XI International conference

BALTTRIB' 2022

CONFERENCE PROGRAMME

Vytautas Magnus University

Akademija, Kaunas

22-24 September 2022

Conference venue:
The Central building of Vytautas Magnus University Agriculture Academy (VMU-AA)
Studentu str. 11, Akademija
LT-53361 Kaunas distr.
LITHUANIA

CONFERENCE ORGANISED BY:

Vytautas Magnus University

Lithuanian Scientific Society Department „Tribologija“

International Tribology Council

Conference topics:

- Friction and wear of friction pairs in agricultural, transport and industrial machinery;
- Lubrication;
- Micro- and nano-scale tribology;
- Tribochemistry;
- Bio-tribology;
- Environmental issues in tribology;
- Surface science and coating engineering;
- Tribology in metal processing;
- Simulation of tribological processes;
- Experimental methods in tribology.

Address:

International Conference “BALTTRIB’2022”
Department of Mechanical, Energy and Biotechnology Engineering
Faculty of Engineering
Vytautas Magnus University Agriculture Academy (VMU-AA)
Studentu str. 15, Akademija
LT-53362 Kaunas distr.
LITHUANIA

Contacts:

Phone: +370 37 752263, 752398

E-mail: balttrib@vdu.lt

Internet: http://www.balttrib.info

CONFERENCE PROGRAMME

22 September 2022

Venue: Central Building of VMU-AA, Studentu str. 11, Akademija

07:00	Registration	Central Building of VMU-AA
09:00	**Opening Session**	Room 217
09:20	**Plenary Session**	Room 217
12:00	Lunch	
13:00	**Poster presentations**	Room 217
14:30	Coffee break	
15:00	**Plenary Session**	
18:00	Get-together (Lobby)	

23 September 2022

Venue: Central Building of VMU-AA, Studentu str. 11, Akademija

09:00 **Scientific sections**

	Section 1. **Friction and wear in tribosystems 1**	Room 217
	Section 2. **Friction and wear in tribosystems 2**	Room 324
11:00	Coffee break	
11:30	Section 3. **Tribological materials 1**	Room 217
11:30	Section 4. **Tribological materials 2**	Room 324
14:00	Lunch	
15:00	**Discussions; Closing remarks**	Room 217
15:30	**Tour to Tribology and Surface science laboratories** at the Department of Mechanical, Energy and Biotechnology Engineering. (Faculty of Engineering)	

17:00 Free time in Kaunas downtown.

PLENARY LECTURES

22 September 2022

09:20 – 12:00 Central Building of VMU-AA, (Room 217)
Chairmen: ***R. Rukuiža***, Co-chairman ***J. Padgurskas***

NANOPARTICLES AS ADDITIVES FOR THE DEVELOPMENT OF HIGH PERFORMANCE AND ENVIRONMENTALLY FRIENDLY LUBRICANTS
Fabrice Dassenoy, *Ecole Centrale de Lyon, France*

ENERGY LOSS METHOD TO CHARACTERIZE LUBRICANTS IN THE BOUNDARY LUBRICATION REGIME.
Satish V. Kailas, *Indian Institute of Science, India*

NANOSCALE ACOUSTIC MEASUREMENTS ENHANCED BY TRANSFER LEARNING
Antanas Daugela, *Nanometronix LLC, USA*

LASER SURFACE TEXTURING: CHALLENGES AND OPPORTUNITIES FOR TRIBOLOGY.
P.Onufrijevs, *L. Grase, Riga TU, Latvia,* ***J. Padgurskas, M. Rukanskis, A. Žunda,*** *Vytautas Magnus University, Lithuania*

INFLUENCE OF THE CONTACT PRESSURE ON THE WEAR BEHAVIOUR OF AS-BESTOS – FREE FRICTION MATERIAL THROUGH PIN-ON-DISK TRIBOMETER
Adolfo Senatore, Antonella Rizzo, Domenico Dimaio, Marcello Massaro, Veronica D'Urso*, University of Salerno, Italy*

