Contents

Nanotechnologies and natural sciences

A Gruodis, A Magomedov, V Getautis	Novel materials for molecular electronics	9
A Gopejenko, Yu F Zhukovskii, Yu A Mastrikov, E A Kotomin, P V Vladimirov	*Ab initio* simulations of the Y, Ti and O solute interactions in fcc-Fe lattice in presence of VFe vacancies	11
Yu F Zhukovskii, S Piskunov, O Lisovski, E Spohr	Suitability of WS2 nanotubes with different morphology for photocatalytic water splitting: First principles simulations	13
A Pashko	Accuracy of simulation of fractional Brownian motion	15
K Nechval, D Tserentogtokh	Design and optimization of spatial motion lambda mechanism for the flaps	17
K Nechval, D Nyambayar	Improvement of the winglets shape in the wing	18
K Nechval, E Batjargal	Solution problem of the determination of fail fasteners and structural joints	19
E K Shidlovskaya	Theoretical modelling of nanodevices in the frameworks of embedded molecular cluster model	20
N Yunicheva, I Kaipov, K Bostanbekov	Modeling of the future climate in Central Asia within the framework of the CORDEX international project (Coordinated Regional climate Downscaling Experiment)	22

Computer modelling and information technologies

S Varbanov, Yu Dyachenko, I Skarga-Bandurova	Functional structure of autonomous intelligent agent	24
V Gopejenko, S Fedziukovich	Software realization of the BLIF to EDIF file converter	26
A Pūciņš, V Gopejenko	Development of virtual infrastructure for “Believe IT” company using Microsoft Hyper-V	27
V Gopejenko, M Smolakovs	Data storage systems as the company's operating efficiency tool	28
A Djukarevs, A Mrochko	Building and virtualization a failover cluster of servers in a logistics company	29
V Grīviņš, A Mrochko	Information system project development for firm “Universal Pilot Group”	30
J R Kalnin, E A Kotomin	The effective diffusion coefficient in two-dimensional systems	32
V Jadzgevičienė	Web based project management: software evaluation	33
D Panyukova	Difference between modern artificial neural networks and new approach for information processing in human brain	34
R G Rakhmatullayev, O V Zhirnova, A T Nagimova, A Zh Onlasynova	Development of an automated system for controlling the thermal regime of an oil pipeline based on a neural network estimation	36

V Barakhnin, O Kozhemyakina, I Pastushkov	The search for additional features for the improving of a joint ("two-dimensional") classifier of genre types and stylistic colouring of poetic texts	38
A M Kairbekov, R I Mukhamediev, Y N Yergaliyev	Deep neural networks in classification of lithological layers and determining uranium deposits	40
Sh N Abduzov, Sh K Khairushev, O V Zhirnova, D T Ziyavdunova	Development of an automated diagnostics system for biogas combustion processes	42
A Dautkulova, R Yunussov	Methods for similarity assessment of children and parents by usage of face images	45
M Kanatov, L Atymtayeva	Convolutional neural networks for object detection. Implementation and comparative analysis	48
B A Suleimenov, Y A Kulakova	Intelligent subsystem for determining the optimum pulsation frequency of a jigging machine	51
B A Suleimenov, Y A Kulakova	Synthesis modal and fuzzy regulators to maintain the frequency of pulsation of jigging machine	53
Sh Koshimbayev, Z Lukmanova	Analysis of the current state of control problems of the flotation enrichment process using artificial intelligence approaches	55
A Suleimenov, L Boleeva, B Suleimenov	Synthesis and analysis of intellectual models for diagnostics the technical state of a turbine unit	57
L B Ilipbayeva, D Zh Utebayeva	Research of specific phonemes of the Kazakh language on the basis of LPC coefficients	59
G R Utegenova, B Zh Tilesheva, A S Turakbayeva, O V Zhirnova, R M Uteshev	Development of a virtual model for geometric information coding specifying the motion kinematics of the mobile robot of the additive control system in engineering	61
M M Zhardem, R R Islamova, D G Zhaksybaev, O V Zhirnova, A Zhumabergenov	Intellectualization of the process of operational diagnostics of thermal processes at a thermal power plant	64
M Arshidinova, K Begaliyeva, A Kudaykulov, A Tashev	Research of a thermo-stressed state of a core of variable section in the presence of a heat flux, thermal insulations and heat exchange	66
N Sarsenbayev	Energy-saving electric drive for capacity regulation of the blowing fans of the kiln	68
N R Toktassynova, B A Suleimenov	Modeling the temperature in the wind box of sintering process	70
A Zaurbek, A Zh Zhaibergenova, D Z Dzhuruntaev	Developing of the project of a random access memory on FPGA with use of a CAD of QUARTUS II and the Verilog language	73
B Bissarinov, R Mussabayev, A Bissarinova	Collective method in solving the Big Data clustering problems	75
A Krassovitskiy, R Mussabayev	Energy maximization approach for solving clustering problem	77
R Mussabayev	Development of social trust information system in the education field using the "Big Data" technologies	79

