



**KHARKIV NATIONAL
AUTOMOBILE and HIGHWAY
UNIVERSITY «ХНАДУ»**

DEAR COLLEAGUES!



We invite you to take part in
the **International Student Research Competition**
**“Restoration of Transport Infrastructure of Ukraine: World
Experience”,**

which will be held on **January 22, 2025** on the occasion of the Day of Unity of Ukraine, on the basis of Kharkiv National Automobile and Highway University.

The purpose of the Competition is to support gifted young people, reveal their abilities, promote the development of research interest in difficult wartime circumstances, and develop proposals for scientific and practical solutions to restore transport infrastructure during the war and post-war recovery in order to properly present the scientific achievements of higher education students and young scientists.

**The founders of the Competition are
Kharkiv National Automobile and Highway University
and Kharkiv Regional Council.**

The competition is held in the following sections:

Section 1. “Technologies for the restoration and operation of the transport infrastructure of Ukraine” (road construction)

Section 2. “Innovative methods of designing transport infrastructure facilities of Ukraine”

Section 3. “Innovative methods and technologies of geodetic support of surveys, design and construction of transport infrastructure facilities in Ukraine”

Section 4. “Innovative building materials for the restoration of the transport infrastructure of Ukraine”

Section 5. “Ecology and green technologies in construction”

Section 6: “Chemical component of the restoration of the transport infrastructure of Ukraine. Synthesis and use of new technologies and materials”

Section 7. “Restoration of critical infrastructure of Ukraine: Bridges and tunnels”

Section 8. “Computer modeling and design in the design of transport infrastructure of Ukraine”

COMMITTEES

CO-CHAIRS

1. **Viktor BOHOMOLOV** – Doctor of Technical Sciences, Professor, Rector of KhNAHU, Ukraine
2. **Valeriia DZIUBA** – Deputy Head of Kharkiv Regional Council, Ukraine
3. **Andrii ALEKSIEIEV** – Head of the Service for Infrastructure Restoration and Development in Kharkiv Region, Ukraine

INTERCESSORS OF THE HEAD

1. **Angelika BATRAKOVA** – Doctor of Technical Sciences, Professor, First Vice-Rector of KhNAHU, Ukraine
2. **Anatolii TSYNKA** – PhD in Engineering, First Deputy Director of the State Enterprise «National Institute for Development Infrastructure», Ukraine

MEMBERS OF THE ORGANIZING COMMITTEE

1. **Shalva KIRTADZE** – Doctor of Technical Sciences, Professor, Rector, Akaki Tsereteli State University, Georgia
2. **Illia DMYTRIIEV** – Doctor of Economics, Professor, Vice-Rector for Scientific Work of KhNAHU, Ukraine
3. **Olena SLAVINSKA** – Doctor of Technical Sciences, Professor, Vice-Rector for Research, National Transport University, Ukraine
4. **Anatolii GRYTSENKO** – Doctor of Geographical Sciences, Professor, Director of the Scientific Research Institution “Ukrainian Scientific Research Institute of Ecological Problems” (USRIEP), Ukraine
5. **Serhii BUHAIEVSKYI** – Doctor of Technical Sciences, Professor, Dean of the Road Construction Faculty of KhNAHU, Ukraine
6. **Andrii BUBELA** – Doctor of Technical Sciences, Professor, Dean of the Faculty of Transport Construction, National Transport University, Ukraine
7. **Andrii KRASNIUK** – Dean of the Faculty of Construction, Architecture and Infrastructure, Ukrainian State University of Science and Technologies, Ukraine
8. **Mirko BARZ** – Doctor of Technical Sciences, Professor, University of Applied Sciences (HTW Berlin), Germany.

