

Zhukabayeva Tamara Kokenovna

PhD, acting professor

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- Laureate of the State Scientific Scholarship for Talented Young Scientists -2015
- The best university teacher 2020.
- Bolashak International Scholarship in 2021, University of Lincoln -"Best Conference Papers" International Conference on Electrical Engineering, Computer Science and Informatics, IEEE,2020

Professional experiences:

01.09.2020 Associate Professor of the Department of IP, L.N.Gumilyov ENU 2018 - 2020 Head of the lab. Laboratory of Information Security Systems, Institute of Information and Computing Technologies (IIVT) MES 2013 2019 associate of Department Professor Software engineering and, ENU.L.N.Gumilev 2003 - 2009 Senior lecturer. lecturer, Assistant Professor, computer engineering, Auezov SKSU

Academic degree and rank, school of sciences:

Doctor of Philosophy (PhD) in the specialty 6D075100— "Computer Science, Computer engineering and management" Associate Professor 05.13.00- "Computer Science, Computer Engineering and Management"

Scientific interests: Artificial intelligence, information security, computer vision, IOT

Education:

- 2009 2012 PhD, 6D075100 "Computer science, computer engineering and management", defended her thesis on December 26, 2012 at KazNTU named after K.I. Satpayev
- 2004 2006 Master's degree "6N0602 Computer Science" Master of Computer Science. Diploma with honors. SKSU named after. M Auyezova

JOOC-M No.0011506

- 1999-2003 "0105 Informatics". Specialist in the field of computer science.AZHB No. 0003096. Diploma with honors. SKSU named after. M Auyezova

Scientific grants:

Acted as an executor on the subject of research in the following projects:

- -2022-2024. Research of methods of confidentiality preservation in the process of Internet of Things interaction
- -2018-2020. "Development of software and hardware for cryptographic protection of information during its transmission and storage in infocommunication systems and general purpose networks",
- -2018-2020. "Development of a new information system and database for optimizing monitoring of atmospheric air pollution by heavy metals"
- 2018-2020. "Development intelligent information complex and mathematical models for modern electric power systems".
- 2018-2020 "Development of algorithms and embedded software for determining the geoelectric section for geoinformation technology GPR",
- -2015.2018 "Development and experimental study of algorithms for adaptive control of robotic mobile complexes"
- --2013-2015 "Development of methodology and algorithms for decentralized optimal control of complex technological systems", under Contract No. 396 dated 04.02.2013
- 2013-2015 "Algorithms and technical means of geolocation systems", under contract No. 773 dated 01.10.2013
- -Executor of a scientific project within the framework of public procurement on the topic "Analysis of international experience in the use of information and communication technologies in electoral processes, taking into account possible application in Kazakhstan", contract No. 31 dated June 12, 2018

Courses: Analysis, testing and debugging of programs Cryptography

Reliability and security in Information System

Data mining

Computer vision technologies

Digital image processing

Introduction to Artificial Intelligence

Publications (selected):

- 1. Nurlan, Z., Zhukabayeva, T., Othman, M.EZ-SEP: Extended Z-SEP routing protocol with hierarchical clustering approach for wireless heterogeneous sensor network/Sensors (Switzerland), 2021, 21(4), ctp. 1–19, 1021, DOI:10.3390/s21041021, [WoS Emerging Sources Citation Index,SCOPUS Q1, CiteScore: 91]
- 2. Nurlan, Z., Zhukabayeva T.,Othman, M., Adamova, A. Resource Allocation Approach for Optimal Routing in IoT Wireless Mesh Networks /IEEE Access, 2021, 9, ctp. 153926–153942, DOI: 10.1109/ACCESS.2021.3123903,[WoS Emerging Sources Citation Index,SCOPUS Q2, CiteScore: 89]1
 - 3. Zhukabayeva, T.K., Mardenov, E.M., Abdildaeva, A.A./Sybil Attack Detection in Wireless Sensor Networks /14th IEEE International Conference on Application of Information and Communication Technologies, AICT 2020 Proceedings, 2020, 9368790,SCOPUS
- 4. Nurlan Z., **Zhukabayeva T.**, Othman M. IoT hardware-defined routing protocol for dynamic self-organizing wireless mesh networks //2020 IEEE 10th International Conference on Consumer Electronics (ICCE-Berlin). IEEE, 2020. C. 1-4. DOI: 10.1109n50680.2020.9352191,[SCOPUS]
- 5. Nurlan, Z., Zhukabayeva, T., Othman, M., Adamova, A., & Zhakiyev, N. (2021). Wireless Sensor Network as a Mesh: Vision and Challenges. IEEE Access, 10,46-67.7.DOI:10.1109/ACCESS.2021.3137341,,[WoS Emerging Sources Citation Index,SCOPUS Q2, CiteScore: 89]
- 6. Nurlan Z., **Zhukabayeva T.**, Othman M. Mesh network dynamic routing protocols //2019 IEEE 9th International Conference on System Engineering and Technology (ICSET). IEEE, 2019. C. 364-369. DOI: 10.1109/ICSEngT.2019.8906314 [SCOPUS]
 - 7. Mavlankulov, G., Othman, M., Turaev, S., Selamat, M. H., Zhumabayeva, L., & **Zhukabayeva**, **T.** (2018). Concurrently controlled grammars. Kybernetika, 54(4), 48-764.[SCOPUS Q3, CiteScore :35]
- 8. G. Khaleel, Sh. Turaev, I. Alshaikhli, <u>T. Zhukabayeva</u>, M. Izzuddin, M. Tamrin. A Symmetric Cryptosystem Based on Nondeterministic Finite Automata. Journal of Theoretical and Applied Information Technology 95(10), 2017, pp. 1489-1498. WoS Emerging Sources Citation Index, SCOPUS, etc.
 - 9. Sh. Turaev, S. Ashaari, A. Okhunov, M.I. Mohd

