№	Статья и ссылка	Аннотация
1.	Abitova, G., Nikulin, V., & Zadenova, T. (2021). NEURAL NETWORK MODELING AND OPTIMISING OF THE AGGLOMERATION PROCESS OF SULPHIDE POLYMETALLIC ORES. *Scientific Journal of Astana IT University*, (6), 4-14. https://doi.org/10.37943/AITU.2021.76.49.001	During the operation of the lead-zinc production while processing of polymetallic ores, problems arose related to the quality of products and the efficient use of equipment – agglomeration furnace and crushing apparatus. Previously, such issues were resolved due to the experiences and based on mathematical modeling of processes. The mathematical model for optimizing unnecessary such operating mode is a difficult program. Performing calculations is required a fairly large investment of time and resources. Therefore, the program of the mathematical model for optimizing the operating mode of the agglomeration furnace and the crushing device for sinter firing was replaced with a neural network by implementing the process of training the network based on the results of calculations on a mathematical model. The results obtained showed that neural network models were more accurate than mathematical models, which made it possible to solve production optimization problems of great complexity. The use of neural networks for modeling technological processes has made it possible to increase the efficiency of product quality control systems and automatic control systems for the roasting of sulfide polymetallic ores.
2.	Bushuyev, S., Onyshchenko, S., Bushuiev, D., Bushuieva, V., & Bushuyeva, N. (2021). DYNAMICS AND IMPACT OF DIGITAL FOOTPRINT ON PROJECT SUCCESS. *Scientific Journal of Astana IT University*, (6), 15-22. https://doi.org/10.37943/AITU.2021.38.94.002	The digital footprint of the project is its integral characteristic, reflecting both the "official" information on the project, unnecessary and any mention of the project including social networks and other Internet resources. An entropy model for assessing the success of a project is proposed. The model covers the content (semantic part), its environment, and the dynamics of implementation. The increase in informational entropy (uncertainty) of the project cannot be estimated as the sum of the increase in entropy associated with each element of the digital footprint. The main reason for this is the synergy inherent in the digital footprint. Separately insignificant elements of a digital footprint of a project of a negative nature, with their significant number and periodic appearance, cause a "snowball" effect, which leads to an increase and exaggeration of small destructive effects of individual digital footprints. Therefore, it makes no sense to consider the increase in information entropy for each element of the digital footprint of the project, but it is necessary to consider the impact of each new element of the digital footprint on the information entropy of the project. Each element of an active digital footprint is formed on time and meets the necessary requirements. The organized formation of a digital footprint promotes order in documentation, timely awareness of risks, the formation of the required level of demand for a project product, and a proactive assessment of success. The digital footprint should also help attract new stakeholders to create a favorable project image and promote the project's product. The fulfillment of this set of conditions ensures a decrease in entropy and, as a result, the success of the project. Conversely, if active and passive digital traces of a project increase entropy, then the likelihood of project success is reduced.
3.	Danchenko, O., Bedrii, D., Haidaienko, O., Bielova, O., Kravchenko, O., & Kuzminska, Y. (2021). MATHEMATICAL SUPPORT OF THE INFORMATION SYSTEM FOR DECISION SUPPORT IN THE SPHERE OF HEALTHCARE. *Scientific Journal of Astana IT University*, (6), 23-37. https://doi.org/10.37943/AITU.2021.89.31.003	The relevance of the topic is that currently modern medical information systems are aimed at providing management, economic and in some cases medical practice in the collection and processing of anamnestic data, including dental, ophthalmological, radiological, anesthesiological, resuscitation. This study goal is to develop models of basic principles and structural and functional scheme of the decision support system as a tool that allows to model the process of "clinical thinking" of an endocrinologist in determining plans for drug treatment of diabetes based on a scenario approach and decision theory. In accordance with the set goal, the research tasks are formulated and solved, the essence of which is as follows: - analyze existing medical decision support systems and identify shortcomings of such systems; - creating the criteria for developing medical decision support systems to improve usability; - develop acceptable algorithms to create a medical decision support system. Recommendations for modeling the functions of the doctor's intelligence in the process of processing and evaluation of medical information using a personal computer are offered, which will improve the operation of existing medical information systems. The research was conducted within the framework of project management methodology and decision theory using information technology tools. The algorithms for the creation a medical decision support system proposed by the authors are based on the method of multicriteria ranking of alternatives, which is a tool for modeling "clinical thinking" and logical reasoning of an endocrinologist. Unlike existing medical information systems, it will not only collect, store and process information about patients, but also increase the efficiency of endocrinologist decisions regarding the prediction and development of a patient treatment plan.
4.	Neftisov, A., Talipov, O., & Andreeva, O. (2021). DEVICE FOR DETERMINING THE VALUE OF	This article discusses an innovative device designed to determine the value of the steady-state current in the primary circuit of electrical installations

		using reed switches and a microprocessor without the use of current transformers. The typical structure of relay protection devices is considered. The main elements are presented. When choosing a primary converter, a reed switch was taken, because it has certain advantages over current transformers. As part of the research, experimental installations for measurements were assembled. They made it possible to emulate the real conditions in which the relay protection devices have to function, unnecessary and to depict the characteristics of future devices. The code is presented that allows the microprocessor device to function according to the laid down algorithm. A device on a reed switch and a microprocessor is presented, which allows transmitting a certain amount of current in the primary circuit in digital form (binary code) to the microprocessor protection. The presented measuring device made it possible to implement a method for determining the magnitude of the steady-state short-circuit current.