SECRETARIES OF THE ORGANIZING COMMITTEE

1. **Hanna BRAZHNYK** – PhD in Engineering, Associate Professor of the Department Of Technologies Of Road Construction Materials Named After M.I. Volkova, KhNAHU, Ukraine
2. **Dmytro KOSTIN** – PhD in Engineering, Associate Professor of the Birul Department of Road Construction and Operation, KhNAHU, Ukraine
3. **Iryna SHELKOVA** – Assistant of the Department of Road Design, Geodesy and Land Management of KhNAHU , Ukraine

MEMBERS OF THE TECHNICAL COMMITTEE

1. **Roman SMOLIANIUK** – PhD in Engineering , Associate Professor, Head of the Department of Construction And Operation Of Highways Named After O.K. Birulya, KhNAHU, Ukraine
2. **Valerii ZHDANIUK** – Doctor of Technical Sciences, Professor, Professor at Harbin Technical University, China
3. **Andrii BELIATYNSKYI** – Doctor of Technical Sciences, Professor, Professor of the Department of Highways and Bridges, Northern University of Nationalities, China
4. **Olga BORZIAK** – Dr. hab. inż., Profesor uczelni, Katedra Fizyki Budowli and Materiałów Budowlanych, Zachodniopomorski Uniwersytet Technologiczny w Szczecinie , Poland
5. **Yevhen DOROZHKO** – PhD in Engineering, Associate Professor, Head of the Department of Road Design, Geodesy and Land Management, KhNAHU, Ukraine
6. **Serhii OKSAK** – PhD in Engineering, Associate Professor, Head of the Department of Road Construction Materials Technology named after M.I. Volkov, KhNAHU, Ukraine
7. **Nataliia VNUKOVA** – Doctor of Technical Sciences, Professor, Head of the Department of Ecology, KhNAHU, Ukraine

8. **Hulmira YAR-MUKHAMEDOVA** – Doctor of Physics and Mathematics, Professor, Department of Solid State Physics and New Materials Technology, Al-Farabi Kazakh National University (Almaty), Kazakhstan
9. **Oleksii TIUTKIN** – Doctor of Technical Sciences, Professor, Head of the Department of Transport Infrastructure, Ukrainian State University of Science and Technologies, Ukraine
10. **Lyudmila HAPONOVA** – PhD in Engineering, Associate Professor, Head of the Department of Computer Graphics, KhNAHU, Ukraine

JURY MEMBERS (BY SECTION):

SECTION 1. «TECHNOLOGIES FOR THE RESTORATION AND OPERATION OF THE TRANSPORT INFRASTRUCTURE OF UKRAINE» (ROAD CONSTRUCTION)

1. **Roman SMOLIANIUK** (Chairman of the Section Jury) – PhD in Engineering, Associate Professor, Head of the Department of Construction And Operation Of Highways Named After O.K. Birulya, KhNAHU, Ukraine
2. **Valerii ZHDANIUK** – Doctor of Technical Sciences, Professor, Professor of Harbin Technical University, China
3. **Andrii BELIATYNSKYI** – Doctor of Technical Sciences, Professor, Professor of the Department of Highways and Bridges, Northern University of Nationalities, China
4. **Viacheslav SAVENKO** – Doctor of Technical Sciences, Professor, Head of the Department of Transport Construction and Property Management, National Transport University, Ukraine
5. **Dmytro KOSTIN** – PhD in Engineering, Associate Professor of the Department of Construction And Operation Of Highways Named After O.K. Birulya, KhNAHU, Ukraine
6. **Volodymyr ILCHENKO** – PhD in Engineering, Head of Postgraduate Studies, Associate Professor of the Department of Roads, Geodesy and Land Management, National University “Yuri Kondratyuk Poltava Polytechnic”, Ukraine

Secretary – Olena FOMENKO – Assistant of the Department of Construction And Operation Of Highways Named After O.K. Birulya, KhNAHU, Ukraine