Research traineeship:2012-2013 Putra Malaysia University (Malaysia, Selangor, Putra Malaysia University). - Lincoln University,UK 1.05.2022-30.10.2022

Hirsch index according to the Web of Science or Scopus information base:

- 4

Languages:

Kazakh Russian English

- Tamrin, <u>T. Zhukabayeva</u>. Multiset Controlled Grammars. Journal of Theoretical and Applied Information Technology, 2017. WoS Emerging Sources Citation Index, SCOPUS, etc
- 10. Sh. Turaev, G. Khaleel, <u>T. Zhukabayeva</u>. A Novel Stream Cipher Based on Nondeterministic Finite Automata. Information Technologies in Science, Management, Social Sphere and Medicine (ITSMSSM 2016), 23-26 May, 2016, Tomsk, Russia, Atlantis Press, 2016, pp. 110-191.
- 11. **Zhukabayeva, T**.; Ordabay, S.; Ven-Tsen, K. Research of cryptosystems resistance on cascade codes to nonalgebraic decoding attacks. Applied Mathematics and Information Sciences, 2012.
- 12. **Zhukabayeva, T.**, Oralbekova, Z., Zhartybayeva, M., Zhumadillayeva, A., & Adamova, A. (2015, August). Prospects of Development of Technologies in the Field of Robotics and the Stages of Design of Mobile Robotic Complex. In 2015 5th International Conference on ITConvergence and Security (ICITCS) (pp. 1-4). IEEE. DOI:10.1109/ICITCS.2015.7293010, [SCOPUS]
- 13. Ven-Tsen, K., <u>Zhukabayeva, T.</u> (2016). (2016). Decentralized Control Of Complex Technological Systems. Applied Mathematics & Information Sciences, 10(1), 377.DOI:10.18576/amis/100140, [SCOPUSQ2, SJR: 0.55]
- 14. Adamova, A., <u>Zhukabayeva</u>, T., Zhumabayeva, L., Mukanova, Z., & Ven-Tsen, K. (2018, July). Design and Development of a Mobile Robotic Complex. In 2018 International Conference on Recent Innovations in Electrical, Electronics & Communication Engineering (ICRIEECE) (pp. 1017-1020). IEEE.DOI:10.18576/amis/100140 [SCOPUS]
- Thumadillayeva, A. (2017).lControl System of Mobile Robotic Complex Based on Mini Tractor "Belarus 132H". In Emerging Trends in Electrical, Communications and Information Technologies (pp. 123-131). Springer, Singapore.DOI: 10.1007/978-981-10-1540-3_13, [SCOPUS].
- 16. Ashaari, S., Turaev, S., Tamrin, M. I. M., Okhunov, A., **Zhukabayeva, T.** (2017). Multiset controlled grammars: A normal form and closure properties. Indonesian Journal of Electrical Engineering and Computer Science, 8(1),36-42. [SCOPUS Q3, SJR: 0.21].

Advanced training in the last 5 years:

- 1. Educational Management. Lincoln University, UK 1.05.2022-30.10.2022
- 2. "Java Programming: Solving Problems with Software" Duke University (82 hours) 2020
- 3. IT competencies and methods of online learning. Astana, Kazakhstan (17.01.2023-01.02.2023) L.N. Gumilyov ENU.
- 4. CCNAv7: Introduction to Networks (CCNAv7: Introduction to Network Technologies). 09/02/2023. Kazakh Academy of Infocommunications. Kazakhstan.
- 5. Methods of student-oriented education at the University (there is a certificate of advanced training); Moscow, Russia

(20.11.2020-15.12.2020)