

Preface: PhD workshop on artificial intelligence in computer science

Olga Cherednichenko^{1,†}, Nina Khairova^{2,3,†}, Lyubomyr Chyrun^{4,†}, Vasyl Lytvyn^{5,†}, and Yevgeniy Bodyanskiy^{6,†}

¹ Bratislava University of Economics and Management, Furdekova str. 16, Bratislava, Slovak Republic

² Umeå University, Universitetstorget 4, 901 87 Sweden

³ National Technical University "Kharkiv Polytechnic Institute", Kirpychova 2, 61000 Kharkiv, Ukraine

⁴ Ivan Franko National University of Lviv, University 1, 79000 Lviv, Ukraine

⁵ Lviv Polytechnic National University, Stepan Bandera 12, 79013 Lviv, Ukraine

⁶ Kharkiv National University of Radio Electronics, Nauky ave 14, Kharkiv, 61166, Ukraine

Abstract

This document is the preface of the PhD Workshop on Artificial Intelligence in Computer Science of the 9th International Conference on Computational Linguistics and Intelligent Systems (CoLInS 2025), May 15–16, 2025, held in Kharkiv, Ukraine (<https://colins.in.ua/phd-workshop-on-artificial-intelligence-in-computer-science/>).

Keywords

natural language processing, corpus technologies, ontologies, computer lexicography, NLP

1. Introduction

The main purpose of the PhD Workshop on Artificial Intelligence in Computer Science is a discussion of the recent research results of PhD and doctoral students in the fields connected to Computer Science and Intelligent Systems, obtaining feedback from experienced researchers and engage in networking opportunities. The workshop is soliciting literature review, survey and research paper comments including, whilst not limited to, the following areas of interest:


- Planning, routing, and scheduling;
- Recommender systems;
- Knowledge representation and reasoning;
- Reasoning under uncertainty;

PhD Workshop on Artificial Intelligence in Computer Science at 9th International Conference on Computational Linguistics and Intelligent Systems (CoLInS-2025), May 15–16, 2025, Kharkiv, Ukraine

* Corresponding author.

† These authors contributed equally.

✉ olga.cherednichenko@vsemba.sk (O. Cherednichenko); nina.khairova@gmail.com (N. Khairova); Lyubomyr.Chyrun@lnu.edu.ua (L. Chyrun); Vasyl.V.Lytvyn@lpnu.ua (V. Lytvyn); yevgeniy.bodyanskiy@nure.ua (Y. Bodyanskiy)

 0000-0002-9391-5220 (O. Cherednichenko); 0000-0002-9826-0286 (N. Khairova); 0000-0002-9448-1751 (L. Chyrun); 0000-0002-9676-0180 (V. Lytvyn); 0000-0001-5418-2143 (Y. Bodyanskiy)



© 2025 Copyright for this paper by its authors. Use permitted under Creative Commons License Attribution 4.0 International (CC BY 4.0).

- Artificial neural networks;
- Deep learning;
- Classification;
- Regression;
- Pattern recognition;
- Supervised learning;
- Data mining & knowledge management;
- Application domain.

The language of the PhD Workshop on Artificial Intelligence in Computer Science is English.

The PhD Workshop on Artificial Intelligence in Computer Science took the form of an oral presentation by peer-reviewed individual papers. The papers were distributed among 69 external reviewers from France, Germany, The Netherlands, the United States, the United Kingdom, India, Moldova, Czech Republic, Poland, Bulgaria, Portugal, Serbia, Slovenia, Finland and Ukraine. To make more correct decisions regarding the acceptance or rejection the papers got 2-3 reviews. This year Organizing Committee received 32 submissions, out of which 14 were accepted for presentation as regular papers.

2. Acknowledgements

The PhD Workshop on Artificial Intelligence in Computer Science would not have been possible without the support of many people. First of all, we would like to thank all the authors who submitted papers to the PhD Workshop on Artificial Intelligence in Computer Science and thus demonstrated their interest in the research problems within our scope. We are very grateful to the members of our Program Committee for providing timely and thorough reviews and, also, for being cooperative in doing additional review work. We would like to thank the Organizing Committee of the conference whose devotion and efficiency made this instance of the PhD Workshop on Artificial Intelligence in Computer Science a very interesting and effective scientific forum. We would like to thank the Chairs of the PhD Workshop on Artificial Intelligence in Computer Science, as well as the Program Committee and all Reviewers, for their diligence in selecting the papers and ensuring their high scientific quality.

