Published textbooks and study guides in 2021

	Name	Author	Publisher, year of publication, pp.	Volume in p.l.
	Introduction to Machine Learning:	Mukhamediev R.I., Amirgaliev E.N.	Textbook. - Almaty. – 288 p. Recommended for publication with the stamp of UMO RUMS on December 21, 2021, protocol No. 2, ISBN 978-601-08-1177-5	18 p.l.

Individual collections of works published by the institute (for example, conference proceedings) in 2021

	Name	Publisher, year of publication	m Volume in p.l.
1	Yakunin K., Mukhamediev R.I., Elis M., Kuchin Y., Symagulov A., Yunicheva N., Mukhamedieva E. Analysis of thematic clusters of media publications of the Republic of Kazakhstan on the topic of the COVID-19 pandemic //	News of the NAS RK. Series of physical and mathematical sciences. – 2022. – No. 3(343). – pp. 260–274.	

Published scientific articles in 2021

	Place of publication of the magazine
	Nazirova AB, Dubovenko YI, Abdoldina FN, Kuzminets MP Optimization of GIS modules for processing data of gravity monitoring of subsoil in the Republic of Kazakhstan // 20th International Conference Geoinformatics : Theoretical and Applied Aspects, Kiev, Ukraine 11 May 2021 - 14 May 2021 pp. 1-6. ISBN 978-946282381-5, DOI 10.3997/2214-4609.20215521136
	Satybaldiyeva F.A., Beisembekova R., Sarybaev A.S., Yessenbekova G.Zh. , Kultas A. Development of models of the maximum power of the solar energy tracking system based on a photopanel (article). Journal of Theoretical and Applied Information Technology. 31 March 2021, Vol. 99, No. 6, pp.1402 – 1413, ISSN:1992-8645, E-ISSN:1817-3195
	K.Sauanova , Mailybayev , Y.Umbetov , U.Lakhno , V.Amanova , M. Development of mathematical and information support for solving prediction tasks of a railway station development.Journal of Theoretical and Applied Information Technology this link is disabled, 2021, 99 (3), pp. 583–593, ISSN: 1992-8645. https://www.jatit.org/volumes/Vol99No3/3Vol99No3.pdf
	Blozva , A.Kydyralina , L.M.Matus , Y.V.Brzhanov , K.Sauanova , R.T.Shalabayeva , M. IoT devices integration and protection in available infrastructure of a university computer network.Journal of Theoretical and Applied Information Technologythis link is disabled, 2021, 99(8), pp. 1820–

1833, ISSN: 1992-8645 https://www.jatit.org/volumes/Vol99No8/11Vol99No8.pdf. https://www.jatit.org/volumes/Vol99No6/5Vol99No6.pdf	
Bebeshko , B. Khorolska , K. Sauanova , K. Kotenko , N. Sagyndykova , S., Tyshchenko , D. 3D modeling by means of artificial intelligence. Journal of Theoretical and Applied Information Technology this link is disabled, 2021, 99(6), pp. 1296–1308, ISSN: 1992-8645	
Babich , MYButaev , K.Sauanova , MMMalygin , AYSagyndykova , SN Imitation of Achievement of Objectives in the Process of Conflict of System.SIST 2021 - 2021 IEEE International Conference on Smart Information Systems and Technologies, 2021. https://ieeexplore.ieee. org/document/9465948	
Uskenbaeva R.K., Kuandykov A.A., Nuralykyzy S., Tolegenov A.M. Application of OLAP technologies as a tool for business analytics . Scientific magazine : Vestnik KazNITU . – Almaty : Satbaev universities . - No. 3. – 2021. – P. 93-98, ISSN 2709-4766	
ESPAEV G.B., KENSHIMOV C.A., Recognition and segmentation of game images on musical instruments, "Student Forum" issue No. 16 (152). Volume 1, No. 16(152), 2021, 29-30 pages , ISSN 2542-2162	
ESPAEV Ғ . B . , KENSHIMOV Ch . A . , Kazakhtyn Ulttyk musical aspaptaryn sureterin segmentationlau , COMPUTER SCIENCE AND CYBER SECURITY 2021. 2021 , 49-51 pages , ISBN 978-601-228-467-6	
ESPAEV G.B., KENSHIMOV C.A., Muzykalyk aspaptarda oynaityn adamardyn sureterin segmentationlau , Satpaevskie readings - 2021. Volume 2, issue , 2021 , 26-30 pages , ISBN 978-601-323-246-1	