15:00 – 18:00 Central Building of VMU-AA, (Room 217)
Chairmen: ***F. Dassenoy***, Co-chairman ***S. Asadauskas***

BIO-LUBRICANTS FROM AGRICULTURAL WASTE AND THEIR 3-BODY CONTACT ANALYSIS
Jeng-Haur Horng, Jin-Long Lin, Yang-Yuan Chen, *National Formosa University, Taiwan (R.O.C)*

THE USE OF WASTE COOKING OIL FOR TRIBOLOGICAL APPLICATIONS
J. Padgurskas, D. Volskis, R. Rukuiža, A. Karalis*, Vytautas Magnus University, Lithuania*

LUBRICANTS FOR ELECTRIC VEHICLES
H. Liang, Texas A&M University, USA

BRITTLENESS AND FLEXIBILITY OF POLYMERS AND COMPOSITES.
W. Brostow, *University of North Texas, USA,* ***P. Rusek,*** *AGH University of Science and Technology, Poland*

LESSONS FROM NATURE: BIOINSPIRED MECHANICALLY DURABLE AND SELF-HEALING SUPERLIQUIPHILIC/PHOBIC SURFACES FOR GREEN TRIBOLOGY
B. Bhushan*, The Ohio State University, USA*

SCIENTIFIC SECTIONS
23 September 2022

Section 1
FRICTION AND WEAR IN TRIBOSYSTEMS 1

09:00 – 11:00 Central Building of VMU-AA, (Room 217).
Chairmen: ***Satish V. Kailas***, Co-chairman ***A. Žunda***

TRIBOLOGICAL AND SURFACE CHARACTERIZATION OF FRICTION MATERIALS FOR BRAKE PADS.
Marco Cavagnero, *University of Turin, Italy*

VISCOMETRY, VOLATILITY AND STABILITY OF DEEP EUTECTIC SOLVENTS FROM BETAINE.
D. Bražinskienė, T. Matijošius, S. Asadauskas, *State Research Institute Center for Physical Sciences & Technology (FTMC), Lithuania*

CHARACTERIZATION OF AN ANTI-WEAR COATING FOR THE APPLICATION OF HIGHLY LOADED SMART THIN-FILM SENSORS.
D. Konopka, F. Pape, R. Ottermann, T. Steppler, F. Dencker, M.C. Wurz, G. Poll*, Leibniz Universität Hannover, Germany*

TRIBO-ELECTROCHEMISTRY AS A TOOL FOR SURFACE CHARACTERIZATION
H. Cesiulis, N. Tsyntsaru*, Vilnius University, Lithuania)*

EFFECT OF CONTACT FORCE IN THE FRICTION PAIR ON THE DYNAMIC PROPERTIES OF A ROTARY STICK-SLIP PIEZO MOTOR.
A. Žunda, A. Andriušis, J. Padgurskas, R. Rukuiža, *Vytautas Magnus University, Lithuania*

EVALUATION OF FRICTION CALCULATION METHODS FOR ROLLING BEARINGS
M. Zander, M. Otto, T. Lohner, K. Stahl, *Technical University of Munich, Germany*

Section 2
FRICTION AND WEAR IN TRIBOSYSTEMS 2

09:00 – 11:00 Central Building of VMU-AA, (Room 324).
Chairmen: ***Adolfo Senatore***, Co-chairman ***R. Kreivaitis***

AN EXPERIMENTAL APPROACH OF ELECTRORHEOLOGICAL FLUID DAMPERS DESIGN.
P.G. Nikolakopoulos*, University of Patras, Greece*

CONTACT TEMPERATURE UNDER DIFFERENT SURFACE ROUGHNESS AND CURVATURE RADIUS OF THE PEAK
Shin-Yuh Chern, Wei Lun, Liu, Jeng-Haur Horng*, National Formosa University, Taiwan (R.O.C)*

NUMERICAL MODELLING OF SINGLE-ASPERITY FRICTIONAL CONTACT WITH ADHESION.
A. Palaiologos, P.G. Nikolakopoulos*, University of Patras, Greece*