I Ualiyeva, A Krassovitsky, R Mussabayev	Generalization rate evaluation in open publication materials in Russian language	81
N Batayev, T Shuvatov, A Onbayev	Gas transportation by motor driven gas compression unit	83
N Batayev, D F Akhmetov, B Suleimenov	Machine learning approach for gas turbine parameters forecasting	85
M Kabdullin, A Kabdullin	Machine Learning in predicting new bacterial pathogens	87
Zh Omirbekova, A Suleimenov, L Boleeva	Development of diagnostic systems for thermal facilities based on data processing	89
N Saparkhojayev, A Mukasheva	Introduction to BigData technology for diagnosis of diabetes	91
N Saparkhojayev, I Mirkhiyazova	Introduction to virtualization system in Big Data	93
A A Ziro, A A Zhamankulova	Research of data interception methods	95
S Adilbekkyzy, E Aitkhozhayeva, S Tynymbayev	Analysis of devices structures for modular reduction	97
A Agabek, E Aitkhozhayeva	Organization of reliable and secure database with encryption	99
A Ashimov, Yu Borovskiy, M Onalbekov	Modeling optimal policy on base of the large-scale DSGE model	101
Y N Yergaliyev, R I Mukhamediyev, A M Kairbekov	Ways of using Internet of Things (IoT) for health monitoring	105
D Kim	Wireless sensor networks research	107
R I Muhamediyev, Y V Shevchenko, A Idrissov	Bibliometric indicators for prospectivity estimation of research domains	109
K A Abzhaparov, G E Kuandikova, K S Sholanov	Experimental validation of Sholkor robot	112
N Tursyngali, M Baibatshayev	Establishment and research of robot system model in production process of magnesium ingot	114
S Orazalieva, T Golubeva, G Yussupova, M Yakubova	Research and modeling of ZigBee wireless sensor networks characteristics, based on OPNET Modeler 14.5 application software package	115
L B Ilipbayeva, D Zh Utebayeva, U O Seidaliyeva	Research of the features of biometric characteristics of phonemes of the Kazakh language	116
Management and Decision Making		
L Shymanovska-Dianych, T Ishcheikin	Mind-management as a modern management tool for an organization	118
A Khmil	Technology for creating brand book for the purpose of forming the image of the student government MO KNUE	120
H Bagratyan, I Klipa	Historical trends in the distribution of income and their impact on national labor markets	122

N Bakalo, V Makhovka	Psychological aspects of personnel management of tourism enterprises	124
R Bilovol, O Goloborodko, I Amelina	Organizational engineering in the system of management of an enterprise	125
I Chernysh, A Glebova	Heoretical aspects of product quality management as a factor of competitiveness of enterprises in international market	126
D Vasiliev	Opportunities for developing ecotourism in Latvia	128
B Aliev, Yu Kochetkov	Strategies of Latvian enterprises in international competition	129
N Azmuk	Human vs artificial intelligence in the process of labor	132
D Kravchenko	The impact of IT-technologies on business	134
T Fedartsova	Practice-oriented training of specialists on tourism and hospitality in the system of the higher education of republic of Belarus	136
A Glebova, O Zernyuk	Peculiarities of formation of marketing and logistic systems at modern enterprises of the building industry	137
O Grishnova, A Kozlovskyy	Social impact of in-house share service business centers implementation in multinational companies	139
M V Hunchenko	Competitiveness in the conditions of global instability: prospects of agrarian enterprises financing	141
C Koryuhina, T Shamshina	Challenges of ICT in education	142
V Labeev, C Koryuhina, T Shamshina, Yu Shamshin	Correlation of 1st year students testing results on maths with examination marks: conclusions and proposals	144
O Mancheva-Ali, V Dimitrova	The future of hospitality management: where specialized software and hotel operations meet	146
I Spica, B Berzina, E Spics	Specific of customer service in electronic business environment	148
I Kalenyuk, O Kuklin	Turbulence in the global market for higher education	149
D Konrade	Green thinking and no waste in catering and novel food from plant by products	152
I Kravchenko, A Aleksanyan	Informational economy: extension of opportunities of human development in social and labor sphere	154
I Krekoten	Investments in the tourism industry	156
N Mayurnikov	Professional and personal competences of “ideal manager”	157
O Maksymenko	Development of tourism industry in Poltava region	159
I Markina, M Somych, D Diachkov	Key problems of ensuring food security in the context of globalization	160
A Chuzhykov	Consolidation of media retail against modern digital platforms	162

