# Scientist profile Kateryna Melnyk

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**Biographical information:** I was born on June 07, 1976, in the village of Liman, I am married, and I have 1 child. I have been working at the Lutsk National Technical University since 1998. In 2011, he received the scientific degree of Candidate of Technical Sciences. In 2012, I received the academic title of associate professor of the Department of Computer engineering and cyber security. I am currently working as an associate professor in the Department of of Computer engineering and cyber security.

#### Education: master's degree

| Period, Organization, Position |                                                          | Obtained Qualification, Degree, or Diploma                                                                                        |  |
|--------------------------------|----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|--|
| 1993-                          | L. Ukrainka Volyn State University,                      | Specialist's degree in the specialty "Mathematician.                                                                              |  |
| 1998                           | Specialist's degree                                      | Mathematics teacher"                                                                                                              |  |
| 2010-<br>2014                  | L. Ukrainka Volyn State University, postgraduate student | Scientific degree and diploma of candidate of technical sciences in the specialty 01.02.04 – mechanics of a deformable solid body |  |
| 2012-<br>2021                  | Lutsk National Technical University, associate professor | Academic title of associate professor of the Department of of Computer engineering and cyber security                             |  |

Scientific interests: Intelligent data processing, artificial intelligence computer systems, parallel and distributed computing

## Scientific and pedagogical activity:

| Period       | Organization             | Position  | Type of work               |
|--------------|--------------------------|-----------|----------------------------|
| 01.09.1998 - | Lutsk National Technical | oppietant | Teaching and research work |
| 31.08.2012   | University               | assistant | Teaching and research work |
| 01.09.2012 - | Lutsk National Technical | associate | Teaching and research work |
| until today  | University               | professor |                            |

**Educational disciplines:** Big data analysis, Computer systems of artificial intelligence, Parallel and distributed computing, Discrete Math

Knowledge of languages: Ukrainian, English (B2)

## **SELECTED WORKS:**

### Monographs:

1) 1. Maksymovich V.M., Melnyk K.V. Interaction of a thick plate with a system of smooth dies under unknown contact areas. Monograph. - Lutsk: LNTU, 2013. - 116 p.

#### Publications included in Scopus, Web of Science databases:

 Melnyk V.M., Bagniuk N.V., Melnyk K.V. The effect of high-performance sockets on the intensity of data processing. // Scientific Journal ScienceRise (Impact Factor DOI: 10.15587/2313-8416.2015.44380). Kharkiv. 2015. VOL. 6, No. 2(11). P. 38-48.

- V. M. Melnyk, P. A. Pekh, K. V. Melnyk, N. V. Bagniuk, O. K. Zhigarevich. Construction and use of an interdomain communication mechanism for high-performance data processing. // Eastern European journal of advanced technologies. – Kharkiv (DOI – Scopus). – 2016. – No. 1/9/79. - with. 10-15.
- V. Melnyk, N. Bahnyuk, K. Melnyk, O. Zhyharevych, N. Panasyuk. Implementation of the simplified communication mechanism in the cloud of high performance computations. East-European journal of Enterprise Technologies. – Kharkiv (Scopus DOI: 10.15587/1729-4061.2017.98896). – 2017. – No. 2/2/86. - p. 24-32.
- V. M. Melnyk, P. A. Pekh, K. V. Melnyk, N. V. Bagniuk, O. K. Zhigarevich. Construction and use of an interdomain communication mechanism for high-performance data processing. // Eastern European journal of advanced technologies. – Kharkiv (DOI – Scopus). – 2016. – No. 1/9/79. - with. 10-15.
- V. Melnyk, N. Bahnyuk, K. Melnyk, O. Zhyharevych, N. Panasyuk. Implementation of the simplified communication mechanism in the cloud of high performance computations. East-European journal of Enterprise Technologies. – Kharkiv (Scopus DOI: 10.15587/1729-4061.2017.98896). – 2017. – No. 2/2/86. - p. 24-32.
- S. K.V. Melnyk, V.M. Melnyk, A.S. Matsibora Research of content methods of spam recognition. // Scientific journal "Computer-integrated technologies: education, science, production". - Lutsk. – 2018, No. 30-31. - with. 95-100.
- Melnyk K.V., Melnyk V.M., Koptyuk Yu.Yu. Research of image recognition methods based on neural networks. // Scientific journal "Computer-integrated technologies: education, science, production". - Lutsk. – 2019, No. 335. - with. 161-165.
- 8) 5. Maksymovich V.M., Melnyk K.V. Interaction of a thick plate with a system of smooth dies under unknown contact areas. Monograph. Lutsk: LNTU, 2013. 116 p.
- 6. V. M. Melnyk, K. V. Melnyk, S. V. Lavrenchuk, I. N. Burchak, O. K. Kaganyuk. The influence of the mechanism of direct search of messages based on TCP protocols on the process of their exchange // Eastern European Journal of Advanced Technologies. – Kharkiv (DOI – Scopus). – 2019. – No. 3/2/99. - with. 36-42.
- 7. Melnyk K.V., Melnyk V.M., Hrygoryshyn A.M. Automatic collection of information (parsing) in the network. // Scientific journal "Computer-integrated technologies: education, science, production" -Lutsk: LNTU Publishing House. - Issue 39. – 2020. – P. 151-156.
- 11) 8. Melnyk K.V., Kostyuchko S.M., Melnyk D.S. Optimizing financial management and analytics using a mobile application based on the Android OS. // Scientific journal "Computer-integrated technologies: education, science, production" - Lutsk: LNTU Publishing House. - Issue 39. – 2020. – P. 157-161.
- 12) 9. Lavrenchuk, S., Melnyk, K., Bagniuk, N., & Pashchuk, V. (2022). Research on methods of calculating distances traveled by sales agents. // Scientific journal "Computer-integrated technologies: education, science, production" - Lutsk: LNTU Publishing House. - Issue 47. - 2022. -P. 35-40.

#### Study guides:

 Electronic study guide on the discipline "Software engineering" for students of the "Computer engineering" training course of all forms of education. – Compilers: Sholom P.S., Zhigarevich O.K., Melnyk K.V. – Lutsk: Lutsk National Technical University, 2016 (Reference #16-10, protocol #9 dated May 19, 2016).

## LINK PROFILE:

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GOOGLE SCHOLAR: https://scholar.google.com.ua/citations?hl=en&user=VTfuwagAAAAJ

## ACADEMIA: https://independent.academia.edu/KatyaMeInyk

#### SCOPUS : https://www.scopus.com/authid/detail.uri?authorld=56366911300