FEATURES OF FRICTION AND WEAR BEHAVIOUR OF POROUS TITANIUM
S. Lavrys, I. Pohrelyuk*, Karpenko Physico-Mechanical Institute of the NAS of Ukraine, Ukraine,* ***J. Padgurskas****, Vytautas Magnus University, Lithuania*

VISCOSITY MODELS OF C60 FULLERENE MINERAL OILS AND COMPUTATIONAL FLUID DYNAMICS ON PISTON RING.
E. Tsakiridis, P. G. Nikolakopoulos*, University of Patras, Greece*

RESEARCH ON THE FRICTION OF WOOD-PLASTIC COMPOSITES AND HARD ALLOY
A.Vilutis, V. Jankauskas*, Vytautas Magnus University, Lithuania*

Section 3
TRIBOLOGICAL MATERIALS 1

11:30 – 13:30 Room 217 Chairmen: ***P. Onufrijevs*** Co-chairman ***N. Tsyntsaru***

ANTIFRICTIONAL EFFECTS OF GROUP IVB ELEMENTS DEPOSITED AS NANOLAYERS ON ANODIC COATINGS.
***T. Matijošius, L. Staišiūnas, G. Stalnionis, G. Bikulčius, S.J. Asadauskas**, State Research Institute Center for Physical Sciences & Technology (FTMC), Lithuania*

SYNTHESIS, CORROSION PROPERTIES AND WEAR RESISTANCE OF HYBRID ELECTROCHEMICAL-EROSION COATINGS
***Yu. Benkovsky, V. Petrenko, S. Silkin, N. Tsyntsaru A. Dikusar**, Institute of Applied Physics, Moldova*

SYNTHESIS OF MULTICOMPONENT COATINGS BY ELECTROSPARK ALLOYING WITH POWDER MATERIALS
***V. Mihailov, N. Kazak, S. Ivascu, Ianachevici**, Institute of Applied Physics, Moldova, **A.E. Ovchinnikov**, Grodno State University named after Yanki Kupaly, Belarus, **C. Baciu**, Gh. Asachi Technical University of Iasi, Romania*

INVESTIGATION OF TRIBOLOGICAL PROPERTIES OF POLYMER GREASE MANUFACTURED FROM POLY ALPHA OLEFIN WITH BORON NITRIDE
***A. Bayar, G. Mehmet AY** Eskisehir Osmangazi University, Turkey*

ABRASIVE AND EROSIVE WEAR OF TI6AL4V ALLOYS WITH COATINGS OF TIB2 ALLOYED MULTICOMPONENT HARD ALLOY MATERIALS CAUSED BY ELECTROSPARK DEPOSITION
***T. Penyashki, G. Kostadinov**, Institute of Soil Science Agrotechnologies and Plant Protection "N. Pushkarov"- Agricultural academy, Sofia, Bulgaria, **M. Kandeva, V. Kamburov, A. Nikolov, R. Dimitrova**, Technical University of Sofia, Bulgaria*

INVESTIGATION OF TRIBOLOGICAL PROPERTIES OF POLYMER GREASE MANUFACTURED FROM PALM ESTER WITH BORON NITRIDE AND POLY ALPHA OLEFIN WITH BORON NITRIDE
***Y. H. Bulutcu, A. Bayar, G. Mehmet AY,** Eskisehir Osmangazi University, Turkey*

Section 4
TRIBOLOGICAL MATERIALS 2

11:30 – 13:30 Room 324 Chairmen: ***D. Konopka*** Co-chairman ***H. Cesiulis***

THE EFFECT OF RUNNING-IN ON THE NATURE OF WEAR OF HEAVILY LOADED FRICTION SURFACES OF STEEL IN THE ENVIRONMENT OF NANOLUBRICANTS.
G. Abramishvili, E. Kutelia, D. Iosebidze, B. Eristavi, K. Beridze*, Georgian Technical University, Georgia*