**SECTION 2. «INNOVATIVE METHODS OF DESIGNING TRANSPORT
INFRASTRUCTURE FACILITIES IN UKRAINE» (DESIGN OF HIGHWAYS)**

1. **Angelika BATRAKOVA** (Chairman of the Section Jury) – Doctor of Technical Sciences, Professor, Professor of the Department of Road Design, Geodesy and Land Management, KhNAHU, Ukraine
2. **Ihor HAMELIAK** – Doctor of Technical Sciences, Professor, Head of the Department of System Design of Transport Infrastructure and Geodesy, National Transport University, Ukraine
3. **Ihor MUSIIENKO** – PhD in Engineering, Associate Professor, Associate Professor of the Department of Road Design, Geodesy and Land Management, KhNAHU, Ukraine
4. **Nataliia ARSENIEVA** – PhD in Engineering, Associate Professor, Associate Professor of the Department of Road Design, Geodesy and Land Management, KhNAHU, Ukraine
5. **Serhii PALAUTA** – Deputy Head of the Project Department of the Infrastructure Restoration and Development Service in Kharkiv Region, Ukraine
6. **Yelysei KOSTROV** – road design engineer at “Innovation project group”, Ukraine

Secretary – Iryna SHELKOVA – Assistant of the Department of Road Design, Geodesy and Land Management, KhNAHU, Ukraine

**SECTION 3. «INNOVATIVE METHODS AND TECHNOLOGIES FOR GEODETIC
SUPPORT OF SURVEYS, DESIGN AND CONSTRUCTION OF TRANSPORT
INFRASTRUCTURE FACILITIES IN UKRAINE» (GEODESY AND LAND
MANAGEMENT)**

1. **Yevhen DOROZHKO** (Chairman of the Section Jury) – PhD in Engineering, Associate Professor, Head of the Department of Road Design, Geodesy and Land Management, KhNAHU, Ukraine
2. **Serhii SUKACH** – Doctor of Technical Sciences, Professor, Head of the Department of Civil Safety, Labor Protection, Geodesy and Land Management of Kremenchuk Mykhailo Ostrohradskyi National University, Ukraine
3. **Liudmyla KAZACHENKO** – PhD in Engineering, Associate Professor, Associate Professor of the Department of Road Design, Geodesy and Land Management, KhNAHU, Ukraine
4. **Maryna PILICHEVA** – PhD in Engineering, Associate Professor, Associate Professor of the Department of Geographic Information Systems, Land and

5

Department of Ecology of KhNAHU, on the basis of which the work of

Section 5 “Ecology and green technologies in construction”,

invites you to participate

*Secretary of the section “Ecology and Green Technologies in Construction” - Nataliia Prokopenko,
Associate Professor of the Department of Ecology, Kharkiv National Automobile and Highway
University, phone +380509411057, e-mail: natvikpro08@gmail.com*

Property Valuation of the O.M. Beketov Kharkiv National University of Urban Economy, Ukraine

5. **Oleksandr ONYSHCHENKO** – Chief Surveyor of Avtomagistral-Pivden LLC

6. **Yevhen SHTONDA** – Director of “UKRGEO-PROJECT MS”, Ukraine

Secretary – Elina ZAKHAROVA – Assistant of the Department of Road Design, Geodesy and Land Management, KhNAHU, Ukraine

SECTION 4. «INNOVATIVE CONSTRUCTION MATERIALS FOR THE RESTORATION OF THE TRANSPORT INFRASTRUCTURE OF UKRAINE» (ROAD CONSTRUCTION MATERIALS)

1. **Serhii OKSAK** (Chairman of the Section Jury) – PhD in Engineering, Associate Professor, Head of the Department of Road Construction Materials Technology named after M.I. Volkov, KhNAHU, Ukraine

2. **Serhii TOLMACHOV** – Doctor of Technical Sciences, Professor, Professor of the Department of Road Construction Materials Technology named after M.I. Volkov, KhNAHU, Ukraine

3. **Dmytro PLUGIN** – Doctor of Technical Sciences, Professor, Head of the Department of Building Materials, Structures and Facilities, Ukrainian State University of Railway Transport (Kyiv), Ukraine