List of scientific articles by department employees for 2021, published in international publications with impact factor (IF >0, IF >0.25)

	FULL NAME.	Position, academic degree	Title of the article and publication, year of publication, pages , volume of pages.	Poland Priority scientific direction, priority industrial sector (for applied and contractual work), type of project	Impact factor (IF >0, IF >0.25) belonging to Scopus , TomsonReuters databases and etc .
	Mukhamediev RI et al. Review of Some Applications of Unmanned Aerial Vehicles Technology in the Resource-Rich Country //Applied Sciences. – 2021. – T. 11. – No. 21. – P. 10171. https://doi.org/10.3390/app112110171				
	Mukhamediev RI et al. From Classical Machine Learning to Deep Neural Networks: A Simplified Scientometric Review //Applied Sciences. – 2021. – T. 11. – No. 12. – P. 5541. https://doi.org/10.3390/app11125541				
	Mukhamediev R.I. , Yakunin K. et al. KazNewsDataset : Single Country Overall Digital Mass Media Publication Corpus //Data. – 2021. – T. 6. – No. 3. – P. 31.				

	https://doi.org/10.3390/data6030031				
	Kirill Yakunin , Ravil I. Mukhamediev , Elena Zaitseva , Vitaly Levashenko , Marina Yelis , Adilkhan Symagulov , Yan Kuchin , Elena Muhamedijeva , Margulan Aubakirov and Viktors Gopejenko . Mass media as a mirror of the COVID-19 pandemic // Computation 2021, 9(12), 140; https://doi.org/10.3390/computation9120140				
	Babich , MYButaev , K.Sauanova , MMMalygin , AYSagyndykova , SN Imitation of Achievement of Objectives in the Process of Conflict of System.SIST 2021 - 2021 IEEE International Conference on Smart Information Systems and Technologies, 2021.https://ieeexplore.ieee.org/document/9465948				
	Daiyrbayeva E., Yerimbetova A., Toigozhonova A. Comparative analysis of the results of image recovery based on the strip method using various matrices. News of the NAS RK. Series Informatics , (4) 2021.–pp.89–95. https://doi.org/10.32014/2021.2518-1726.70				
	AmirgaliyevYe ., Berikov V., Cherikbayeva L., Tulegenova B., Daiyrbayeva E. Construction of an optimal collective decision on the basis of a cluster ensemble. Bulletin of KazNPU named after. No. Abai, series " Physics and Mathematics ". - Almaty: 2021, No. 4.–P.65-71. https :// doi . org /10.51889/2021-4.1728-7901.09				
	Cherikbayeva L., Yerimbetova A., Daiyrbayeva E. Research of Cluster Analysis Methods for Group Solutions of the Pattern Recognition Problem. 6th International Conference on Computer Science and Engineering.UBMK-2021, 15-17.09.2021, Ankara-Turkey/ IEEE Xplore (Scopus). -P.511-51				

List of scientific articles by department employees for 202 1 year, published in republican publications with an impact factor (IF >0, IF >0.25), including in publications recommended by the KKSON MES RK

	FULL NAME.	Position, academic degree	Name of the report and publication, year of publication, pages , page volume , including in publications recommended by the Committee for Education and Science of the Ministry of Education and Science of the Republic of Kazakhstan pages , p.l.	Poland Priority scientific direction, priority industrial sector (for applied and contractual work), type of project	Impact factor (IF >0, IF >0.25) belonging to the Scopus , TomsonReuters , etc. databases .
	Abdoldina , FN, Nazirova , AB,		Solution of the gravity exploration direct problem by		

	Dubovenko , YI, Umirova , GK		the simulated annealing method for data interpretation of gravity monitoring of the subsoil conditions // News of the National Academy of Sciences of the Republic of Kazakhstan, Series of Geology and Technical Sciences, 2021, 1(445) , pp. 13-21, DOI: https://doi.org/10.32014/2021.2 5 18-170X.2		
	Aisagaliev S.A., Sevryugin I.V., Isaeva Z.B., Iglikova M.N. Optimal control of linear systems with restrictions ., Izvestia of the National Academy of Sciences of the Republic of Kazakhstan, physical and mathematical series, No. 4 (2021), 118-125 pages ISSN 1991-346 X				