TRIBOLOGICAL PROPERTIES OF PROTIC IONIC LIQUID STABILISED NANOSUSPENSIONS AS ENVIRONMENTALLY FRIENDLY LUBRICANTS.
R. Kreivaitis, M. Gumbytė, A. Kupčinskas, J. Treinytė, *Vytautas Magnus University, Lithuania*

INFLUENCE OF HEAT TREATMENT ON THE STRUCTURE AND ABRASION RESISTANCE OF ALUMINUM ALLOY 1011 AFTER HARD ANODIC COATINGS APPLICATION.
M. Student, I. Pohrelyuk, V. Gvozdetskyi, Kh. Zadorozhna*,* ***H. Chumalo****,* ***H. Veselivs'ka****, Karpenko Phisico-Mechanical Institute of the National Academy of Sciences of Ukraine, Ukraine,* ***J. Padgurskas,*** *Vytautas Magnus University, Lithuania,* ***R. Iurkevych****, Hetman Petro Sahaidachnyi National Army Academy, Ukraine.*

TRIBOLOGICAL ASPECTS OF POLYMERS AND THEIR COMPOSITES USED IN ADDITIVE MANUFACTURING.
Abhijit Mukhopadhyay*,* ***Sounak Banerjee,*** *, RBU (EOGP), KOLKATA, INDIA*

AUGMENTING THE PERFORMANCE OF ECO-FRIENDLY GREASES USING SYNERGISTIC NATURAL RESOURCES.
Ankit Saxena*,* ***Deepak Kumar, Naresh Tandon****, Indian Institute of Technology Delhi, India*

POSTER PRESENTATIONS

P-1 RIBOLOGICAL PROPERTIES AND STRUCTURE OF SURFACES WELDED BY FLUX CORED WIRE.
D. Gventsadze, Ivane Javakhishvili *Tbilisi State University, Georgia,* ***J. Sharashenidze****, F. Tavadze Institute of Metallurgy and Materials, Tbilisi, Georgia,* ***S. Mebonia,*** *R. Dvali Institute of Machine Mechanics, Tbilisi, Georgia,* ***V. Jankauskas****, Vytautas Magnus University, Lithuania*

P-2 EFFECT OF MOLYBDENUM CONTENT ON THE STRUCTURE AND TRIBOLOGICAL PROPERTIES OF DIAMOND-LIKE CARBON FILMS.
H. Zhairabany, L. Marcinauskas, V. Dovydaitis (*Kaunas University of Technology, Lithuania)****, E. Gnecco*** *(M. Smoluchowski Institute of Physics, Poland)*

P-3 CFD SIMULATION OF WEAR ANALYSIS OF CENTRIFUGAL SLURRY PUMP FOR DIFFERENT SIZE AND SHAPE FACTORS OF EROSIVE PARTICLES.
Jashanpreet Singh. *Thapar Institute of Engineering and Technology, Patiala, India*

P-4 USE OF THE MAGNETIC ROTATIONAL SUPPORTS AND TECHNOLOGY OF 3D PRINTING OF BLADES IN WIND TURBINE WITH A TILTED AXIS.
A.Geguchadze, A. Kuparadze, N. Sulakvelidze, O. Zivzivadze*. LEPL – Center for internships, advanced training and employment for IDPs from Abkhazia – "Business Incubator"*

P-5 EFFECT OF MoS2/TiO2 NANOCOMPOSITE ADDITIVE ON THE ENHANCED TRIBOLOGICAL PERFORMANCE OF LUBRICANTS.
Pyung Hwang*,* ***Baikun Huang, Seongjun Ko, Dawit Zenebe Segu, and Seok-Won Kang*** *Yeungnam University, Korea, South*

P-6 TWO-DIMENSIONAL CFD ANALYSIS OF GROOVE TEXTURED INCLINED SLIDER BEARING.
Tae-Jo Park, In-Gyu Jang*, Gyeongsang National University, Korea, South*