The PhD Workshop on Artificial Intelligence in Computer Science was carried out with the grant support of the National Research Fund of Ukraine, "Information system development for automatic detection of misinformation sources and inauthentic behaviour of chat users", project registration number 33/0012 from 3/03/2025 (2023.04/0012). Also, we would like to thank the reviewers for their precise and concise recommendations that improved the presentation of the results obtained.

Committees

General Chair

Olga Cherednichenko, Bratislava University of Economics and Management, Slovak Republic

Co-Chair

Natalia Sharonova, National Technical University “Kharkiv Polytechnic institute”, Ukraine

Nina Khairova, Umeå University, Sweden

Lyubomyr Chyrun, Ivan Franko National University of Lviv, Ukraine

Vasyl Lytvyn, Lviv Polytechnic National University, Ukraine

Yevgeniy Bodyanskiy, Kharkiv National University of Radio Electronics, Ukraine

Steering Committee

Natalia Sharonova, National Technical University “KhPI”, Ukraine

Olga Cherednichenko, Bratislava University of Economics and Management, Slovak Republic

Vasyl Lytvyn, Lviv Polytechnic National University, Ukraine

Nina Khairova, Umeå University, Sweden

Andrii Kopp, National Technical University “Kharkiv Polytechnic Institute”, Ukraine

Lyubomyr Chyrun, Ivan Franko National University of Lviv, Ukraine

Yevhen Kupriianov, National Technical University “KhPI”, Ukraine

Mariia Kozulia, National Technical University “Kharkiv Polytechnic Institute”, Ukraine

Program Chairs

Natalia Sharonova, National Technical University “KhPI”, Ukraine

Nina Khairova, Umeå University, Sweden

Olga Cherednichenko, Bratislava University of Economics and Management, Slovak Republic

Vasyl Lytvyn, Lviv Polytechnic National University, Ukraine

Andrii Kopp, National Technical University “Kharkiv Polytechnic Institute”, Ukraine

Yevhen Kupriianov, National Technical University “KhPI”, Ukraine

Mariia Kozulia, National Technical University “Kharkiv Polytechnic Institute”, Ukraine

Proceedings Chair

Natalia Sharonova, National Technical University “KhPI”, Ukraine

Nina Khairova, Umeå University, Sweden

Andrii Kopp, National Technical University “Kharkiv Polytechnic Institute”, Ukraine

Presentations Chair

Natalia Sharonova, National Technical University “KhPI”, Ukraine
Olga Cherednichenko, Bratislava University of Economics and Management, Slovak Republic
Nina Khairova, Umeå University, Sweden
Vasyl Lytvyn, Lviv Polytechnic National University, Ukraine
Andrii Kopp, National Technical University “Kharkiv Polytechnic Institute”, Ukraine
Mariia Kozulia, National Technical University “Kharkiv Polytechnic Institute”, Ukraine

Poster and Demo Chairs

Andrii Kopp, National Technical University “Kharkiv Polytechnic Institute”, Ukraine
Yevhen Kupriianov, National Technical University “KhPI”, Ukraine
Mariia Kozulia, National Technical University “Kharkiv Polytechnic Institute”, Ukraine

IT Talks Chairs

Andrii Kopp, National Technical University “Kharkiv Polytechnic Institute”, Ukraine
Anzhelika Vorzhevitina, National Technical University “Kharkiv Polytechnic Institute”, Ukraine
Yevhen Kupriianov, National Technical University “KhPI”, Ukraine

Local Organization Chairs

Andrii Kopp, National Technical University “Kharkiv Polytechnic Institute”, Ukraine
Mariia Kozulia, National Technical University “Kharkiv Polytechnic Institute”, Ukraine
Yevhen Kupriianov, National Technical University “KhPI”, Ukraine

Publicity Chair

Natalia Sharonova, National Technical University “KhPI”, Ukraine
Andrii Kopp, National Technical University “Kharkiv Polytechnic Institute”, Ukraine
Mariia Kozulia, National Technical University “Kharkiv Polytechnic Institute”, Ukraine
Yevhen Kupriianov, National Technical University “KhPI”, Ukraine

Web Chair

Andrii Kopp, National Technical University “Kharkiv Polytechnic Institute”, Ukraine
Anzhelika Vorzhevitina, National Technical University “Kharkiv Polytechnic Institute”, Ukraine
Yevhen Kupriianov, National Technical University “KhPI”, Ukraine

