

*Taras Shevchenko National University of Kyiv (Ukraine),
International Institute for Applied Systems Analysis (Austria),
Glushkov Institute of Cybernetics of NAS of Ukraine,
Ukrainian-American Concordia University (Ukraine),
Higher School Academy of Sciences of Ukraine,
Ivan Franko National University of Lviv (Ukraine),
Noosphere Ventures Corporation (Ukraine),
European Education Center (Georgia)*

***XXXIII International Conference
PROBLEMS OF DECISION
MAKING UNDER
UNCERTAINTIES
(PDMU-2019)***

January 24 – February 1, 2019

*Dedicated to the 30th anniversary
of the Department of System Analysis and
Decision Making Theory*

ABSTRACTS

Hurgada, Egypt

**Kyiv
2019**

Надруковано за рішенням Вченої Ради факультету комп'ютерних наук та кібернетики Київського національного університету імені Тараса Шевченка (протокол № 4 від 17 грудня 2018 р.)

INTERNATIONAL PROGRAM COMMITTEE

Prof. O. Nakonechnyi (Ukraine) – Chairman,
Prof. O. Romanovski (Ukraine) – Vice-Chairman,
Gen. A. Abd Allah (Egypt) – Vice-Chairman,
Prof. S. Aliev (Azerbaijan Republic), Prof.
M. Bratychuk (Poland), Prof. G. Chachanidze
(Georgia), Prof. I. Didmanidze (Georgia), Prof.
N. Ibrahimov (Azerbaijan Republic), Prof. T. Ivanov
(USA), Prof. V. Korolyuk (Ukraine), Prof. J. Michalek
(Czech Republic), Prof. M. Sedlačik (Czech Republic),
Prof. I. Sergienko (Ukraine), Prof. Yu. Shestopalov
(Sweden), Prof. Z. Suraj (Poland), Prof. O. Zakusylo
(Ukraine), Prof. G. Yagub (Republic of Turkey), Prof.
Yu. Yermoliev (Austria)

NATIONAL ORGANIZING COMMITTEE

S.Q. Sharkawy (Egypt) – Chairman,
M. Bartish (Ukraine), S. Bekešienė (Lithuania),
Ya. Chabanyuk (Poland), O. Iksanov (Ukraine),
I. Khanin (Ukraine), H. Latii (Ukraine), E. Lebedev
(Ukraine), S. Lyashko (Ukraine), S. Mashchenko
(Ukraine), V. Marcenyuk (Ukraine), K. Nanobashvili
(Georgia), N. Semenova (Ukraine), S. Shakhno
(Ukraine), O. Tymashov (Ukraine), A. Vlasjuk (Ukraine),
Ya. Yeleyko (Ukraine)

LOCAL ORGANIZING COMMITTEE

P. Zinko (Ukraine) – Chairman,
O. Kapustian (Ukraine), T. Korobko (Ukraine),
M. Losieva (Ukraine), O. Lukovych (Ukraine), A. Nikitin
(Ukraine), T. Zinko (Ukraine)

CONTENT¹

Abashidze I., Didmanidze I. Mathematical modeling of the movement of three-linked road trains	8
Abdullayeva N. Different rejims of motion of moving particles	10
Aliyev S.A., Aliyeva S.S. Convergence of sequence of Bellman-Harris branching processes to Jirina process	10
Bagratiioni I. The results of decision-making bologna process for philosophy of education in Georgia	11
Bakuridze M. Some approximate properties of Cesaro means Fourier series and their conjugates	14
Baranetskij Ya. O., Ivasiuk I. Ya. The nonlocal boundary problem for elliptic equation with constant coefficients with perturbations of dirichlet conditions	15
Bartish M. Ya., Kovalchuk O.V., Ogorodnyk N.P. General scheme for construction of three-step methods for minimization functions	17
Bazetska G.I. Decision making in education management in Ukraine	18
Bayramov V., Aliyev R. On the renewal-reward process with dependent components and interclaim times having a distribution which belongs to the class $\mathcal{L} \cap \mathcal{D}$	19
Beridze Z., Geladze N. Wireless network security systems	20
Beridze Z., Shavadze J., Geladze M. Main stages of designing automated system supporting wireless networks.....	21
Bondarchuk Y.V. About multiple saving sources of facts for DSS work problem.....	22
Burkhardt T. Mathematical modeling of flexibility in investments with examples from Forestry	24
Chabanyuk Ya.M., Khimka U.T., Budz I. S. Stochastic volatility with control and semi-Markov switchings	24
Chachanidze G., Matiashvili I. Logical-mathematical rules for decision-making of assessment of knowledge.....	25

¹ *The abstracts are publishing in authors edition*

Chachanidze N. Implementation of logical-mathematical rules for decision-making in knowledge assessment process	27
Chachanidze T. Innovative mechanisms for making investment decisions on Georgian stock exchange	29
Chechelnitcki A. Diffusion properties of the service processes in Jackson network with dependent renewal input flows	30
Chkopoia S., Kandelaki S. The rationality of public decision making as the main basis of democratic political system.....	31
Chornyy R., Goshko L., Kinash O. About determination of an optimal insurance fee in case of payments with lognormal distribution	32
Didmanidze I., Akhvlediani N., Didmanidze D., Khujadze N. Teaching of computer technologies	33
Didmanidze I., Imnaishvili G., Didmanidze M. About elaborating the automated system of training credits	34
Didmanidze I., Kakhiani G., Didmanidze D., Dumbadze Z. Neural network's modeling problem.....	35
Didmanidze I., Motskobili I., Fomina T., Zakaradze Z. Labor market and forecasting.....	36
Didmanidze I., Shatashvili A., Tkhilaishvili R. Development of system management optimization principles.....	37
Didmanidze I., Tsitskishvili G., Kuchava M. Technology of shipping operation by marine transport means.....	38
Dolenko G., Manovytska D., Chufistova E. Infrastructure development challenge for electric vehicles	39
Doliashvili T., Nadiradze V. Optimal management decision-making directions of air transportation quality in Georgia.....	40
Drin S. Model of advertising expenditure with cumulative effect.....	41
Geladze D. Develop cognitive interests with multimedia.....	42
Jafarova H., Aliyev R., Guliyeva N. Comparative analysis of classification algorithms on insurance data in R	43
Karkashadze I. Concept for application of information systems supporting decision making in aviation consulting activities.....	44

