



AGENDA

of the 2-nd International Scientific and Practical Conference

"ENERGY-OPTIMAL TECHNOLOGIES, LOGISTICS AND SAFETY ON TRANSPORT"

ORGANIZERS

**DNIPRO NATIONAL UNIVERSITY OF RAILWAY TRANSPORT
NAMED AFTER ACADEMICIAN V. LAZARYAN**

RAILWAY INSTITUTE

FACULTY OF TRANSPORT OF WARSAW UNIVERSITY OF TECHNOLOGY

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**WESTERN CENTER OF THE UKRAINIAN BRANCH OF THE «INTERNATIONAL
CENTER FOR SCIENTIFIC CULTURE - WORLD LABORATORY»**



September 19-20th, 2019

Lviv, Ukraine

BRIEF AGENDA
of the conference

Time	Event
September, 19	
09.00 – 10.00	Registration of the participants & Welcome coffee
10.00 – 13.00	Scientific roundtables (First session)
13.00 – 14.00	Lunch
14.00 – 14.50	Grand opening of the conference
14.50 – 17.10	Plenary session
17.10 – 17.30	Official photography
17.30 – 22.00	Gala dinner
September, 20	
09.30 – 10.45	Scientific roundtables (Second Session)
10.45 – 11.15	Coffee-break
11.15 – 13.00	Scientific roundtables (Third Session)
13.00 – 14.00	Lunch
14.00 – 15.00	Scientific roundtables (Fourth Session)
15.00 – 15.30	Coffee-break
15.30 – 16.30	Closing of the conference, Discussing and accepting the decision

September, 19
REGISTRATION AND WELCOME COFFEE

TIME	Lobby of the „RAMADA-LVIV” Hotel	Restaurant of the „RAMADA-LVIV” Hotel
9.00-10.00	Registration of the participants	Welcome coffee

SCIENTIFIC ROUNDTABLES

First Session (10.00 – 13.00)

TIME	Hall "RAMADAHALL" (EOT05) Moderator M. Kuzin , Dr. of sci., Lviv branch of DNURT
10.00-10.15	S. Dovhaniuk, V. Kalashnyk, A. Reidemeister, O. Shykunov and Ju. Sobolevska Investigation of possibility of hopper cars unloading on the car dumper VRS–134M
10.15-10.30	A. Afanasov, A. Shapovalov and M. Voitenko Systems mutual loadings of traction asynchronous cars
10.30-10.45	D. Bannikov, A. Radkevich, and A. Muntian Modeling of the electric locomotion DC3 working
10.45-11.00	G. Tatarchenko, N. Beloshitskaya, V. Sychenko and V. Liashuk The effect of ozone on wet atmospheric corrosion of aluminum of high-voltage lines
11.00-11.15	I. Lebid, I. Kravchenya, M. Berezovyi, N. Luzhanska, T. Dubrovskaya, and Ye. Demchenko Identification of the railway reconstruction parameters at imposition of high speed traffic on the existing lines
11.15-11.30	I. Lebid, I. Kravchenya, G. Prokudin, N. Luzhanska, D. Shevchenko, and M. Olishevych Rationing of the number of signals and interlockings in the operational stock of railway stations
11.30-11.45	A. Trofimov, A. Kuzmenko, H. Nesterenko, S. Avramenko, M. Muzykin, N. Mormul, A. Sokhatsky Non-destructive control data analysis of railroad foundation constructions
11.45-12.00	I Vakulenko, M. Kuzin, L. Vakulenko, S. Raksha, S. Proidak Improving the performance parameters of railway wheels with the help of optimal design technologies of their electric pulse processing
12.00-12.15	D. Adamski, A. Białoń, and Z. Łukasz Selected aspects of proper integration between ERTMS/ETCS on-board and trackside devices
12.15-12.30	M. Kaniewski, and M. Cichoński Mathematical model of pantograph cooperation with two degrees of freedom with a catenary system
12.30-12.45	A. Rojek, and M. Skrzyniarz Contact arc time – important parameter of DC high-speed circuit-breakers
12.45-13.00	P. Urbański, M. Bajerlein, J. Merkisz, A. Ziółkowski and D. Gallas Analysis of thermodynamic parameters in spark ignition VCR engine