Program Committees

MAIN PhD Workshop on Artificial Intelligence in Computer Science co-located with the 9th International Conference on Computational Linguistics and Intelligent Systems (CoLInS-2025)

Agnieszka Kowalska-Styczen, Silesian University of Technology, Poland
Bohdan Rusyn, Karpenko Physico-Mechanical Institute of the NAS of Ukraine, Ukraine
Dmytro Peleshko, GeoGuard, Vancouver, British Columbia
Fadila Bentayeb, ERIC Laboratory, University of Lyon 2, France
Grygoriy Zholtkevych, V.N. Karazin Kharkiv National University, Ukraine
Krzysztof Grochla, Polish Academy of Sciences, Poland
Lidia Pivovarova, University of Helsinki, Finland
Lyubomyr Chyrun, Ivan Franko National University of Lviv, Ukraine
Manik Sharma, University Jalandhar, India
Mariya Nazarkevych, Lviv Polytechnic National University, Ukraine
Michael Emmerich, Leiden Institute of Advanced Computer Science, The Netherlands
Nataliia Kunanets, Lviv Polytechnic National University, Ukraine
Nina Khairova, Umeå University, Sweden
Olena Vynokurova, GeoGuard, Vancouver, British Columbia
Olga Cherednichenko, Bratislava University of Economics and Management, Slovak Republic
Sergei Subbotin, Zaporizhzhia Polytechnic National University, Ukraine
Sergii Babichev, Jan Evangelista Purkinje University in Ustinad Labem, Czech Republic
Tetiana Hovorushchenko, Khmelnytskyi National University, Ukraine
Vasyl Lytvyn, Lviv Polytechnic National University, Ukraine
Viacheslav Kovtun, Polish Academy of Science, Poland
Vitor Basto-Fernandes, University Institute of Lisbon, Portugal
Volodymyr Lytvynenko, Kherson National Technical University, Ukraine
Volodymyr Pasichnyk, Lviv Polytechnic National University, Ukraine
Vyacheslav Kharchenko, National Aerospace University «Kharkiv Aviation Institute», Ukraine
Yevgeniy Bodyanskiy, Kharkiv National University of Radio Electronics, Ukraine

Local Organization Committee

Andrii Kopp, National Technical University “Kharkiv Polytechnic Institute”, Ukraine
Anzhelika Vorzhevitina, National Technical University “Kharkiv Polytechnic Institute”, Ukraine
Mariia Kozulia, National Technical University “Kharkiv Polytechnic Institute”, Ukraine
Mykhailo Godlevskyi, National Technical University “Kharkiv Polytechnic Institute”, Ukraine
Nadiia Babkova, National Technical University “Kharkiv Polytechnic Institute”, Ukraine
Olga Cherednichenko, Bratislava University of Economics and Management, Slovak Republic
Olga Kanishcheva, Friedrich Schiller University Jena, Germany
Vasyl Lytvyn, Lviv Polytechnic National University, Ukraine
Yevhen Burov, Lviv Polytechnic National University, Ukraine
Yevhen Kupriianov, National Technical University “Kharkiv Polytechnic Institute”, Ukraine

Sponsors



National Technical University "Kharkiv Polytechnic Institute"

<http://www.kpi.kharkov.ua/eng/>



Lviv Polytechnic National University,
Ukraine

<http://www.lp.edu.ua/en>



Institut Galilée of Université Paris 13

<https://galilee.univ-paris13.fr>



Politechnika Śląska

<https://www.polsl.pl/Strony/Witamy.aspx>



Українське науково-освітнє ІТ товариство
Ukrainian Scientific and Educational IT Society

Ukrainian Scientific and Educational IT
Society

<https://usit.eu.org>

Informational Partners



Lviv IT Cluster
<https://itcluster.lviv.ua/en/>



Ukrainian Lingua-
Information Fund
<https://www.ulif.org.ua/>

softserve m/

SoftServe
<https://www.softserveinc.com/>



Kharkiv IT Cluster
<http://it-kharkiv.com/en/>



MANNING
<https://www.manning.com/>



PI-MINDS
<http://pi-minds.com/en/>



SYTOSS
<https://sytoos.com>



SSA Group
<https://www.ssa.group>



Laboratoire d'Informatique
pour la Mécanique et les
Sciences de l'Ingénieur
<https://www.limsi.fr/fr/>



Global Work
<http://globalwork.top/>



Zone3000
<https://zone3000.net/>



Fortifier
www.4tifier.com

DATAART
<https://www.dataart.com.ua>