

CURRICULUM VITAE

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Nonlinear Applied Analysis Department,
Institute for Applied System Analysis (IASA),
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PRESENT APPOINTMENT: Senior Researcher, Nonlinear Applied Analysis Department; Professor of Chair of mathematical methods of systems analysis (MMSA) of IASA, Kyiv, Ukraine

EDUCATION:

1992 Doctor of sciences (Physics and Mathematics), Kyiv, Ukraine
 Doctoral thesis: Reduction methods in problems of control, stopping and checking probability models, speciality “System analysis and automatic control” 01.01.11
1969 candidate of sciences (Physics and Mathematics), Ph.D., Kyiv, Ukraine, USSR
 Ph.D. thesis: Some problems of checking, optimal stopping and control of markov stochastic processes, speciality “Theoretical cybernetics” 009
1959–1964 State University of Chernivtsi, Ukraine, USSR

RESEARCHER POSITIONS:

Since 1996 Leading Researcher,
 Nonlinear Applied Analysis Department, Institute for Applied System Analysis,
 National Technical University of Ukraine “Kyiv Polytechnic Institute”, Ukraine
1993–1996 Leading Researcher,
 Glushkov Institute of Cybernetics of National Academy of Sciences of Ukraine
1972–1993 Senior Researcher,
 Glushkov Institute of Cybernetics of National Academy of Sciences of Ukraine
1969–1972 Reseacher,
 Glushkov Institute of Cybernetics of National Academy of Sciences of Ukraine, SSR
1965–1969 Post-graduate student, trainee researcher,
 Glushkov Institute of Cybernetics of National Academy of Sciences of Ukraine, SSR

ACADEMIC POSITIONS:

Since 2000 Professor of Chair of mathematical methods of systems analysis (MMSA),
 Institute for Applied System Analysis,
 National Technical University of Ukraine “Kyiv Polytechnic Institute”, Ukraine
2000–2014 Professor of Chair of Mathematics
 Kyiv Institute of Business and Technology, Ukraine
2000–2012 Professor (teaching master students)
 International Research and Training Center for Information Technologies and Systems
 of National Academy of Sciences of Ukraine

- 1995–2013 Professor of Department of Management
Academy of Labour, Social Relations and Tourism,
- 1992–1995 Professor of Chair of Department of Economic Systems Mathematical Modeling,
Faculty of Management and Marketing,
National Technical University of Ukraine “Kyiv Polytechnic Institute”, Ukraine

TEACHING:

Lectures on operations research. Planning, optimization and forecasting of economic stochastic models.
Lectures on Bayesian statistics. Sequential methods in statistics and stochastic models optimization.
Optimal decision-making models under stochastic uncertainty.
Stochastic models optimization. Controlled markov and semi-markov models with complete and incomplete information.
Optimization of stochastic processes and systems

OTHER ACTIVITIES:

Member of Special Academic Council of State University of Chernivtsi, Ukraine (1995–2003)
Member of Academic Council of Institute for Applied System Analysis (IASA), National Technical University of Ukraine “Kyiv Polytechnic Institute”, Ukraine (since 1996)

PUBLICATIONS: more than 140. Selected:

JOURNAL ARTICLES (selected):

1. Analysis of some checking schemes of the Poisson process // *Cybernetics*, 1968, No. 6, P. 59–61 (Russian);
2. (with Gubenko L., Shtatland E.) On one optimal stopping problem of markov sequences with stochastic discounting // *Theory of optimal decisions I*, 1968, Issue 5, P. 100–103; *II*, 1969, Issue 6, P. 92–99 (Russian);
3. (with Gubenko L., Shtatland E.) Controlled markov sequences (finite decision set I; compact decision set II) // *Theory of optimal decisions I*, 1968, Issue 6, P. 100–103; *II*, 1969, Issue 2, P. 92–99 (Russian);
4. (with Korolyuk V.S.) On some checking scheme of the Poisson process with a shift // *Cybernetics*, 1969, No. 1, P. 72–74 (Russian);
5. (with Shtatland E.) Controlled stochastic processes and systems // *Cybernetics*, 1972, No. 3 (Russian);
6. (with Karachenets D., Massal'sky G.) On optimal control under partly interaction of two markov processes with discrete time // *Cybernetics*, 1975, No. 6, P. 120–125 (Russian);
7. (with Shor E.) / Equivalence of one-step and many-step optimization for stochastic dynamical objects // *Proceedings of the Academy of Sciences of USSR, Ser. A*, 1977, No. 10, P. 935–938 (Russian);
8. (with Ivanenko V., Shor E.) On one class of strategies in controlled markov models // *Cybernetics*, 1978, No. 3, P. 96–98 (Russian);
9. (with Shor E.) Equivalence conditions of one-step and many-step optimization for controlled objects with memory // *Cybernetics*, 1978, No. 4, P. 93–97 (Russian);
10. (with Mel'nik V.) On control of the systems described by quasi-linear partial differential equations // *Proceedings of the Academy of Sciences of USSR, Ser. A*, 1980, No. 2, P. 72–75 (Russian);
11. (with Onysyk S.) On optimal observation of stochastic systems with distributed parameters // *Cybernetics*, 1981, No. 6, P. 126–128 (Russian);