P-7 TRIBOLOGICAL AND MICROMECHANICAL PROPERTIES OF THE NANOSTRUCTURED SUPERLATTICE COATINGS DEPOSITED BY ADVANCED PVD TECHNIQUE.
A. Leitans, E. Jansons, J. Lungevics, K. Kundzins, I. Boiko, U. Kanders, V. Kovalenko, O. Linins*, Riga TU, Latvia*

P-8 INFLUENCE OF TORCH POWER ON TRIBOLOGICAL PROPERTIES OF PLASMA SPRAYED CHROMIA AND CHROMIA COMPOSITE COATINGS
Lukas Bastakys, Liutauras Marcinauskas*, Kaunas University of Technology, Lithuania,* ***Romualdas Kėželis, Mindaugas Aikas****, Lithuanian Energy Institute, Lithuania,* ***Sebastjan Matkovič****, University of Ljubljana, Slovenija*

P-9 EFFECTS OF PAD WELDING TECHNOLOGY ON TRIBOLOGICAL PROPERTIES OF SURFACE LAYERS.
T. Góral *(AGH University of Science and Technology, Poland),* ***W. Brostow*** *(University of North Texas, USA)*

P-10 IMPROVED CALCULATION OF VISCOUS FRICTION IN THE MODEL OF A PIPE ROBOT.
K. Ragulskis *(Kaunas University of Technology, Lithuania),* ***Br. Spruogis, A. Matuliauskas, V. Mištinas*** *(Vilnius Gediminas Technical University, Lithuania),* ***A. Pauliukas, L. Ragulskis*** *(Vytautas Magnus University, Lithuania),* ***P. Paškevičius*** *(Company "Vaivora", Lithuania),* ***A. Korpach (****National Transport University, Ukraine)*

P-11 CORROSION AND MECHANICAL WEAR OF NITROGEN STEELS IN ACID ENVIRONMENTS
M. Stechyshyn, A. Dykha*,* ***N. Stechyshyna****, Khmelnitsky National University, Ukraine,* ***J. Padgurskas****, Vytautas Magnus University, Lithuania*

P-12 FRICTIONAL BEHAVIOUR OF TiN, TiB and Ti2N COMPOUND LAYERS IN TRIBO-PAIRS WITH STAINLESS STEEL AND UHMWPE UNDER DRY SLIDING CONDITIONS.
S. Lavrys, I. Pohrelyuk, O. Tkachuk, V. Trush, *Karpenko Physico-Mechanical Institute of the NAS of Ukraine, Ukraine,* ***J. Padgurskas****, Vytautas Magnus University, Lithuania*

P-13 ABRASIVE WEAR BEHAVIOR–MECHANICAL PROPERTIES–MICROSTRUCTURE RELATION OF Fe–C-B–13wt.%Cr-Ti and Fe-C-B-4wt.%Cr-7wt.%Cu–Ti BASED HARDFACING ALLOYS
B. Trembach, *PJSC «Novokramatorsky Mashinostroitelny Zavod», Ukraine,* ***I. Trembach****, Donbas State Engineering Academy, Ukraine,* ***O. Rebrov, O. Rebrova****, National Technical University «Kharkiv Polytechnic Institute», Ukraine*

P-14 STUDY OF THE INFLUENCE OF TRIBOLOGICAL AND ELECTRICAL PROPERTIES OF WINTER RAPE SEEDS ON THEIR EQUILIBRIUM ANGLE ON THE SEPARATING PLANE

Kovalyshyn S., ***Shvets O., Ptashnyk V., Nester B.,*** *Lviv National Environmental University, Ukraine,* ***Kharchenko S.,*** *The State Biotechnology University, Ukraine,* ***Ivashchyshyn F.,*** *Lviv Polytechnic National University, Ukraine* ***Kovalyshyn O.,*** *Soft Serve Digital Consulting Company, Lviv, Ukraine*

P-15 EFFECT OF HYDROGEN SULFIDE ON CORROSION AND TRIBOCORROSION OF STEEL 07Cr16Ni6

M.S.Khoma, V.A.Vynar, N.B. Ratska, Ch.B.Vasyliv, V.R.Ivashkiv, B.M.Datsko, M.R.Chuchman, S.A. Golovei. *Karpenko Physico-Mechanical institute, National Academy of Ukraine, Ukraine*