Karkashadze M. Subject – “Systemic Engineering” as the basis for forming a decision-making skill.....	46
Kashpirovskiy O.I. Local solution approximation of infinite stationary systems of difference equations.....	48
Kinash A., Chabanyuk Ya, Khimka U. Dissipativity of discrete procedure with Markov switching.....	49
Kiseleva E., Hart L., Prytomanova O. On construction of generalized Voronoi diagrams with fuzzy parameters based on the theory of optimal set partitioning and neuro-fuzzy technologies.....	50
Koval V.V., Lysenko V.P., Komarchuk D.S., Samkov O.V. Computer-integrated control system of quality of synchsignals Smart&Microgrid electrical systems	51
Krak Iu., Barmak O., Manziuk E., Kasianiuk V. Ensembles for classification based on their aggregation results	52
Kriukova G.V., Sarana M.P., Glybovets M.M. General regularization scheme in supervised learning.....	53
Kudin G.I., Zinko T.P. Optimal two-stage linear discrimination of information	54
Kusyk N.L., Bagdikyan S.V. Justification of the decision making on the financing of education in Ukraine	56
Lebedev E.A., Chaykovskyy I.A., Lukovych O.V. Analysis of the influence of socio-economic status on population heart diseases	57
Maksyshko N.K., Vasylieva O.V. Modeling of system characteristics dynamics for the support investment decision-making in financial markets	58
Margvelashvili Ts. Basic criteria for the program management system creation of unmanned aircrafts in the Georgian airspace	59
Mashchenko S.O., Lopuh K.V. Nash's equilibrium in a game with fuzzy set of players.....	60
Mashchenko S.O., Zapolskyi S.V. The core of a game with a fuzzy set of coalitions	61
Megrelishvili N., Tadumadze N., Tuphinashvili T., Egnatievi I. Decision-making principle in Georgia's mental health system.....	62

Nakonechnyi O.G., Zinko P.M., Shevchuk I.M. Guaranteed predictive estimation for models of information spreading process with the gompertzian dynamics under uncertainty	64
Nanobashvili K. Didactic objectives for decision-making in the learning process	66
Nikitchenko M., Shkilniak O., Shkilniak S., Mamedov T. Sequent calculi for logics with composition of predicate complement	67
Pankratova N.D., Pankratov V.A. Strategy of complex economic systems development	70
Pelekh Ya.M., Gnativ L.B., Kunynets A.V., Mentynskiy S.M. Simulation and analysis of the magnetic field distribution in a magnetically hard layer	71
Ponomarov V., Lebedev E. On the problem of quality of service improvement in retrieval queues	73
Rozora I.V., Lukovych O.V. On the modelling of input signal on the linear system taking into account the output signal	74
Rozorinov H.N. Monitoring of human respiratory organs	76
Semenova N.V., Lomaha M.M., Koliechkin V.O. Vector problems with linear-fractional functions of criteria and lexicographically Pareto's optimization	78
Semenova N.V., Semenov V.V. Robust solutions of integer optimization problems under uncertainty	79
Shakhno S.M., Shunkin Yu.V., Yarmola H.P. On an improved convergence analysis of Gauss-Newton-Secant method for solving nonlinear least squares problems	80
Sharapov M., Lebedev E. Stationary distributions for systems with unreliable devices	81
Shcherbatyy M., Shcherbata I. Optimization of parametrized nonlinear dynamical systems using surrogate models	82
Shkilniak O.S. Deviant classes of <i>GND</i> -predicates	83
Slabospitsky A.S. About time-varying parameter identification by least squares method with least deviations from 'attraction' points for bilinear dynamic systems in the presence of disturbances	84

Surmanidze I. Complex wave beam phase in a weakly absorbing randomly inhomogeneous medium	85
Tavdgiridze L., Mazmishvili N., Todua L. 21 ST century pupils'/students' digital skills and challenges of the teachers	86
Timofeeva N.K. Formation of symmetry in biology and combinatorics	87
Usar I., Makushenko I. Analysis of retrial systems with queue	88
Vergunova I. Finite element method with second order elements for analysis of the pollution distribution in a hydrotechnical rampart-terrace	89
Vlasyuk A. P., Zhukovska N. A. Mathematical modeling of influence of heat and mass transfer on deformation processes of multilayered soil array in three-dimensional case	92
Yagub G., Ibrahimov N.S., Zengin M., Farzaliyeva U.M. Identification problem for the linear nonstationary quasi optics equation with a special gradient terms	94
Yarova O.A. The principle of large deviations for random evolutions in the scheme of poisson approximation	96
Yeleyko Ya., Khymych O. Economic models evaluation of education.....	97
Pashko A., Terenchuk S. The intelligent system for the estimation of technical state of construction structures.....	98