12. On optimal reduced control of markov sequences // *Cybernetics*, 1982, No. 4, P. 119–121 (Russian);
13. (with Mel'nik V.) Boundary control of nonlinear elliptic systems // *Proceedings of the Academy of Sciences of USSR, Ser. A*, 1983, No. 8, P. 63–66 (Russian);
14. Reduced control for one optimization problem for two-component processes // *Proceedings of the Academy of Sciences of USSR, Ser. A*, 1984, No. 2, P. 68–71 (Russian);
15. (with Korolyuk V.S.) Controlled markov renewal processes with small absorption probability // *Cybernetics*, 1984, No. 4, P. 112–124 (Russian);
16. (with Korolyuk V.S.) Markov renewal process checking with small absorption probability // *Cybernetics*, 1989, No. 5, P. 128–129 (Russian);
17. The optimal stopping of markov renewal process with small absorption probability // *Cybernetics and System Analysis*, 1994, No. 6, P. 166–169 (Russian);
18. An optimal stopping of Markov renewal process with small probability absorption // *Cybernetics and System Analysis*, 1996, No. 6, P. 128–131
19. (with Podzharenko V., Skiliagin A.) The Application of Nonlinear Filtering and Sensitivity Theory Methods to the Problem of Identified the Parameters of Electromechanical System // *Control and Informatics Problems*, Vol. 27, 1998, No. 5, P. 44–52.
20. Optimal stopping of aggregated and weakly-perturbed disaggregated markov and semi-markov models in discrete time // *System research and information technologies*, 2002, Issue 3, P. 139–146 (Russian);
21. Applied statistical analysis of high-frequency stochastic processes in discrete time // *System research and information technologies*, 2002, Issue 4, P. 161–179 (Ukrainian);
22. Applied statistical analysis of Gauss-Markov processes in discrete time // *System research and information technologies*, 2003, Issue 1, P. 112–120 (Ukrainian);
23. Adaptive control of weakly controlled markov and semi-markov models in discrete time // *System research and information technologies*, 2003, Issue 2, P. 92–107 (Ukrainian);
24. Synthesis of optimal planning strategies of stochastic experiment in problems of the high-speed troubleshooting // *System research and information technologies*, 2003, Issue 3, P. 111–119 (Ukrainian);
25. Analysis and synthesis of optimal checking strategies of Poisson processes and semi-markov processes with absorption // *System research and information technologies*, 2003, Issue 4, P. 120–132 (Ukrainian);
26. Optimal decision theory in imperfect inspection problems // *Bulletin of National Technical University of Ukraine "Kyiv Polytechnic Institute"*, 2009, No. 6, P. 34–43 (Ukrainian);
27. Optimal decision theory in optimal stopping problems // *System research and information technologies*, 2010, Issue 4, P. 120–132 (Ukrainian);
28. Adaptive processes of individual and collective decision-making in finite discrete time // *Bulletin of Kyiv Institute of Business and Technology*, 2010, Vol. 12, Issue 2, P. 48–64 (Ukrainian);
29. Bayesian sequential decisions in experiment planning problems with many alternatives // *Bulletin of Kyiv Institute of Business and Technology*, 2010, Vol. 13, Issue 3, P. 196–203 (Ukrainian);
30. Stochastic inventory models under incomplete information // *Bulletin of Kyiv Institute of Business and Technology*, 2011, Vol. 15, Issue 2, P. 3–10 (Ukrainian);
31. (with Kharkianen L.V.) Weakly controlled markov renewal processes with several state classes in the problems of intersectoral economic ties // *Bulletin of Academy of Labour, Social Relations and Tourism*, 2012, Vol. 2, P. 21–27 (Ukrainian);
32. Weakly controlled markov renewal processes in insurance problems // *Bulletin of Kyiv Institute of Business and Technology*, 2013, Vol. 22, Issue 3, P. 3–10 (Ukrainian);

33. Controlled undiscounted semi-markov models with several ergodic state classes and compact decision space // Analysis, Modeling and control. Book of papers on applied nonlinear department of Institute for Applied System Analysis, Vol. 1, 2013, P. 13–26 (Ukrainian);
34. Optimization methods and models in perishable inventory problems // Bulletin of Kyiv Institute of Business and Technology, 2014, Vol. 23, Issue 1, P. 3–15 (Ukrainian);
35. Optimization with mean reward criterion for undiscounted weakly controlled markov renewal process with several ergodic state classes // Analysis, Modeling and control. Book of papers on applied nonlinear department of Institute for Applied System Analysis, Vol. 2, 2015, P. 52–57 (Ukrainian).

BOOKS:

1. Lections on financial statistics. Optimal investment strategy – stock, bond, and currency exchange buy/sell, 2005 (Ukrainian);
2. Lections on operations research. Planning, optimization and forecasting of economic stochastic models, 2006 (Ukrainian);
3. Lections on Bayesian Econometrics, 2007 (Ukrainian);
4. Lections on Bayesian statistics. Sequential methods in statistics and stochastic models optimization, 2009 (Ukrainian);
5. Optimal decision-making models under stochastic uncertainty. Special course, 2011, (Ukrainian);
6. Stochastic models optimization. Controlled markov and semi-markov models with complete and incomplete information. Special course, 2012 (Ukrainian);
7. Stochastic processes optimization, 2015 (Ukrainian).