P-16 IMPROVING THE OPERATIONAL PROPERTIES OF CENTRIFUGAL CAST ROLLS WITH A WORKING LAYER OF CHROMIUM CAST IRON WITH MICROSTRUCTURE ASSESSMENT BY COMPUTER VISION

V. Vlasovets, T.Vlasenko, *State Biotechnology University, Kharkiv, Ukraine,* ***S.Kovalyshyn, O.Kovalyshyn, T.Shchur,*** *Lviv National Agrarian University, Dubliany, Ukraine,* ***S. Kurpaska,*** *University of Agriculture in Krakow, Kraków, Poland,* ***O.Bilovod, L.Shulga****, Poltava State Agrarian University, Poltava, Ukraine,* ***O.Kovalyshyn****, Soft Serve Digital Consulting Company, Lviv, Ukraine*

P-17 INFLUENCE OF PLASMA-ELECTROLYTE TREATMENT OF ALUMINUM CAST ALLOYS AK9 AND AK12 ON THEIR ABRASIVE WEAR RESISTANCE

M. Student, I. Pohrelyuk, V. Posuvailo ,V. Gvozdetskyi, Kh. Zadorozhna, H. Chumalo*, Karpenko Phisico-Mechanical Institute of the National Academy of Sciences of Ukraine, Lviv, Ukraine.****J. Padgurskas****, Vytautas Magnus University, Kaunas, Lithuania****, A. Kychma,*** *Lviv Polytechnic National University, Lviv, Ukraine*

P-18 TRIBOLOGICAL CHARACTERISTICS OF ANODIZED LAYERS (HARD ANODIC COATINGS) ON AD0 ALLOY PAIRED WITH STEEL AND CERAMIC BALL

M. Student, I. Pohrelyuk, V. Gvozdetskyi, Kh. Zadorozhna, O. Tkachuk, H. Chumalo*, Karpenko Phisico-Mechanical Institute of the National Academy of Sciences of Ukraine, Lviv, Ukraine,* ***J. Padgurskas****, Vytautas Magnus University Kaunas, Lithuania.*

P-19 TRIBOLOGICAL CHARACTERISTICS OF FRICTION PAIRS OF VEHICLES BRAKING MECHANISMS.

V. Volkov*,* ***T. Volkova,*** *Kharkiv National Automobile and Highway University, Ukraine,* ***V. Kuzhel****, Vinnytsia National Technical University, Ukraine,* ***A. Pauliukas****, Vytautas Magnus University, Lithuania*

P-20 WEAR RESISTANCE OF NITRIDED STEEL IN DRY FRICTION.

M. Stechyshyn, M. Skyba, O. Dykha, A. Martyniuk*, Khmelnytskyi National University, Ukraine*

P-21 THE INFLUENCE OF MECHANICAL - CHEMICAL PROCESSES ON PERFORMANCE PROPERTIES OF LUBRICATING OILS

V. Oleksandrenko*,* ***M. Stechyshyn, V. Kurskoi, A. Sukhovirska****, Khmelnytskyi National University, Ukraine, R. Budiak, Kalynivka Technological Applied College, Ukraine*

P-22 BIODIESEL FUELS BASED ON VEGETABLE OILS: ENVIRONMENTAL SOLUTION IN THE OPERATION OF VEHICLES

M. M. Dell'anna*, DICATECh, Politecnico di Bari, Italy, V****. Tkachuk, O. Povstyanoy****,* ***I. Murovanyi****,* ***O. Rechun****, Lutsk National Technical University, Ukraine*

P-23 TRIBOLOGICAL EVALUATION OF COMPOSITES FROM PLANT WASTE

V. Vilčinskas, J. Padgurskas*, Vytautas Magnus University, Lithuania*

P-24 EVALUATION OF TRIBOLOGICAL PROPERTIES OF TRANSMISSION OILS AND THEIR CHANGE DURING OPERATION

Uselis, J. Padgurskas*, Vytautas Magnus University, Lithuania,* ***A. Sukhovirska****, Khmelnytskyi National University, Ukraine,*

