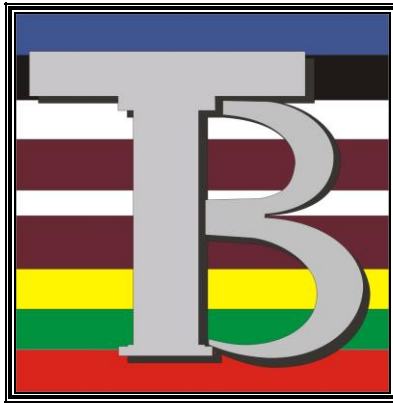


VII International conference



BALTRIB' 2013

CONFERENCE PROGRAMME

Aleksandras Stulginskis University
Akademija, Kaunas

14-15 November 2013

Conference venue:

4th building of Aleksandras Stulginskis University (ASU)
Universiteto 8A, Akademija
LT-53345 Kauno r.
LITHUANIA

Contacts:

Phone: +370 37 752263, 752398
Fax: +370 37 752271
E-mail: baltrib@asu.lt

Internet: <http://www.baltrib.info>

CONFERENCE ORGANISED BY:



Aleksandras Stulginskis 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 “BALTTTRIB’2013”
Institute of Power and Transport Machinery Engineering
Aleksandras Stulginskis University (ASU)
Studentu 15, Akademija
LT-53362 Kauno r.
LITHUANIA

Phone: +370 37 752263, 752398

Fax: +370 37 752271

E-mail: balttrib@asu.lt

Internet: <http://www.balttrib.info>

Pre-conference workshops

Venue: Canteen building of ASU, Studentu 9, Akademija, LT-53361 Kauno r.

13 November 2013

- 08:00 Registration
09:00 Workshop **OIL & SUGAR** (bio-tribocorrosion, surface engineering, lubrication and process improvements in oil and sugar production)
13:00 Lunch
14:00 Workshop **TEMADEP** (surface engineering by nanostructuring of metals and metal alloys, electro-deposition of advanced alloys)
17:20 Discussions; Closing remarks
18:00 Dinner

Conference sessions

Venue: 4th Building of ASU, Universiteto 8A, Akademija

14 November 2013

- 08:00 Registration 4th Building of ASU, lobby
09:00 **Opening Session** Conference Hall (Room 214)
09:30 Coffee break
10:00 **Plenary Session** Conference Hall (Room 214)
12:00 Coffee break
12:30 **Poster presentations**
13:30 Lunch
14:30 **Scientific sections**
Section 1 Lubrication and lubricants Conference Hall (Room 214)
Section 2 Surface processing and surface science – Part 1 Room 211
16:10 Coffee break
16:30 Scientific sections
Section 3 Friction and wear in tribosystems Conference Hall (Room 214)
Section 4 Surface processing and surface science – Part 2 Room 211
18:30 Get together (Lobby, 1st floor)

15 November 2013

- 09:00 **Plenary Session** Conference Hall (Room 214)
11:30 Coffee break
12:00 **Exhibition** (presentations of enterprises)
13:00 **Discussions; Closing remarks**
13:15 Lunch
14:00 **Tour to Tribology laboratory** at the Institute of Power and Transport Machinery Engineering
15:00 Free time in Kaunas downtown.

Cultural programme

15 November 2013

- 18:00 Performance at Musical Theatre of Kaunas* (Leo Fall, Madame Pompadour).

16 November 2011

- 08:00 Departure for **Cultural programme in Lithuania** from 4th building of ASU (Hill of Crosses, Museum of Chocolate, Museum of bikes, Siauliai)*
19:00 Return to 4th building of ASU.

***REMARK:**

Participation in pre-conference workshops (including meals), tickets for Musical theatre and cultural programme is charged separately from conference fee

PLENARY LECTURES

14 November 2013

10:00 – 12:00
214)

Conference Hall of 4th building of ASU (Room

Chairmen: **J. Padgurskas**, Co-chairman **R. Rukuiža**

Recent Developments in Hydraulic Rod Seal Simulation

R. F. Salant (USA)

Nanomaterials of interest to tribology made accessible through surface treatments

J.-P. Celis, **P. Matteazzi**, **I. Buijnsters**, **E. Georgiou**, **D. Drees** (Belgium)

Some Tribological Aspects in Automotive Engineering and Traffic

F. Franek (Austria)

Experimental Rigs and Tests of Different Kind for Tribological Investigations on Machine Components