4. **Volodymyr MALIAR** – PhD in Engineering, Associate Professor, Professor of the Department of Road Construction Materials Technology named after M.I. Volkov, KhNAHU, Ukraine

5. **Olga BORZIAK** – Dr. hab. inż., Profesor uczelni, Katedra Fizyki Budowli and Materiałów Budowlanych, Zachodniopomorski Uniwersytet Technologiczny w Szczecinie, Poland

6. **Liudmyla TRYKOZ** – Doctor of Technical Sciences, Professor, Professor of the Department of Building Materials, Structures and Facilities, Ukrainian State University of Railway Transport (Kyiv), Ukraine

7. **Yurii SIDUN** – PhD in Engineering, Associate Professor, Associate Professor of the Department of Roads and Bridges, Institute of Civil Engineering and Engineering Systems, Lviv Polytechnic National University, Ukraine

Secretary – Andrii HALKIN – PhD in Engineering, Associate Professor of the Department of Road Construction Materials Technology named after M.I. Volkov, KhNAHU, Ukraine

SECTION 5. «ECOLOGY AND GREEN TECHNOLOGIES IN CONSTRUCTION» (ECOLOGY)

1. **Yuliia ZGHURSKA** (Chairperson of the Section Jury) – Deputy Director of the International Cooperation Department of Kharkiv City Council, Ukraine
2. **Nataliia VNUKOVA** – Doctor of Technical Sciences, Professor, Head of the Department of Ecology, KhNAHU, Ukraine
3. **Eleonora DARMOFAL** – PhD in Engineering, Associate Professor of the Department of Ecology and Technological Safety of the National Aerospace University named after M.E. Zhukovsky “Kharkiv Aviation Institute”, Ukraine
4. **Oleksii SHESTOPALOV** – PhD in Engineering, Associate Professor, Head of the Department of Chemical Engineering and Industrial Ecology, National Technical University “Kharkiv Polytechnic Institute”, Ukraine
5. **Maryna BARUN** – PhD in Economics, Associate Professor, Associate Professor of the Department of Ecology, KhNAHU, Ukraine
6. **Mykola ZYPUNNIKOV** – PhD in Engineering, Associate Professor, Anatolii Pidhornyi Institute Of Power Machines And Systems of the National Academy of Sciences of Ukraine , Ukraine

*Secretary – Nataliia PROKOPENKO – PhD in Biology, Associate Professor, Associate Professor of the Department of Ecology, KhNAHU, Ukraine
Phone +380509411057, E-mail: natvikpro08@gmail.com*

SECTION 6. «CHEMICAL COMPONENT OF THE RESTORATION OF THE TRANSPORT INFRASTRUCTURE OF UKRAINE. SYNTHESIS AND USE OF NEW TECHNOLOGIES AND MATERIALS» (CHEMISTRY AND CHEMICAL TECHNOLOGIES)

1. **Tetiana NENASTINA** (Chairman of the jury) – Doctor of Technical Sciences, Professor, Head of the Department of Chemistry and Chemical Technology, KhNAHU , Ukraine
2. **Elina KHOBOTOVA** – Doctor of Technical Sciences, Professor, of the Department of Chemistry and Chemical Technology, KhNAHU, Ukraine
3. **Hulmira YAR-MUKHAMEDOVA** – Doctor of Physics and Mathematics, Professor of the Department of Solid State Physics and New Materials Technology, Al-Farabi Kazakh National University, (Almaty), Kazakhstan

4. **Alla KOROHODSKA** – Doctor of Technical Sciences, Senior Researcher, Head of the Department of General and Inorganic Chemistry, National Technical University “Kharkiv Polytechnic Institute”, Ukraine

5. **Yuliana GAPON** – PhD in Engineering, Associate Professor of the Department of Special Chemistry and Chemical Technology, Faculty of Operational and Rescue Forces, National University of Civil Defense of Ukraine, Ukraine