P-25 EVALUATION OF TRIBOLOGICAL PROPERTIES OF USED PALM OIL

D. Volskis, J. Padgurskas, R. Rukuiža, G. Baltramaitytė*, Vytautas Magnus University, Lithuania*

P-26 MODELLING OF TEMPERATURE FLASHES IN THE CONDITIONS OF SLIDING OF DISCRETE ROUGH FRICTION SURFACES

Yu. Kovalchyk, *Lviv National University of Nature Management, Ukraine****, V. Shyrokov, O. Shyrokov****, Ukrainian Academy of Printing, Ukraine*

P-27 THE USE OF TWO-PHASE OIL-VAPOR-GAS MIXTURES TO IMPROVE THE PERFORMANCE OF TRIBOSYSTEMS

S. Shymchuk, N. Zaichuk, O. Shymchuk*, Lutsk National Technical University, Lutsk, Ukraine****, R. Kostunik****,* ***V. Radzievsky****, National Aviation University, Kiev, Ukraine,* ***Arvydas Pauliukas*** *Vytautas Magnus University, Lithuania*

LANGUAGE

The conference language is English.

INFORMATION FOR SPEAKERS

Duration of oral reports:

- Plenary sessions – 30 min (including 5 minutes' discussion)
- Scientific sessions – 20 min (including discussion)

Sections' rooms will be equipped for **Multimedia presentations.**

Area of poster presentation should not exceed **A1 format.**

ARRIVAL

There are three means of most popular regular public transport in Lithuanian cities - buses, trolleybuses and minibuses. It is possible to buy the ticket at a driver. Buses No 18 and 32 arrives from city centre to conference venue at Vytautas Magnus University. Comprehensive information about arrival and tickets:

https://zua.vdu.lt/wp-content/uploads/2022/07/GUIDE-FOR-INTERNATIONAL-VISITORS-2022.pdf

Arriving from airports:

After arrival to **Kaunas airport** you may transfer to Kaunas railway and bus stations by bus No 29 or go with taxi (price ca 20 EUR) to Kaunas downtown or directly to VMU AA campus. Timetables of public transport in Kaunas are available at *https://www.stops.lt/kaunas/#kaunas/en*

After arrival to **Vilnius airport** to Vilnius railway and bus stations (same place) is possible by buses No 1, 2 and 4. Timetables of public transport in Vilnius are available at: *https://www.stops.lt/vilnius/#vilnius/en*

Timetable of buses from Vilnius to Kaunas (buses every 20-30 min) at: *https://www.autobusubilietai.lt/en*
Timetable of trains from Vilnius to Kaunas at *https://ltglink.lt/en*

Other transport information:

University's campus map at:
https://zua.vdu.lt/wp-content/uploads/2022/07/VMU-AA-Campus-Plan.pdf

Touristic information of Kaunas:
http://visit.kaunas.lt/en/

Touristic information of Lithuania:
https://www.lithuania.travel/en/

VMU AA Campus Plan

1. Central Building **Conference BALTTRIB 2022** (Faculty of Agronomy, Faculty of Forest Sciences and Ecology)
2. II Building (Faculty of Engineering)
3. III Building (Faculty of Bio Economy Development)
4. IV Building (Agricultural Science and Technology Park)
5. VI Building
6. VII Building (Institute of Forest Management and Forestry Institute)
7. VIII Building (Open Access Research Centre)
8. I Dormitory
9. II Dormitory
10. III Dormitory (Kindergarten-nursery)
11. IV Dormitory (Health Care Centre PSPC)
12. V Dormitory (Subdistrict administration)
13. VII Dormitory
14. Exhibition Pavilion No.1
15. Exhibition Pavilion No.2
16. Exhibition Pavilion No.3
17. Communication and Technology Transfer Centre.