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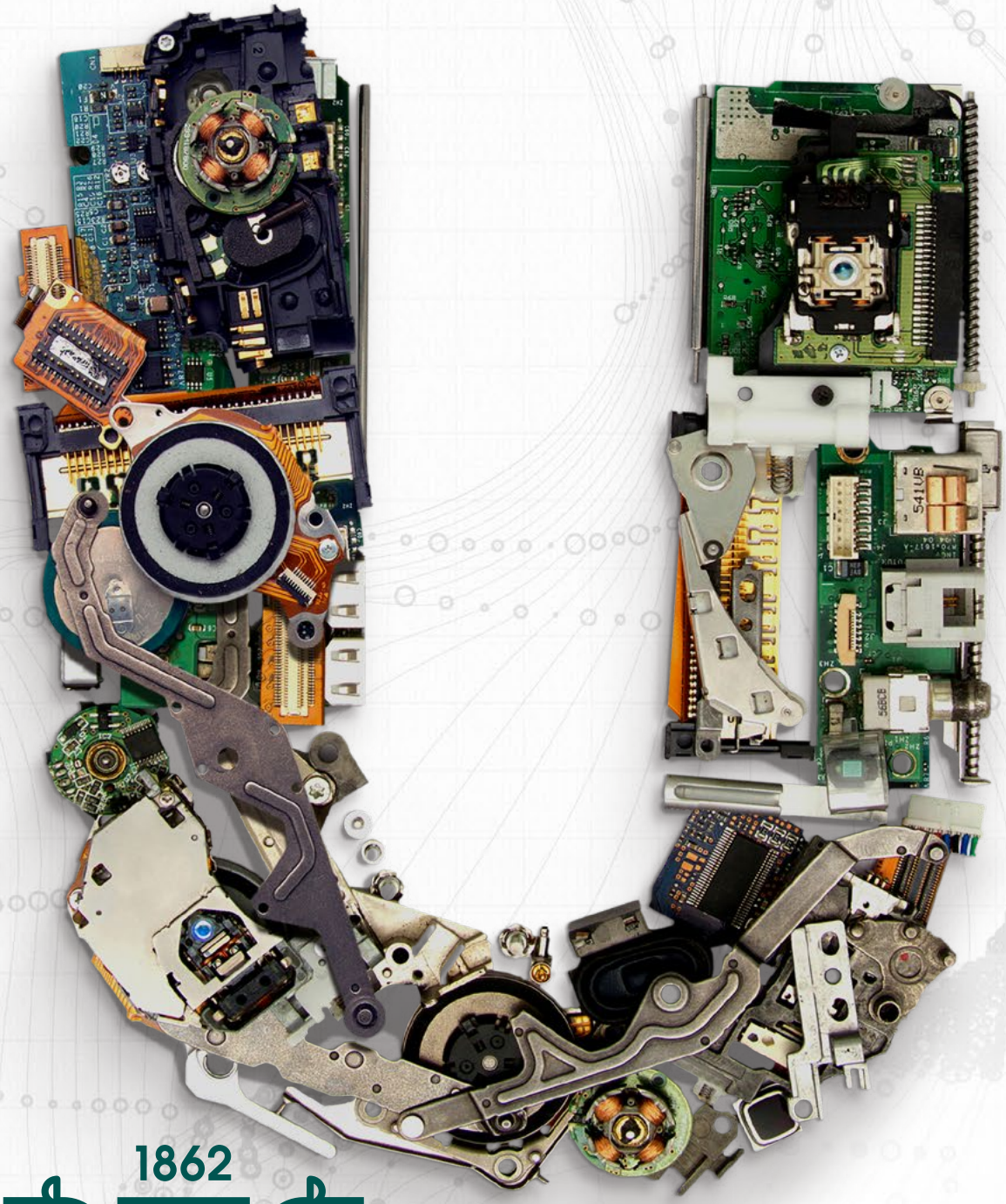

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RIGA TECHNICAL UNIVERSITY

MAGNETIC LATVIA

RIGA TECHNICAL UNIVERSITY

is the largest technological university in the Baltic States with rich history and clear future vision aimed at promoting excellence in student academic results, research, and global issues in cooperation with the industry and foreign partners.

STUDIES:

Studies at RTU are implemented by 9 faculties, including 33 institutes.

RTU has 4 affiliations, it comprises Riga Business School, BALTECH — a consortium of seven engineering universities from the Baltic Sea Region, as well as Engineering High School.

PROGRAMMES: 49:

RTU offers academic and professional study programmes in English at 3 levels:

13 undergraduate

24 post graduate

12 doctoral studies

FACULTIES

INCLUDING **33** INSTITUTES

RESEARCH

Research at RTU is organized on six research platforms:

6

- Energy and Environment;
- Cities and Urban Development;
- Information and Communication;
- Transport;
- Materials, Processes and Technologies;
- Safety and Security.

RESEARCH CAPACITY:

833 researchers | **30** laboratories

Advanced infrastructure, innovation and technology transfer, cooperation with the industry.

MAGNETIC **LATVIA**

2017

RESEARCH PUBLICATIONS in 2017:

1659 RTU publications/ in total indexed

900 indexed in SCOPUS data base

728 indexed in ISI Web of Knowledge data base

FACULTIES

- Faculty of Architecture,
- Faculty of Civil Engineering,
- Faculty of Computer Science and IT,
- Faculty of E-Learning Technologies and Humanities,
- Faculty of Electronics and Telecommunications,
- Faculty of Power and Electrical Engineering,
- Faculty of Engineering Economics and Management,
- Faculty of Mechanical Engineering, Transport and Aeronautics,
- Faculty of Materials Science and Applied Chemistry.

