equations of Markovian random evolution on the line. *J. Appl. Probab.*, 1998, **35**, 27-35.