	THE STEADY-STATE ELECTRICITY IN THE PRIMARY CIRCUIT USING A REED SWITCH AND A MICROPROCESSOR. *Scientific Journal of Astana IT University*, (6), 52-58. https://doi.org/10.37943/AITU.2021.75.95.005	
5.	Ibadildin, N., Tolesh, F., & Assylkhanova, T. (2021). IMPACT OF THE COVID-19 PANDEMIC ON STUDENTS IN THE REPUBLIC OF KAZAKHSTAN. *Scientific Journal of Astana IT University*, (6), 38-51. https://doi.org/10.37943/AITU.2021.55.10.004	Kazakhstan, as many other countries in the world had to urgently switch to online learning when it became clear that the Covid-19 was a highly contagious disease and it was necessary to 'social distance' to slow down its spread. This study aims to explore the influence of the pandemic on lives and education experiences of the Kazakhstani undergraduate students. An online survey and online interviews were conducted via the social media platforms and 161 fully completed questionnaires were sorted out for the analysis. The findings indicate that during online learning students reported both positive and negative effects of pandemic on their lives and study experiences. More students started to work in part-time positions, however, their online class attendance fell considerably, and in order to cope with the increased amount of home assignments they started to cheat more often. Students were rather unhappy about the lack of interaction with peers and faculty members. Also, they were frustrated with the poor Internet connection as well as the need to self-isolate in the environment which does not always contribute to the productive education process. However, students also reported benefits in terms of more time spent with family and for self-development, self-care and hobbies.
6.	Tanaka, H., & Bushuyev, S. (2021). PROJECT MANAGEMENT IN THE GLOBAL OIL AND GAS INDUSTRY BY CO-CREATING STRATEGIC VALUE FOR THE INDUSTRY. *Scientific Journal of Astana IT University*, (6), 59-75. https://doi.org/10.37943/AITU.2021.16.52.006	Project development and marketing on large oil and gas projects (LOGPs) by engineering-procurement-construction (EPC) contractors respond to massive capital investment (CAPEX) undertakings by oil and gas industry owners and takes on multi-lateral interactions carried out by a dozen actors proactively participating in the EPC contractors' business ecosystem created to remain competitive toward owner companies, which form of project marketing is different from a straight forward contractor – owner interaction found in the other branches of contracting industry. Most of such interactions are based on strategic trust among the relevant members built over decades of heavy win-win transactions. This study has found the actors that compose the project development and marketing cycle in LOGPs, explored dominant logics of EPC contractor's project development and marketing, and analysed how primary actors in LOGP development and implementation co-create strategic values for both the respective corporations and sustainable overall industry growth. The business ecosystem theory posits that a business ecosystem is an economic community supported by interacting organizations; the company holding a leadership role is valued by the community because it enables members to move toward shared visions to align their investments – this refers to the platform services theory and to find mutually supportive roles.
7.	Terenchuk, S., Pasko, R., Panko, O., & Zaprivoda, V. (2021). MODELS, METHODS, AND MEANS OF REPRODUCTION OF EXPERT KNOWLEDGE IN INTELLIGENT SUPPORT SYSTEM BUILDING-TECHNICAL EXPERTISE. *Scientific Journal of Astana IT University*, (6), 76-87. https://doi.org/10.37943/AITU.2021.43.51.007	The paper is devoted to solving such a scientific and practical problem as the creation of computerized infocommunication systems for support building-technical expertise to determine the causes of destruction and deformation of buildings and structures. The analysis of the current state of expert activity within the framework of building-technical expertise is carried out. Perspective directions of the introduction of intelligent infocommunication systems in the course of performance of building-technical expertise and expert researches are outlined. The architecture of Intelligent Support System Building-Technical Expertise and the communication scheme of experts with the system are shown. To mapping expert knowledge formalized in the form of fuzzy associative rules to the memory card of the Cascade ARTMAP category fuzzy artificial neural network, it is proposed to use a fuzzy Mamdani-type inference system. The main input data, on the basis of which a fuzzy conclusion is realized to establish the degree of influence of various environmental factors on the technical condition of buildings and structures, are systematized and presented in a form acceptable for processing by computerized systems. At the same time, the main focus is on the study of facilities that are built and operated on subsidence loess soils. The process of formalization of heuristics, which is based on the formation of associations related to information on the position of signs of deterioration of the technical condition of the objects of expertise and the position of the changed soil, is described. Examples of interpretation and fuzzification of input information

		on soil properties, characteristics of the soil base of the object of building-technical expertise, and the surrounding area are given. The described approach provides an opportunity to reduce the risks of making wrong decisions by using the system as an intelligent database. The use of an artificial fuzzy neural network of the Cascade ARTMAP category gives the system the ability to form an expert conclusion on the degree of influence of various environmental factors on the technical condition of objects in the fuzzy conditions of a partially observed environment.