

# CONTENTS

<b>Geology</b> .....	5
<b>K. A. Bezruchko, V. F. Prykchodchenko, O. V. Prykchodchenko, M. O. Hladka.</b> Predicting zones of increased water inflows in local folded structures .....	5
<b>B. R. Rakishev.</b> Mining and geological models of virtual complex ore blocks of the bench .....	11
<b>A. E. Abetov, A. N. Uzbekov.</b> Tectonics and gravity field structure of Central Kazakhstan .....	18
<b>Mining</b> .....	26
<b>M. C. Mezam, M. A. Bachar Assed, M. Ould Hamou, S. Narsis, A. Bensehoub.</b> A new mining method for reopening the opencast mine of Kef Essennoun .....	26
<b>Solid State Physics, Mineral Processing</b> .....	33
<b>M. Hlukhoveria, I. Mladetskyi, K. Levchenko, O. Borysovska.</b> Improving the technology of extracting coal concentrate from fly ash from thermal power plants .....	33
<b>S. A. Us, O. K. Ishchenko, D. V. Koba, K. S. Ishchenko.</b> Selection and justification of drilling and blasting parameters using genetic algorithms .....	40
<b>V. V. Sobolev, N. V. Holub, O. A. Tereshkova.</b> Magnetic stimulation of chemical reactions in coal .....	48
<b>A. V. Uhl, O. V. Melnyk, Yu. A. Melnyk.</b> Application of the stereomicrophotogrammetric method for the complex study of the Al-Cu-Mg alloys system .....	56
<b>Geotechnical and Mining Mechanical Engineering, Machine Building</b> .....	62
<b>O. Panchenko.</b> Substantiating a method for computer analysis of the stress-strain state of the tubbing erector manipulator mechanism .....	62
<b>V. O. Tuz, N. L. Lebed, N. S. Kulesh.</b> Hydrodynamics of vapor-liquid flows in curvilinear channels of separation devices of power plants .....	68
<b>V. V. Hovorukha, A. V. Hovorukha.</b> Improvement of the service life of mining and industrial equipment by using friction modifiers ..	74
<b>Electrical Complexes and Systems</b> .....	82
<b>I. F. Alrefo, O. Matsulevych, O. Vershkov, S. Halko, O. Suprun, O. Miroshnyk.</b> Designing the working surfaces of rotary planetary mechanisms .....	82
<b>Power Supply Technologies</b> .....	89
<b>A. Polyanska, Yu. Pazynich, Kh. Mykhailyshyn, V. Buketov.</b> Energy transition: the future of energy on the base of smart specialization .....	89
<b>N. S. Dreshpak, O. S. Dreshpak.</b> Parameterization of the statistical model for electrical energy efficiency control .....	96
<b>Environmental Safety, Labour Protection</b> .....	103
<b>Mustafa Abdullah Theyab, Hiba Kamal Lafta, Basma Mohammed Ismail, Fadila Sami Lafta, Shaima Mahmoud Mohamed, Marwah M. Rajab.</b> Soil contamination status using contamination indicators and the health risk .....	103
<b>V. A. Tsopa, S. I. Cheberiyachko, O. O. Yavorska, O. V. Deryugin, O. M. Borovytskyi.</b> Improving a process of managing dynamic occupational risks .....	110
<b>G. S. Suleymanov, T. A. Sheydai, N. N. Abdullayeva, K. V. Fokina-Mezentseva, H. A. Bratus, Yu. V. Mazur.</b> The role of the formation of the environmental management system in the improvement of international economic relations .....	118
<b>O. V. Lozhnikov, B. Yu. Sobko, A. V. Pavlychenko, Yu. O. Kirichek.</b> Utilization of the secondary resources of titanium-zirconium pits when constructing highways .....	124
<b>Information Technologies, Systems Analysis and Administration</b> .....	130
<b>Aigul Tilemissova, Dmytro Kozachenko, Roman Vernyhora, Maral Izteleuova, Muratbek Arpabekov.</b> Competitiveness assessment of the railway network of Kazakhstan in the performance of transit container transportation .....	130

<b>Oleksandr Laktionov, Leonid Lievi, Andrii Tretiak, Mykola Movin.</b> Investigation of combined ensemble methods for diagnostics of the quality of interaction of human-machine systems . . . . .	138
<b>L. Zgalat-Lozynska, H. Kryshstal, Z. Drinke, V. Lych, O. Kulikov, Y. Panin.</b> Impact of digital transformation on business structures . . . . .	144
<b>T. Kapeliushna, A. Goloborodko, S. Nesterenko, I. Bezhenar, B. Matviichuk.</b> Analysis of digitalization changes and their impact on enterprise security management under uncertainty. . . . .	150
<b>Economy and Management</b> . . . . .	157
<b>R. H. Snishchenko, V. I. Hrynychtskyi, Yu. M. Nikolchuk, O. O. Lopatovska, L. M. Krot.</b> Financial security of macro regions in the period of military aggression . . . . .	157
<b>O. S. Tsyhanova, N. V. Katkova, I. S. Murashko, O. V. Hryshchenko, K. S. Burunsuz.</b> Adaptation of the controlling system of the machine-building enterprise to change in strategic goals. . . . .	164
<b>H. Kundieieva, M. Turchyna, O. Tur, O. Sheremetynska, Yu. Yasko.</b> Impact of globalization processes on strategic planning of enterprises. . . . .	173
<b>R. Sharanov, B. Vatchenko.</b> Features of crisis management of business entities during martial law . . . . .	181

*“Naukovyi Visnyk Natsionalnoho Hirnychoho Universytetu” is included in the Category A of the “List of Scientific Professional Editions of Ukraine” on geological and economic sciences (Order of Ministry of Education and Science of Ukraine No. 612 dated May, 7, 2019) and technical sciences (Order of Ministry of Education and Science of Ukraine No. 975 dated July 11, 2019)*