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innovation across borders

**GEOtest**



 **E!7614 APPL-EIS**

**EUREKA 2016**

**4<sup>th</sup> conference and working session**

SCHEDULE



PROCEEDINGS

**October 13<sup>th</sup> – 14<sup>th</sup>, 2016**

**GEOtest, Inc., Brno University of Technology  
Lednice, CZ**



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# EUREKA 2016

**4<sup>th</sup> Conference and Working Session Within the  
frame of the International Program EUREKA  
Project No.: E!7614**

*A System of Monitoring of Selected Parameters of Porous  
Substances Using the EIS Method in a Wide Range of Applications*  
*Systém sledování vybraných parametrů porézních  
látek metodou EIS v širokém spektru aplikací*

**E!7614 APPL-EIS**



**October 13<sup>th</sup> – 14<sup>th</sup>, 2016**  
**GEOtest, Inc., Brno University of Technology, FCE**  
**Lednice, Czech Republic**





# RIGA TECHNICAL UNIVERSITY

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Rector: Academician, Dr. habil. sc. ing. Leonīds Ribickis



**the seat of the Rector**

Riga Technical University is the first technical university in the Baltic countries – its history dates back to 1862 when Riga Polytechnic was founded. Long lasting traditions, advanced teaching methods, new technologies and innovative approach provide the University with the opportunity to ensure research excellence and offer exciting full-time or part-time studies in RTU in Engineering Sciences, Technologies, Natural and Environmental Sciences as well as in Architecture and Engineering Economics.

Riga Technical University is an accredited internationally recognised European university that consists of 8 faculties and 35 institutes. It is the second largest university in Latvia by number of students, and it has the greatest number of state funded students.

It is ensured that each student of Riga Technical University gains practical experience during internships not only in Latvia but also abroad. More than 200 agreements on cooperation have been signed with European and other foreign universities. RTU collaborates with the enterprises in major industries in Latvia and abroad as well as with state and local government institutions. Supported by European Structural Funds, RTU is taking active part in various research projects as well as in establishing of Competence Centres and National Research Centres.

The implementation of RTU Development Project has started: construction of a single university campus «RTU – a City within the City» is underway at Kipsala, Riga. The Project envisages setting up one of the most advanced engineering study centres in the Baltic region thus providing students,

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researchers and industry representatives with up-to-date research opportunities and infrastructure.

I strongly believe that the future of Riga Technical University lies in internationalisation of research and in collaboration with business sector. International, vibrant and attractive research environment that is open to innovation and new technologies will ensure that RTU becomes the centre of



RTU management and faculty deans

excellence where everyone will be able to get acquainted with modern technologies and latest achievements in science, as well as to meet people to exchange and implement innovative ideas.

The world is changing and we have to be prepared to take advantage of the challenges and opportunities offered. RTU is to become one of the leading universities in consolidating the research community in Latvia, Europe and the

entire world.

NUMBER OF STUDENTS (01.10.2015.)						
<b>NUMBER OF STUDENTS</b>						
2010	2011	2012	2013	2014	2015	
15 579	14 746	14 686	14 891	14 452	14 797	
<b>NUMBER OF STUDENTS (STATE AND RTU FUNDED/PAYING TUITION FEES)</b>						
Students whose studies are financed by State or by RTU						9023
Students paying tuition fees						5774
<b>FOREIGN STUDENTS (INC. INCOMING «ERASMUS» AND OTHER EXCHANGE PROGRAM FOREIGN STUDENTS)</b>						
2012	2013	2014	2015			
414 (133)	874 (387)	785 (207)	1141 (271)			



### Number of students

(<http://www.rtu.lv/en/content/view/3810/2073/lang,en/>)

### Faculties and Affiliates

- Faculty of Architecture and Urban Planning (FAUP),
- Faculty of Civil Engineering (FCE),
- Faculty of Computer Science and Information Technology (FCSIT),
- Faculty of Electronics and Telecommunications (FET),
- Faculty of Engineering Economics and Management (FEEM),
- Faculty of Material Science and Applied Chemistry (FMSAC),
- Faculty of Power and Electrical Engineering (FPEE),
- Faculty of Mechanical Engineering, Transport and Aeronautics (FMETA),
- Faculty of E-Learning Technologies and Humanities (FLTH),

Daugavpils Affiliate (DA), Liepāja Affiliate (LA), Ventspils Affiliate (VA), Cēsis Affiliate (CA), Riga Business School (RBS), BALTECH Study Centre.