TIME	Hall "ABSOLUTE" (EOT03) Moderator V. Havryliuk , Dr. of sci., DNURT
10.00-10.15	A. Batig, P. Hrytsyshyn, Ya. Bolzhelarskyi, A. Milyanych, O. Voznyak, and Yu. Tereshchak Development of an algorithm for investigation the technical condition of the running gear of wagons at their derailment
10.15-10.30	A. Kuzyshyn, A. Batig, Ju. Sobolevska, S. Kostritsa, L. Ursulyak and S. Dovhaniuk Determining the causes of rolling stock derailment from the track using modern research methods
10.30-10.45	V. Kovalchuk, M. Sysyn, O. Nabochenko, A. Pentsak, O. Voznyak, and S. Kinter Stability of the Railway Subgrade under Condition of Its Elements Damage and Severe Environment
10.45-11.00	O. Kuropiatnyk, S. Raksha, and P. Anofriev Justification of parameters of wheelset axle fatigue strength test-bench for railway rolling stock
11.00-11.15	Yu. Zelenko, O. Dzhus, V. Dzhus, D. Yanchenko Methodology of risk assessment and forms of environmental safety management for the transport of dangerous goods by railway transport
11.15-11.30	V. Havryliuk Artificial neural network based detection of neutral relay defects
11.30-11.45	O. Patlasov, Ye. Fedorenko The intensity of rail failure flow
11.45-12.00	T. Kolesnykova, O. Matveyeva, L. Manashkin Railway transportation of dangerous goods: a bibliometric aspect
12.00-12.15	I. Saiapina, M. Babaiev, O. Ananieva Reducing noise influence on an audio frequency track circuit
12.15-12.30	M Kapitsa, Ev. Mikhailov, S. Kliuiev, S. Semenov and M. Kovtanets Study of rail vehicles movement characteristics improvement in curves using fuzzy logic mechatronic systems
12.30-12.45	Vit. Krysan, V. Krysan, V. Petrenko, O Tiutkin, and V Andrieiev Improving the safety of railway subgrade when it is strengthened using soil-cement elements
12.45-13.00	O. Hololobova, S. Buriak, V. Havryliuk, I. Skovron, and Oleksii Nazarov Mathematical modelling of the communication channel between the rail circuit and the inputs devices of automatic locomotive signalization

TIME	Hall "NETHALL" (EOT01) Moderator V. Sychenko , Dr. of sci., DNURT
10.00-10.15	S. Arpul, V. Artemchuk, M. Babyak, V. Vasilyev, H Hetman and S. Marikutsa Analysis of the electric energy consumption components for mine train traction
10.15-10.30	T Kostiuk, and R. Habutdinov The increasing of energy efficiency of international freight truck trains under the concept of energy innovative technologies development of motor transport
10.30-10.45	V. Sychenko, V. Kuznetsov, Ye. Kosarev, P. Beh, Yu. Sayenko, B. Styslo, M. Pavlichenko, I. Vasilev and M. Pulin The concept of a hybrid traction power supply system
10.45-11.00	A. Falendysh, V. Dzhus, O. Kletska, O. Kosariev, J. Dizo Model for building traction information of suburban rolling stock on hydrogen fuel
11.00-11.15	A. Khabutdinov Risk-regulatory increase of trajectory safety, productivity and energy efficiency of motor transport operations in conditions of uncertainty

TIME	Hall "NETHALL" (EOT01) Moderator V. Sychenko , Dr. of sci., DNURT
11.15-11.30	R. Khabutdinov, A. Khabutdinov Conceptual-innovative and energy-resource management on motor transport
11.30-11.45	A. Pshinko, A. Afanasov, V. Kuznetsov, V. Skalozub, S. Arpul and A. Ivanov Energy-efficient and cost-effective methods of driving trains under the conditions of development of the electricity market
11.45-12.00	O. Bondar, D. Ustymenko, O. Kurylenko, M. Kedria, O. Karzova, R. Krasnov and O. Baliichuk Experimental investigation of actual situation of using and accounting of recovered energy of regenerative braking mode at the DC traction system
12.00-12.15	O. Bondar, O. Baliichuk, O. Karzova, R. Krasnov, O. Marenych and D. Ustimenko Improvement of energy indicators of conventional electric driving asynchronous motors of non-standard technological equipment at the enterprises for repair of railway rolling stock through the use of energy-saving motors
12.15-12.30	M. Karnaukh, D. Muzylyov, and N. Shramenko Technological aspects of energy optimization during operating vehicles and increase their environmental safety
12.30-12.45	N. Chernetskaya-Beletskaya, A. Rogovyi, I. Baranov, A. Krut, M. Miroshnikova, and N. Bragin Increasing the efficiency of highly concentrated coal-water fuel based on the simulation of non-Newtonian fluid flow