E. Ciulli (Italy)

15 November 2013

09:00 – 11:30

Room 261 of Central building of ASU

Chairmen: **W. Brostow**, Co-chairman **A. V. Radulescu**

R&D of adaptive tribological parameters control methods for piezoelectric motors

R. Rukuiža, **J. Padgurskas**, **R. Bansevicius**, **A. Žunda**, **A. Andriušis**, **D. Metrikaitė**, **V. Jankauskas** (Lithuania)

Visual comparison of the damage symptoms occurring at radial shaft seals and at RWDR-Tribometer samples

A. Petuchow, **V. Wollesen**, **O. von Estorff** (Germany)

Experimental methods for visualization of the lubricant flow field in plane motions

A. V. Radulescu, **M. Hajjam**, **D. Bonneau** (Romania)

Effect of pulse bias potential on the tribological properties of TiN, TiAlN and TiAlYN films produced with PIII&D process

M. Ürgen, **S. S. Akkaya**, **E. N. Reshetnyak**, **V. E. Strel'nitskij** (Turkey)

Coating engineering of Cobalt-Tungsten alloys and mapping their properties

H. Cesiulis, **N. Tsyntсарu**, **E. Vernickaite**, **C. Yang**, **J.-P. Celis**, (Lithuania, Moldova, Belgium)

SCIENTIFIC SECTIONS

14 November 2013

Section 1

Lubrication and lubricants

14:30 – 16:10

Conference Hall (Room 214)

Chairmen: **V. Wollesen**, Co-chairman **S. Asadauskas**

Failure and oil analysis in wind turbine gearboxes

B. Graca, J. Castro, R. Martins, C. Fernandes and J. Seabra (Portugal)

Effect of assumptions on the determination of the friction coefficient for radial shaft seals based on the Gumbel number

G. Weiser, V. Wollesen, A. Petuchow, O. von Estorff . (Germany)

The study of the system "vegetable oil-steel"

H. Cesiulis, J. Padgurskas, R.Kreivaitis, R.Rukuīža (Lithuania), L. Majidi (Morocco)

Biobased lubricating greases

R.Kreivaitis, A.Kupčinskas, J.Padgurskas (Lithuania)

Tribological properties of various rapeseed oil cultivars with commercial additives

M.Pinkauskas, J.Padgurskas, M.Gumbyté, Z.Kriaučiūnienė (Lithuania)

Section 2

Surface processing and surface science – Part 1

14:30 – 16:10

Room 211

Chairmen: **J.-P. Celis**, Co-chairman **A. Žunda**

Wear behaviour of nanostructured supersonic sprayed Ti-TiC cermets

E. Georgiou, S. Achanta, D. Drees, S. Dosta, J. Fernandez, P. Matteazzi, J. Kusinski, J.-P. Celis. (Belgium)

Influence of sintering technology on cermets performance

J. Kübarsepp, J. Pirso, K. Juhani (Estonia)

Slide burnishing and gas nitriding rise tribological properties of selected tool steels

W. Brostow (USA), K. Czechowski, P. Rusek, D. Tobola, I. Wronska (Poland)

Sliding wear behaviour of basalt containing composites with additions of either metallic and/or ceramic phases

M. Antonov, D.Goljandin, A.Andreev, N.Voltsihhin, I.Hussainova (Estonia)

Micromechanical and macromechanical properties of ethylene-octene elastomer modified polypropylene

I. Bochkov, J. Zicans, R. Merijs Meri, R. Maksimov (Latvia)

Section 3

Friction and wear in tribosystems

16:30 – 18:30

Conference Hall (Room 214)

Chairmen: **R. Salant**, Co-chairman **H. Cesiulis**

Importance of Scale Factor in Tribology

N.K. Myshkin, A.Ya. Grigoriev. (Belarus)

Influence of geomaterials on improvement of tribotestings parameters of friction pairs

M.Skotnikova, N.Krylov, E.Ivanov, A.Sokolov, G.Tsvetkova.. (Russia)

Elaboration of the model for thermal calculation of evaporator-homogenizer for production of oil containing amorphous nanodispersed carbon

J.Iosebidge, O.Kiguradze, G.Khutsishvili, G.Chitashvili, G.Abramishvili, D.Kupatadze.(Georgia)

Energy Criterion of Lubricant Oil Film Failure during Friction

S.V. Fedorov (Russia)

Tribology of ultrasonic motors: materials and motion parameters

D.Metrikaitė, J.Padgurskas, R.Rukuiža (Lithuania)