Through project E!7614 in the EUREKA program is a solid collaboration with Faculty of Civil Engineering with Department of Water Technology (head of dept. and leader of cooperation is Assoc. professor Dr.sc.ing. Boriss Gjunsburgs) and with Division of Building Technology (contact person is assistant Mg.sc.ing. Mārtiņš Vilnītis).



### **Faculty of Civil Engineering (FCE)**

A construction engineer is a prestigious profession both in Latvia and elsewhere in the world. Even a person not directly related to the construction industry may have noticed the construction industry growth in Latvia. In 1993 construction volumes in Latvia accounted for 210 million lats, in 2006 they already reached 1131.6 million lats. It may be assumed, that in the next decade this figure will grow just as fast. With the growth of construction volumes the demand for qualified specialists capable of performing surveying, design, construction and maintenance of buildings and transport structures will increase as well. The Faculty of Civil Engineering trains construction specialists with academic and professional education in construction, geodesy and cartography, as well as heat, gas and water supply technologies.

FCE incorporates:

- *Heat, Gas, and Water Technology Institute;*
- *Institute of Building Production;*
- Institute of Materials and Structures;
- Institute of Building and Reconstruction;
- Institute of Transport Structures.

After graduation new specialists are employed in the construction of buildings, roads and bridges, they may become managers and foremen of construction projects, geodesists, as well as work in different institutions supervising construction work, companies manufacturing road building materials, research laboratories, design workshops, etc.

Being a builder is a wonderful profession, for even after many years civil engineers and builders can proudly look at the buildings, transport structures or heat and water supply systems, which they have built. This only means that construction is a sphere with a future.

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## **Riga Technical University Strategy for 2014–2020**

The main target of the RTU Strategy is to ensure implementation of the leitmotiv referred to in the National Development Plan for 2014-2020 – to achieve the “economic breakthrough” in Latvia. Riga Technical University positions itself as a cornerstone of the development of Latvia, which ensures education of specialists necessary for Latvian nationaleconomy and development of new products and services, serving as a basis for sustainable growth of Latvia. RTU Strategy contains the core targets of the RTU development until 2020, as well as defines the activities and distribution of responsibilities for implementation of the tasks.

The vision of Riga Technical University until 2020 is to become the leading University of science and innovation in the Baltic States. In order to achieve it, the strategy defines three objectives of the University – high quality study process, excellence in research and sustainable innovation and commercialization activities. Specific result-based targets have been determined for these three objectives to make it possible for the RTU to achieve its vision by 2020.

The strategy is based on the three key objectives of the University while the following five main priorities of the University cut across the strategy – internationalization, interdisciplinarity, organisational efficiency, financial efficiency and infrastructure efficiency. RTU uses these five horizontal priorities as a prism to see implementation of its objectives and ensure internationally competitive high quality scientific research, tertiary education, technology transfer, commercialization and innovation activities for Latvian national economy and the society.

Implementation of the RTU Strategy is approved by the decision of the RTU Senate. After approval of the Strategy the RTU rector ensures defining of the annual RTU objectives and tasks with clear result-based indicators at the level of every RTU structural unit. The RTU Strategy is implemented and the annual achieved results are analysed on the basis of these targets.

**Mission** – To ensure internationally competitive high quality scientific research, tertiary education, technology transfer and innovation for Latvian national economy and the society.

**Vision** – Riga Technical University – a modern and prestigious University, internationally recognised as the leading university of science and innovation in the Baltic States – a cornerstone of the development of Latvia.