Secretary – Lyudmila STEPANENKO – Head of the Laboratory of the Department of Chemistry and Chemical Technology, KhNAHU, Ukraine

SECTION 7. «RESTORATION OF UKRAINE'S CRITICAL INFRASTRUCTURE: BRIDGES AND TUNNELS» (BRIDGES AND TRANSPORTATION TUNNELS)

1. **Serhii BUHAIEVSKYI** (Chairman of the Jury) – Doctor of Technical Sciences, Professor, Dean of the Road Construction Faculty, KhNAHU Ukraine

2. **Oleksii TIUTKIN** – Doctor of Technical Sciences, Professor, Head of the Department of Transport Infrastructure, Ukrainian State University of Science and Technologies (Dnipro), Ukraine

3. **Oleksii OVCHARENKO** – PhD in Engineering, Associate Professor, Head of the Department of Bridges, Structures and Construction Mechanics named after V.O. Rosiiskoho, KhNAHU, Ukraine

4. **Vitalii KOZHUSHKO** – Doctor of Technical Sciences, Professor of the Department of Bridges, Structures and Construction Mechanics named after V.O. Rosiiskoho, KhNAHU, Ukraine

5. **Sergey KRASNOV** – PhD in Engineering, Associate Professor of the Department of Bridges, Structures and Construction Mechanics named after V.O. Rosiiskoho, KhNAHU, Ukraine

6. **Oleksandr LUKIN** – PhD in Mechanical Engineering, Chief Engineer of the Expert Center “ENGINEERING SPORTS”, Ukraine

Secretary – Kyrylo VERBITSKYI – Assistant of the Department of Bridges, Structures and Construction Mechanics named after V.O. Rosiiskoho KhNAHU, Ukraine

SECTION 8. «COMPUTER MODELING AND DESIGN IN THE DESIGN OF TRANSPORT INFRASTRUCTURE OF UKRAINE» (INDUSTRIAL AND CIVIL ENGINEERING)

1. **Liudmyla HAPONOVA** (Chairman of the Section Jury) – PhD in Engineering, Associate Professor, Head of the Department of Computer Graphics, KhNAHU, Ukraine
 2. **Oleksii LOBIAK** – PhD in Engineering, Associate Professor, Head of the Department of Construction Mechanics and Hydraulics, Ukrainian State University of Railway Transport, Ukraine
 3. **Kateryna BEREZHNA** – PhD in Engineering, Associate Professor of the Department of Bridges, Structures and Construction Mechanics named after V.O. Rosiiskoho, KhNAHU, Ukraine
 4. **Svitlana BERESTIANSKA** – PhD in Engineering, Associate Professor, Head of the Laboratory of the Department of Construction Mechanics and Hydraulics, Ukrainian State University of Railway Transport, Ukraine
 5. **Oleksandr ROMANENKO** – PhD in Engineering, Associate Professor of the Department of Building Materials, Structures and Facilities, Ukrainian State University of Railway Transport, Ukraine
- Secretary – Serhii ANDRIIENKO – Assistant of the Department of Computer Graphics, KhNAHU, Ukraine*