Section 4

Surface processing and surface science – Part 2

16:30 – 18:30

Room 211

Chairmen: **E. Ciuli**, Co-chairman **R. Kreivaitis**

Surface topography and adhesive/frictional behaviour of sliding surfaces in micro/nanocontact

M.Michalowski, D.Nolbert, L.Ocypa, Z.Rymuza (Poland)

Ball-on-plate testing of nanopore fillers for tribologically effective anodized alumina coatings

A.Ručinskienė, G.Bikulčius, S.Jankauskas, S. Asadauskas (Lithuania)

Effect on wear of the application of feldspar coatings on lithium disilicate dental crowns

C.G. Figueiredo-Pina, N. Patas, J. Canhoto, R. Claudio (Portugalia)

Al-Sn Nanostructured Coatings on Aluminum Surfaces Using Electrospark Alloying and Their Wear Behavior

V.I.Agafii, E.V.Yurchenko, V.I.Petrenko, A.Kupcinskas, A.Zunda, A.I.Dikusar (Moldova, Lithuania)

Research of materials and technology parameters influence of vibroarcwelding layers properties

R.Skirkus, V.Jankauskas (Lithuania)

POSTER PRESENTATIONS

14 November 2013

IV Building of ASU, Lobby of 2st floor

Cyclic plasticity and microstructure of nickel with friction

V.G. Pinchuk, S.V. Korotkevich. (Belarus)

Anti-frictional and mechanical properties of flame sprayed polymer coatings

O. Rekhliitsky, N. Solovej, M. Belotserkovsky, S. Korotkevich (Belarus)

Tribological properties of organic additives in mineral oils

Ch. Boniatian, A. Pogosian, W. Saroyan (Armenia)

Structure and electrical properties of graphene modified thermoplastic polymer composites.

T. Ivanova, J. Zicans, R. Merijs Meri, J. Bitenieks. (Latvia)

Structure and elastic properties of carbon nanotubes containing polypropylene nanocomposites

R. Merijs Meri, J. Zicans, T. Ivanova, I. Reinholds, V. Kalkis (Latvia)

Structure and electric properties of graphene containing thermoplastic polymer nanocomposites

J. Zicans, R. Merijs Meri, T. Ivanova, J. Bitenieks (Latvia)

Improvement of tribological properties of AISI D2 tool steel through slide burnishing and nitriding

W. Brostow (USA), K. Czechowski, P. Klimczyk, P. Rusek, D. Tobola (Poland)

Tribological performance of magnetorheological fluids

J. Kozłowska, M. Leonowicz (Poland)

The composite coatings Ni-B and their tribological and tribocorrosion properties

A. Gajewska-Mindzialek, B. Szeptycka, J. Senatorski (Poland)

Wear resistance of carbon coatings produced on polyetheretherketone using RFCVD process

M. Tarnowski, K. Kulikowski, B. Rajchel, Tadeusz Wierzchoń (Poland)

Wear resistance of Ti6Al4V alloy after plasma nitriding at the cathode and plasma potential

K. Kulikowski, M. Tarnowski, T. Wierzchoń (Poland)

Wear Behavior of Electrospark Coatings on Steel

V.I. Agafii (Moldova), J. Padgurskas, A. Andriušis, R. Kreivaitis (Lithuania), Y.V. Yanakievich, V. Mihailov (Moldova)

Nanoexfoliated wear-resistant material on the basis of iron, copper and carbon

S.L. Revo (Ukraine), J. Padgurskas (Lithuania), D. Zhanmin, K.O. Ivanenko (Ukraine)

Criterion of transition in the fretting phenomenon based on the variable coefficient of friction

S. Ghimisi (Romania)

Experimental researches concerning the lubricant impact on the technical performances of the centrifugal fans

I. Radulescu, A.V. Radulescu (Romania)

Micro-indentation test for measuring the adhesion of copper layer on electronic printed circuit boards

G. Dumitru, G. Chisuiu, A. Tudor, S. Cananau (Romania)

Definition of parameters of oxide layer

I. Dyakov, A. Kuzmin (Russia)

Friction behavior of eco-friendly conductive polymer composites (CPC) for solar absorber design

Z. Antar, K. Elleuch (France), J.-Fr. Feller (Tunisia), H. Noel, P. Glouannec (France)

Laser equipment for tribological application: design and investigations

Č. Sipavičius, K. Mažeika, J. Padgurskas, R. Rukuiža, V. Bėčytė, K. Bazilevičius (Lithuania)

