## RIGA TECHNICAL UNIVERSITY



## SCIENTIFIC RESEARCH DIRECTORY

2007/2008

RTU Publishing House RIGA

Publisher and distributor: Riga Technical University Production: Prof. L.Ribickis, Prof. B.Grasmanis, Assoc. Prof. J. Valeinis, S. Rendore D.Ostrovska, L.Lazdina RIGA TECHNICAL UNIVERSITY SCIENTIFIC RESEARCH DIRECTORY 2007/2008 - RIGA: RTU, 2007 - pp. 143 The information in this directory was provided by the faculties, institutes and research centres of Riga Technical University © Riga Technical University, 2007







This report features the multishaped research face of the Riga Technical University. It provides general information on different fundamental and applied research projects carried out in our academic and research units. It also gives the names of our academic staff members as well as institutions involved in particular research areas.

We regard promotion of research activities to be one of our priorities and I strongly believe that this will in the future rank the Riga Technical University among the leading higher educational institutions in the Baltic sea region contributing to the development of science and technology.

Wishing success, new discoveries and achievements to everybody in the fantastic and challenging world of research.

Professor Ivars Knēts, Rector of Riga Technical University, Full Member of Latvian Academy of Science

E-mail: knets@latnet.lv



This presentation highlights information on the organisational structure of our University which comprises 8 faculties, wide range of institutes, departaments and divisions.

It presents the main topics of scientific interests, acquired scientific equipment and the list of funded projects in 2006-2007. The publication also includes the list of Promotion Councils and the list of the Doctoral thesis defended in RTU in 2005-2006.

Research activity in our University is an integral part of the study process and it is to be noted that many of the research programmes are very important for the industry and economy of Latvia.

Riga Technical University is open to world-wide co-operation in scientific research and in education for sustainable development of knowledge based society.

Professor Leonīds Ribickis, Vice-Rector for Science and Research, Corresponding Member of Latvian Academy of Science

E-mail: leonids.ribickis@rtu.lv

## **CONTENT**

FO	REWORD	4
1.	Faculty of Architecture and Urban Planning	8
2.	Faculty of Building and Civil Engineering	10
3.	Faculty of Computer Science and Information Technology	24
4.	Faculty of Electronics and Telecommunications	39
5.	Faculty of Electrical and Power Engineering	46
6.	Faculty of Engineering Economics	58
7.	Faculty of Material Science and Applied Chemistry	67
8.	Faculty of Transport and Mechanical Engineering	92
9.	Institute of Humanities	113
10.	Institute of Languages	115
11.	Riga Business School	118
12.	Scientific Library	119
13.	Research Institute of Inorganic Chemistry	120
LIST OF DISSERTATIONS DEFENDED BY RTU SCIENTISTS 1		126
PR	OFESSORS AND ASSOCIATE PROFESSORS OF RTU	131
DD	OMOTION COUNCILS OF DTU	137