H Minkevich	Hotel property in Belarus	164
D Nasriddinov, D Normamatova	Teachers' and learners' use of aids and visuals in the English as an fl classroom	165
J Rimlina	Online sales services for retail travel business	166
V Orehovs	Emulation problems while using the sphere of shemotechnical model of NI Multisim in the training process	168
Y Panchenko, H Kuzmenko	Innovative investment and international competitiveness of national economies	169
M Pesocka	Methods of adaptive personnel administration	171
E Pilege	Challenges and opportunities of entrepreneurship in age of data economics	173
O Bilinska	Case method as one of the methods of staff assessment in the company	175
O Cherniavska, L Hnypa-Chernevetska, A Bychkova, W Zhijun	The appliance of the fundraising definition for start-ups and SMEs	177
Yu Karpenko, V Stetsenko	The impact of globalization on the development of tourism management	178
O Manzhura	International Co-operative Integration in the context of sustainable development: perspectives for Ukraine	185
N Kuznetsova	Practical steps to implement the concept of Learning Cities	187
R Kinderis, J Jonuševičienė	Brand value of higher education institution	189
A Savitskaya	The development of tourism in the Republic of Belarus	191
S Dimitrova, S Stoykov	Security knowledge management based on the comprehensive approach	193
E V Skakalina	Information technology for building a model of financial forecasting	195
A Rogale-Homika	Cluster project: electronic online educational and certification system for employees of the tourism industry	197
Ye Hirnyk	Public sector in the doctrine of sustainable development of Ukraine	198
L Leis	Typology of endowment funds in modern practice of financing academic entrepreneurship in the EU	200
V Osetskyi	Institutional principles of realization of European economic development in Ukraine	201
S Iudaeva	Some aspects of alternative tourism development in the world and Latvia	203
G Kabduyeva, M Zhivitere	Kaizen philosophy and its role in management	205

M Yelubayeva, M Petrova, M Zhivitere	Improving management system in the public health organizations at the present stage	207
V Riashchenko, M Bezpartochnyi	Innovation – sources of competitive advantage in the value chain of tourism enterprises	209
L Tsymbal	Intellectual component of global leadership	211
M Vasylchenko, O Khrystenko, A Chaikina	Implementation of project management concept for innovations in the context of organization design	212
Z Oborenko, M Zhivitere, M Bezpartochnyi	The change of disability policy to employment disabled persons: gaps in Latvia's practice	214
N Nazarenko	Youth labour behaviour problems of current importance	216
H Anikovich	Image of a tourist enterprise as a factor of competitiveness	218
D Frolov	Informational technologies in international financing of innovative activity	219
Superb organizations		
Zh Mikryukova	Coordination communication mechanisms of management	220
A Iskandarov, A Kovaleva, D Peshkova	Influence of technology of vision on mission of the organization	221
V Dangele, V Karaev, T Bazarbaev	Methods of estimation of the demands to professionals in business management based on the Greiner's model	222
D Bukas	Adaptation as the connecting link of dynamics and manageability	223
N Kopitova	Systematization of elements of a procedure, orientated towards measuring an enterprise's effectiveness	224
A Amangeldiyev	Detailed examination of a business project process	225
D Kelsina, A Mamedrzaev	Mechanisms of full-scale protection of the organization	227
R Kopitov, A Merentsova, J Miltuze, N Novikova, S Sultanmahmudov, V Oleshko, A Tugarina	Specificity of value estimation of multifunctional enterprises	228
S Miscenko	Parallax in the process of paragenesis of management products	229
G Akimov, A Amangeldiyev, O Kamforina, I Kazina, R Kopitov, R Zaharov	Algorithms for calculation of discounting rates during various life cycles of an organization	231
M Zybina	Cluster organisation resource features of auditing	233
M Bruk, R Kopitovs	Superb Organizations object in general	234