Nitrided constructional steels and their wear behaviour

J. Senatorski, J. Tacikowski, E. Kasprzycka, B. Bogdanski (Poland)

Tribological properties of chromized tool steel in conditions of sliding friction and concentrated contact

E. Kasprzycka, J. Senatorski, B. Bogdanski (Poland)

Effect of seawater on the friction and wear properties of rubber materials for oil seal

T. Gou, T. Iwai, Y. Shoukaku (Japan)

Relationship of real contact area and friction characteristics of paper based friction material for wet clutch

T. Hideyuki, T. Iwai, Y. Shoukaku (Japan)

Analysis of zones influenced by friction and friction coefficient in tube hydroforming process

E. Karabegović, M. Mahmić, I. Karabegović, E. Husak. (Bosna and Hercegovina)

Tribological and tribocorrosion tests of Ni-SiC electrochemical coatings

B. Szeptycka, J. Senatorski (Poland)

Considerations regarding the wear testing by dry friction at 300⁰Celsius degrees of hard chrome plating XC45 steel

N. Popa, C. Onescu, R.N. Dobrescu, M.T. Popescu (Romania)

Sliding wear of HVOF sprayed self- fluxing alloy matrix cermet particles reinforced composite coatings

A. Surzhenkov, M. Antonov, V. Mikli, J. Latokartano, T. Vilgo, P. Kulu (Estonia)

LANGUAGE

The conference language is English.

INFORMATION FOR SPEAKERS

Duration of oral reports:

- Plenary sessions – 30 min.
- Scientific sessions – 20 min.

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

Area of poster presentation should not exceed **A0 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. Bus No 18 (price 2 Litas) and minibus No 56 (price 2,5 Litas) arrives from city centre to conference venue at Aleksandras Stulginskis University. After arrival to Kaunas airport transferring to Kaunas railway and bus stations is possible by bus No 29.

Timetables of public transport in Kaunas are available at

<http://www.marsrutai.lt/kaunas/en/>

After arrival to Vilnius airport to Vilnius railway and bus stations (same place) is possible by buses No 1 and 3. Timetables of public transport in Vilnius are available at

<http://www.marsrutai.lt/vilnius/en/#Routes/Bus>

Timetable of trains from Vilnius to Kaunas at <http://www.litrail.lt>

Timetable of buses from Vilnius to Kaunas (buses every 20-30 min.) at:

<http://www.autobusubilietai.lt/>.

Transport information in Lithuania:

<http://www.marsrutai.lt/en/>

More information about transfers in Lithuania to and from Aleksandras Stulginskis University is available at: <http://intern.asu.lt/arrivtoLT.html>

University's campus map at:

<http://www.asu.lt/intern/tsenwhere.html>

Touristic information of Kaunas:

<http://visit.kaunas.lt/W3/titulinis?lang=en>

Touristic information of Lithuania:

<http://www.travel.lt>

ACCOMMODATION

Participants can arrange their accommodation in University guestrooms (15-30 EUR/day):

<http://intern.asu.lt/tsenhot.html>

or in the hotels of Kaunas city:

http://www.hotels.lt/t_kaunas.html

In following hotels You can get remarkable discount, if You will mark in hotel reservation that You are guest of Aleksandras Stulginskis University and participant of BALTRIB 2013 conference:

- „Park Inn by Radisson Kaunas Hotel“ (<http://www.parkinn.com/hotel-kaunas>)
- „Europa Royale Hotel Kaunas“
(http://www.groupeuropa.com/europa_royale/kaunas_hotel/)
- „Best Western Santakos hotel“ (http://balttrib.info/13_Accommodation.htm)

CULTURAL PROGRAM

15 November 2013

Possibility to participate on cultural performance on Friday evening at 18:00:

Operetta (musical) at Musical Theatre of Kaunas called "Madame Pompadour" by Leo Fall

The ticket cost 15 EUR.