13.00-14.00	LUNCH , Restaurant of the „RAMADA-LVIV” Hotel
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GRAND OPENING OF THE CONFERENCE

14.00-14.50 Hall "RAMADAHALL"

Moderator **Ya. Bolzhelarskyi**, Ph.D. director of Lviv branch of DNURT, Ukraine

TIME	EVENT	SPEAKERS
14.00-14.10	Introduction speech	A. Radkievych , Dr.of sci, Prof., vice-rector of DNURT, Ukraine, Ya. Bolzhelarskyi , Ph.D. director of Lviv branch of DNURT, Ukraine
14.10-14.15	Opening speech	O. Pshinko , Dr.of sci, Prof., rector of DNURT, Ukraine
14.15-14.20	Opening speech	M. Jacyna , Dr.of sci, Prof., Dean of the Faculty of Transport, Warsaw University of Technology, Poland
14.20-14.25	Opening speech	A. Massel , dr inż., Deputy Director for Studies and Research Projects, Railway Institute, Poland
14.25-14.30	Welcoming speech	Representative of the JSC «Ukrainian railways»
14.30-14.35	Welcoming speech	Representative of the Lviv Regional State Administration
14.35-14.40	Welcoming speech	A. Bilyj , Deputy Director of the Department of Housing and Infrastructure of Lviv City Council

PLENARY SESSION

14.50-16.20 Hall "RAMADAHALL"

Moderator **Ya. Bolzhelarskyi**, Ph.D. director of Lviv branch of DNURT, Ukraine

TIME	REPORTS
14.40-15.00	M. Pawlik , Deputy Director for Railway Interoperability, Railway Institute, Poland “Technical and legal challenges regarding transitions from national railway intraoperability to European railway interoperability”
15.00-15.20	K. Bochenek , Project manager, «TUV Rheinland» “Rail vehicles’ Energy consumption in reference to the tender procedure and procurement
15.20-15.40	J. Orrison , infrastructure advisor, U.S. Treasury “Train safety management system”
15.40-15.50	R. Bilynskyi , architect, Institute for Spatial Development “Proposals for the reconstruction and expansion of the Lviv railway junction taking into account the medium-term and long-term Lviv and the western region development plan”.
15.50-16.00	I. Koshel , Director of the Reform Support Team, Ministry of Infrastructure of Ukraine “Infrastructure projects, challenges and perspectives”
16.00-16.10	A Guiricin , CEO, TRA consulting “ITS and HSR on railways”
16.10-16.20	B. Ganaylyuk , Chairman of the Supervisory Board, Consortium “Transmagistral” “New life of forgotten tracks” (An investment proposal for the reconstruction of the Rava-Ruska railway junction and adjacent sections of the track in Ukraine and Poland to ensure the cross-border crossing of trains of two 1520/1435 mm track standards and its operation under public-private concessions)
16.20-16.30	L. Nazarenko, O. Malysh , Project manager, lawyer, RST, railway sector reform “New law on railway transport of Ukraine”
16.30-16.40	J. C. Martinez Acevedo , Research & Development Directorate, Strategic Planning and Projects Management Direction (expert on R&D Energy and Interoperability), ADIF Á. A. Alguacil , Jefe de Proyectos Internacionales, D.G. DE PLANIFICACIÓN ESTRATÉGICA Y PROYECTOS, Dirección de Internacional, ADIF “Energy-optimized technologies on railway transport”
16.40-16.50	Ya. Bolzhelarskyi , direktor of Lviv branch of DNURT, O. Shelkovyi , director of RPA “Dniprotechtrans” “Current experience of the implementation and integration of Delta- system based information locomotive complexes”
16.50-17.00	J. Andrejka , Managing director PL&UA, Leo Express “Leo Express connecting Ukraine with European Union”
17.00-17.10	Hanna Sydorenko , Co-Founder, Managin Partner “Prospects for the development of cross-border railway tourism”

17.10-17.30	OFFICIAL PHOTOGRAPHY , Lobby of the Hotel „RAMADA-LVIV”
17.30-22.00	GALA DINNER , Restaurant of the „RAMADA-LVIV” Hotel