MAIN FIGURES:

14 672 total number of students

2 353 international students

563 number of doctoral students

36 doctoral theses defended in 2017

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RĪGAS TEHNISKĀ UNIVERSITĀTE

2018

PATENT PORTOLIO

88
National (Latvian) patents in force

26
National (Latvian) patents filed

9
European patents in force

PROJECT PORTFOLIO

From 2008 till 2017, RTU has been involved in the implementation of 34 EU 7th Framework Programme (FP7) projects and 17 Horizon 2020 Programme projects.

38
EU Structural Fund projects

34
International research projects

8
International cross-border research project

29
State funded research projects

THINK GLOBAL, BE GLOBAL!

INTERNATIONAL COOPERATION

RTU is highly active in international affairs. The University is open to cooperation with foreign partners, it hosts guest delegations to launch joint projects and organize exchange of good practices.

With a slogan “Think global, be global!” RTU positions itself in the global education market as a modern university open to international cooperation.

RTU is represented at the largest European and world education networks and actively participates in the work of specialized associations:

- **European University Association — EUA;**
- **European Society for Engineering Education — SEFI;**
- **European Association for International Education — EAIE;**
- **Association for International Educators — NAFSA;**
- **The University Consortium for Science and Technology — BALTECH;**
- **Baltic University Programme – BUP;**
- **The Association «European Universities;**
- **Public Relations and Information Officers — EUPRIO;**
- **Romualdo Del Bianco Fund – Life Beyond Tourism;**
- **Baltic Sea Region University Network – BSRUN.**

RIGA TECHNICAL UNIVERSITY

INFORMATION TECHNOLOGIES

RTU FACULTY OF COMPUTER SCIENCE AND INFORMATION TECHNOLOGY

ABOUT FACULTY

The Faculty of Computer Science and Information Technology has more than 55 years long history of research and studies. It prepares specialists who can analyze, design, develop and use information technology solutions for solving different types of problems and tasks. It is the largest computer science faculty in Latvia. The faculty provides more than 300 state-funded study places every year that is more than in any other Latvian institution of higher education in this field. The average number of students is 1700.

The top four professional occupations of faculty's graduates are a programming engineer, a system analyst, a financial analyst and a leader of information technology projects. These and other computer science specialists mostly work in Latvia's and international leading information technology companies, banks and state institutions.

The program «Computer Systems» implemented by the Faculty of Computer Science and Information Technology is the most advised study programme by Latvian employers for many years. It also has Euro-Inf (European Accreditation of Informatics Programmes, 2011-2016), QUESTE-SI (2013) and QUESTE (The Quality System of European Scientific and Technical Education, 2009-2011) accreditation.

STUDY PROGRAMS

The faculty implements internationally accredited academic and professional study programmes at all levels of study:

In English:

— Automation and Computer Engineering (doctoral studies);
— Computer Systems (academic bachelor, academic master, and doctoral studies);
— Business Informatics (academic master studies);
— Logistics and Supply Chain Management (academic master studies).

STRUCTURAL UNITS AND MAIN RESEARCH DIRECTIONS

— Institute of Applied Computer Systems – Research on ambient intelligence for the development and integration of smart and autonomous systems.
— Institute of Information Technology — Research on ambient intelligent computing for evolutionary digital enterprises.
— Institute of Computer Control, Automation, and Computer Engineering — Research on ambient data processing in complex distributed environments.
— Institute of Applied Mathematics – Research on mathematical modelling.
— Environment Modelling Centre – Research on Groundwater modelling.
— Computing Centre.

FIELDS OF COMPETENCY

— Artificial intelligence and systems engineering.
— Robotics.
— Intelligent agents and multi-agent systems.
— Intelligent software solutions for education.
— Affective computing.
— Information systems design.
— Database technologies.
— Systems engineering.
— Image processing and computer graphics.
— Medical imaging.
— Image/video quality enhancement and segmentation.
— Construction and analysis of 3D model.
— Pattern recognition and face recognition systems.
— Computer networks and system technologies.
— Scalable cloud systems.
— Wireless sensor networks.
— Information technology security.

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RECENT ACHIEVEMENTS AND PROJECTS

— Development of multiple technical solutions for adaptive highly mobile multi-wheel autonomous robotic platforms (all of the solutions have received Latvian patents).
— Hybrid architecture for the autonomous intelligent robotic system.
— Hybrid multi-robot localization technique for indoor vision-based robotic systems.
— Practical multi-agent system applications in intelligent tutoring systems, logistics, insurance, robotics, and other domains.
— MASITS CASE tool supporting and partially automating the intelligent tutoring system development process.
— Agent-based intelligent tutoring system MIPITS for the study course “Fundamentals of Artificial Intelligence”.
— Concept map based intelligent knowledge assessment system IKAS.
— An educational game for knowledge assessment based on affective computing.
— Development of a portable device for non-contact early diagnostics of skin cancer.
— Skin cancer early diagnostics accuracy improvement by using neural networks.
— Fast and non-contact optical estimation of micro-organisms activity.
— Intelligent system for object recognition.

IKSA RESEARCH LAB

IKSA research lab gathers experts from various departments, knowledge and skills. Main research directions of the lab are artificial intelligence in general, machine learning as well as big and small data analysis specifically, sensors and sensor networks as well as affective computing.
IKSA research lab has attracted both scientific and applied projects, including two government funded postdoc research projects and a national research project. Moreover, IKSA research lab cooperates with multiple enterprises on research and development projects.

CONTACTS:

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