COMPOSITION OF THE APPEAL COMMISSION

1. **Anatolii TSYNKA** (Chairman of the Appeal Commission) – PhD in Engineering, First Deputy Director of the State Enterprise «National Institute for Development Infrastructure», Ukraine
2. **Anatolii GRYTSENKO** – Doctor of Geographical Sciences, Professor, Director of the Scientific Research Institution “Ukrainian Scientific Research Institute of Ecological Problems” (USRIEP), Ukraine
3. **Mykola SAKHNENKO** – Doctor of Technical Sciences, Professor, Head of the Department of Physical Chemistry, National Technical University “Kharkiv Polytechnic Institute”, Ukraine
4. **Jan PYRIH** – PhD in Engineering, Senior Researcher at the Department of Road Construction Materials Technology named after M.I. Volkov, KhNAHU, Ukraine
5. **Olena SYNKOVSKA** – PhD in Engineering, Associate Professor, Associate Professor of the Department of Bridges, Structures and Construction Mechanics named after V.O. Rosiiskoho, KhNAHU, Ukraine
6. **Olga BEZBABICHEVA** – PhD in Engineering, Associate Professor, Associate Professor of the Department of Bridges, Structures and Construction Mechanics named after V.O. Rosiiskoho, KhNAHU, Ukraine
7. **Halyna FOMENKO** – PhD in Engineering, Associate Professor, Associate Professor of the Department of Road Design, Geodesy and Land Management, KhNAHU, Ukraine
8. **Taras NALYVAIKO** – PhD in Engineering, Associate Professor of the Department of Geographic Information Systems, Land and Property Valuation, O.M. Beketov Kharkiv National University of Urban Economy, Ukraine
9. **Serhii CHUHUEENKO** – PhD in Engineering, Director of RADIAL Engineering LLC, Ukraine

PROCEDURE AND TERMS OF THE CONTEST

1. The Competition is held in three stages:

Stage I:

– qualifying round (held on the basis of the participants' organization) -
until **November 30, 2024**;

Stage II:

– submission of competition works - **until January 10, 2025**;
– review of scientific papers and review of competitive works in compliance with
the principles of objectivity, accessibility and transparency
until January 14, 2025;
– invitation to the final conference of the authors of the best competition papers -
by **January 15, 2025**;

Stage III:

– Final conference and awarding of the winners
January 27, 2025.

2. Publication of the winners' works on the official website of the Department
of Ecology of KhNAHU - **until January 31, 2025**.

Registration for participation in the Contest is carried out **EXCLUSIVELY**
through the electronic registration form at the link:

<https://forms.gle/L7QkqxDJw4qQ9b4d6>.

The electronic registration form must be accompanied by the competition entries in
Ukrainian and English (executed in accordance with the requirements).

REQUIREMENTS FOR THE DESIGN OF THE ENTRY

1. The textual work should be written in Ukrainian/English and have a volume of up to 10 pages of printed text in A4 format (text editor Word, Times New Roman 14 pt at 1.5 intervals; margins: top and bottom - 20 mm; left - 30 mm; right - 15 mm).
2. Illustrative material for the paper may be submitted as a separate appendix.
3. **The work is performed in Ukrainian and English.**

The work is formalized according to the following template:

WORK TITLE

Author(s): First name Last name
Supervisor(s): Full name
Name of the institution (Country)

Abstract. *The abstract should be no more than 1200 characters. The text is printed in italics, single-spaced, after the name of the university.*

Keywords: *up to 10 words. The text is printed in italics.*

INTRODUCTION

Text...

ANALYTICAL REVIEW OF THE LITERATURE

The text of the subsection should be single-spaced. References to the literature are given in square brackets in the order of mention in the text, for example, [1] or [2-7].

If necessary, this section may be divided into subsections

OBJECT, SUBJECT AND METHODS OF RESEARCH

Text...

RESEARCH RESULTS AND THEIR DISCUSSION

If necessary, this section may be divided into subsections.

Tables and figures should be referenced in the text and should be formatted according to the following sample:



Figure 1 – Truck traffic is prohibited

Table 1 – Estimated indicators of transport noise

Heading 1	Heading A	Heading B	Heading C
Heading 2	Data	Data	Data
Heading 3	Data	Data	Data

If a table or figure takes up more than ½ of the page, it should be placed in the Appendices to the paper.

CONCLUSIONS

Text

LIST OF REFERENCES

1. Source 1.
2. Source 2.
3. Source 3.

It is forbidden to use literature published in russia or belarus.

APPENDIX

Appendices are not a mandatory section. If available, the appendices should be directly related to the research and have references in the text of the paper.