SCIENTIFIC ROUNDTABLES
Second Session (09.30 – 10.45) **September, 20**

TIME	Hall "RAMADAHALL" (EOT03) Moderator V. Havryliuk, Dr. of sci., DNURT
09.30-09.45	S. Tomaszewski, F. Tomaszewski, M. Kaluba, W. Stawecki, P. Urbański and Y. Bolzhelarskyi Optimization of the design of relay valves for rail vehicles braking systems in the context of train traffic safety
09.45-10.00	M. Pawlik Concept of the railway safety, security and cybersecurity functional integrity levels
10.00-10.15	D. Adamski, K. Ortel, and J. Furman Research on measurement of electromagnetic fields generated by electric and combustion powered rolling stock
10.15-10.30	J. Niziński Voltage and current measurements on the pantograph of light DC rail vehicles and the benefits of it
10.30-10.45	M. Bartoś, P. Gołębiowski Method of railway line audit in terms of the condition of railway infrastructure

TIME	Hall "ABSOLUTE" (EOT01) Moderator V. Sychenko, Dr. of sci., DNURT
09.30-09.45	V. Kopylov, O. Kuzin, M. Kuzin Improving the energy efficiency of operation of elements of the structures of the rolling stock by means of surface engineering
09.45-10.00	A. Kosolapov Resource Saving Method of Forming Information Infrastructure of Sorting Stations
10.00-10.15	M. Kostin, A. Mukha, O. Sheikina, S. Levytska Fryze reactive power of trams in effective stochastic recuperation processes
10.15-10.30	Z. Kaira, L. Golovkova The hybrid trains in international logistics transportation
10.30-10.45	O. Grigorov, G. Anishchenko, E. Druzhynin, V. Strizhak, M. Strizhak, and V. Malashchenko Comparing hydraulic and electromechanical drives by electric motor's power

TIME	Hall "NETHALL" (EOT04) Moderator D. Kozachenko, Dr. of sci., DNURT
09.30-09.45	O. Kharchenko, A. Okorokov, R. Vernigora, P. Tsuprov, O. Papakhov, N. Logvinova Capital investment i in the context of sustainable development railways
09.45-10.00	V. Gaba, T. Hrushevska, O. Strelko, A. Kyrychenko, M. Rudyuk and Y. Gusar Improvement of international railway transposition of benzene between ukraine and the european union countries
10.00-10.15	D. Kozachenko, M. Berezovyi, V. Malashkin, T. Bolvanovska and Y. Grimak Improvement of the analysis methods of the working hours` distribution of locomotive crews by the types of train operation in freight traffic
10.15-10.30	L. Volynets, V. Gurnak, I. Chalatska Intellectualization of logistic supply chains on the basis of forecasting volumes of cargo transportation
10.30-10.45	M. Mishchenko, S. Dziuba, V. Kopytko, T. Shargun The Economic Guarantee of Logistic Connections Optimization at Railway Transport

10.45-11.15	COFFE-BREAK , Restaurant of the „RAMADA-LVIV” Hotel
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SCIENTIFIC ROUNDTABLES
Third Session (11.15-14.00) **September, 20**

TIME	Hall "RAMADAHALL" (EOT04) Moderator D. Kozachenko , Dr. of sci., DNURT
11.15-11.30	P. Gołębiowski, M. Jacyna, J. Żak Multi-criteria method of selection the way of conducting railway traffic on the open line for modernized and revitalized railway lines
11.30-11.45	A. Kalašová, V. Harantová, S. Kubíková and J. Mikulski Implementation of road charging in the city of Žilina – a tool for reducing negative externalities
11.45-12.00	J. Strzemkowski, A. Merkisz – Guranowska, M. Andrzejewski, H. Stawecka, and M. Kamińska Innovative concept of loading bimodal trailers with the organization of a loading terminal (EOT)
12.00-12.15	A. Massel Actual utilisation of maximum line speed - Polish and Ukrainian experience
12.15-12.30	M. Izdebski, M. Jacyna, P. Klimek, I. Jacyna-Golda, R. Vašek Decision-making problems of designing database in the aspect of planning transport of cargoes by intermodal transport
12.30-12.45	I. Jacyna-Golda, M. Izdebski, P. Klimek, R. Vašek Constructing a database structure in the problem of the assignment of air transport operators to commissioned tasks
12.45-13.00	D. Pyza, R. Jachimowski Designing of transshipment terminals in the aspect of selected intermodal transport systems