16 November 2013

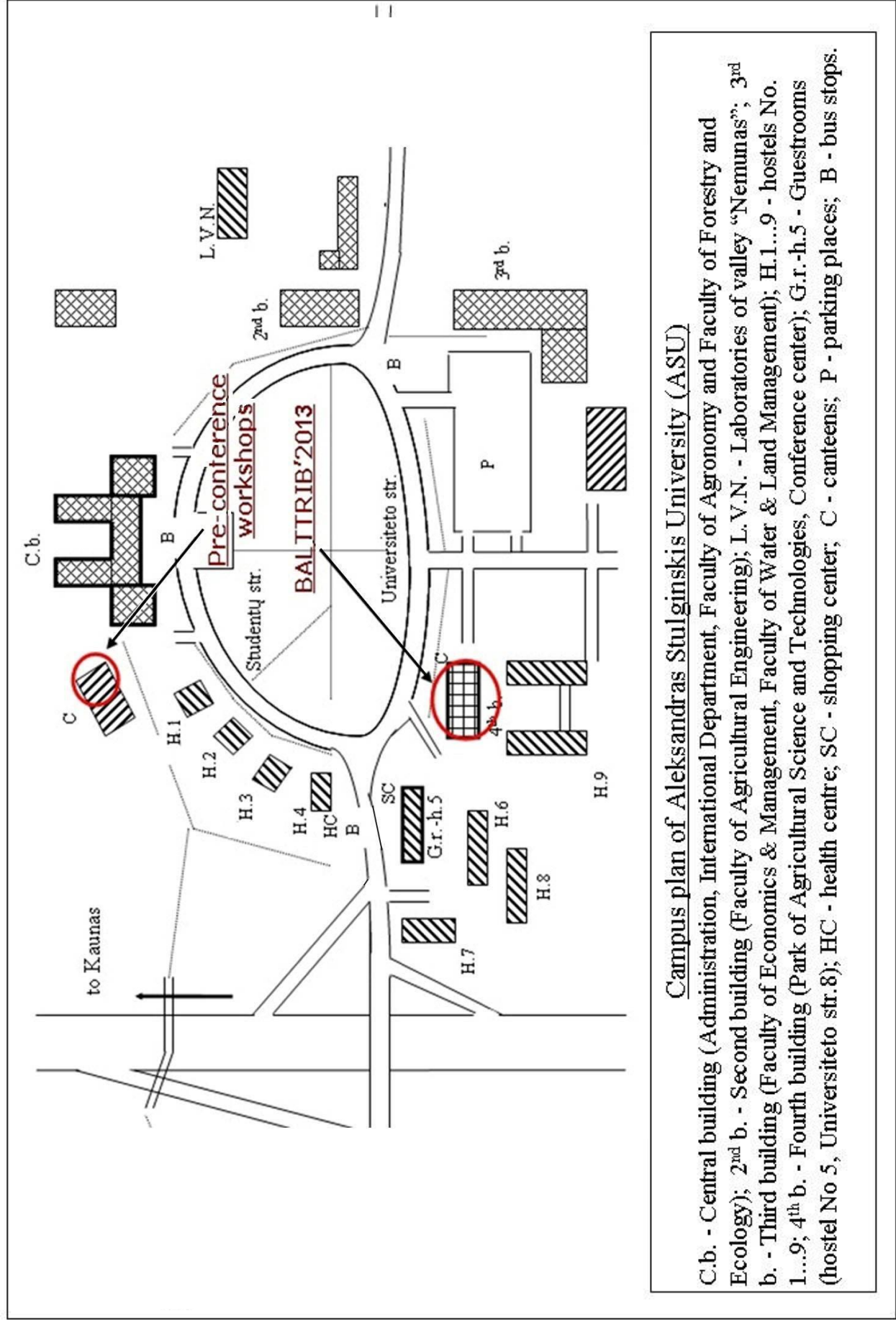
Cultural program on Saturday will include lunch and the visits to:

- Hill of Crosses near Siauliai (<http://www.kryziukalnas.lt/?id=44>;
<http://www.hillofcrosses.com>),
- Museum of Chocolate with Educational program
(<http://www.sokoladomuziejus.lt/en>),
- Museum of bikes (<http://ausrosmuziejus.lt/eng/Ekspozicijos/Dviraciu-muziejus>),

Departure – at 08:00 from University guestrooms, return – at 19:00

Participation at cultural programme on 16.11.2011 costs 50 EUR.

Cultural programme is not included in conference and should be paid separately at the registration.



Campus plan of Aleksandras Stulginskis University (ASU)

C.b. - Central building (Administration, International Department, Faculty of Agronomy and Faculty of Forestry and Ecology); 2nd b. - Second building (Faculty of Agricultural Engineering); L.V.N. - Laboratories of valley "Nemunas"; 3rd b. - Third building (Faculty of Economics & Management, Faculty of Water & Land Management); H.1...9 - hostels No. 1...9; 4th b. - Fourth building (Park of Agricultural Science and Technologies, Conference center); Gr.-h.5 - Guestrooms (hostel No 5, Universiteto str.8); HC - health centre; SC - shopping centre; C - canteens; P - parking places; B - bus stops.