TIME	Hall "ABSOLUTE" (EOT02) Moderator L. Rymaniak , Dr. of sci., Poznan University of Technology
11.15-11.30	Z. Dvulit, O. Melnyk, Yu. Chyrkova, N. Petryshyn, M. Bortnikova Diagnostics of the structural risk level in the sphere of waste management at Ukrainian railways
11.30-11.45	Yu. Zelenko, M. Bezovska, A. Leshchynska, A. Shnaiderman Disposal of technological sludge of railway infrastructure enterprises
11.45-12.00	V. Biliaieva, P. Mashykhina, I. Kalashnikov, P. Kirichenko and I. Kravets Risk assessment in case of toxic chemical emission at railway transport
12.00-12.15	T. Rusakova, R. Kyrychenko, L. Dolina and Z. Yakubovskaya Road traffic: atmosphere pollution simulation
12.15-12.30	M. Biliaiev, V. Kozachyna, O. Berlov M.O. Oladipo and K. Chernyatyeva Modeling of the atmosphere pollution from coal trains
12.30-12.45	M. Biliaiev, V. Biliaieva, V. Kozachyna, O. Berlov, I. Kalashnikov and K. Chernyatyeva Atmosphere pollution modeling in the case of accident during rocket propellant transportation by trains

TIME	Hall "NETHALL" (EOT03) Moderator V. Havryliuk , Dr. of sci., DNURT
11.15-11.30	A. Razgonov, A. Zhuravlyov, K. Yashchuk and V. Shechka Investigation of train shunt problem in track circuits of signalling and interlocking devices
11.30-11.45	M. Kapitsa, V. Laguta, and Yu. Kozik Classification of quality conditions of a traction motor frame insulation of locomotives
11.45-12.00	S. Kostritsa, A. Pshinko, L. Ursulyak, A. Kuzyshyn, M. Kramarenko, and A. Grechkin Stress-strain state analysis of the leading car body of DPKr-2 diesel train under action of design and operational loads

13.00-14.00	LUNCH , Restaurant of the „RAMADA-LVIV” Hotel
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SCIENTIFIC ROUNDTABLES
Fourth Session (14.00-15.00) **September, 20**

TIME	Hall "RAMADAHALL" (EOT02) Moderator L. Rymaniak , Dr. of sci., Poznan University of Technology
14.00-14.15	M. Kamińska, L. Rymaniak, P. Daszkiewicz, and P. Lijewski Test guidelines for evaluation real driving emission two-way vehicles
14.15-14.30	A. Ziolkowski, P. Daszkiewicz, L. Rymaniak, P. Fuc, P.Ukleja Analysis of the exhaust emissions from hybrid vehicle during RDE test
14.30-14.45	D. Gallas, J. Merkisz, M. Andrzejewski, S. Tomaszewski, J. Strzemkowski, and S. Kinter Assessment of motor coach road emissions in real operating conditions
14.45-15.00	A. Białoń, K. Bialek and P. Wetoszka Analysis of emission tests of electromagnetic disturbances in diesel-electric locomotives

TIME	Hall "ABSOLUTE" (EOT06) Moderator Ya. Bolzhelarskyi Ph.D., Lviv branch of DNURT
14.00-14.15	D. Kozachenko, B. Gera, N. Sannytskyi, Yu. Hermaniuk, T. Shargun Estimation of Private Locomotives Usage Efficiency for Freight Transportation in Ukraine
14.15-14.30	A. Ratkiewicz, K. Lewczuk Selected aspects of designing platform shed
14.30-14.45	Yu. Statyvka, H. Kyrychenko, O. Strelko, Yu. Berdnychenko, V. Gaba and T. Hrushevska Improvement of the technique of calculating operational parameters using an automated system
14.45-15.00	I Savelieva, S. Melnikov and O. Orlovska The impact of asymmetry on equilibrium of logistics systems

TIME	Hall "NETHALL" (EOT04) Moderator D. Kozachenko , Dr. of sci., DNURT
14.00-14.15	I. Zhukovytskyi, V. Pakhomova, H. Domanskay and A. Nechaiev Distribution of information flows in the advanced network of MPLS of railway transport by means of a neural model
14.15-14.30	P. Yanovsky, V. Yanovska, S. Lytvynenko, L. Lytvynenko and O. Vodchic Methodical foundations of cargo owners' transport services logistics management
14.30-14.45	O. Ozerova, P. Yanovsky, V. Yanovska, S. Lytvynenko, L. Lytvynenko, and S. Martseniuk Estimation of the interaction level between urban passenger transport and city train
14.45-15.00	O. Prydatko, V. Popovych, I. Malets, V. Prydatko, and I. Solotvynskyi Algorithm of rescue units logistic support planning in the process of regional life safety systems development

15.00-15.30	COFFE-BREAK , Restaurant of the „RAMADA-LVIV” Hotel
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CLOSING OF THE CONFERENCE, DISCUSSING AND ACCEPTING THE DECISION
15.30-16.30 Hall "RAMADAHALL"
Moderator **Ya. Bolzhelarskyi**, Ph.D. director of Lviv branch of DNURT

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