Automation
Civil Engineering
Geodesy
Electrical Engineering
Mechanical Engineering
Architecture
Chemistry
Food Technology
Material and Technology
Information and Communication
Technology
Design
Managment

Research at Slovak University of Technology in Bratislava

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Civil Engineering
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STU in top world rankings

- **QS World University Rankings 2016**

  - ranked 401. - 450. in the subject Computer science and information technologies
  - ranked the best technical higher education institution in Slovakia as well in architecture, civil engineering, chemical engineering, mechanical engineering, material technologies and in mathematics

- **Times Higher Education World University Rankings 2015**

  - 601. – 800. positions in the list of the world's best universities

- **ARWU 2012:**

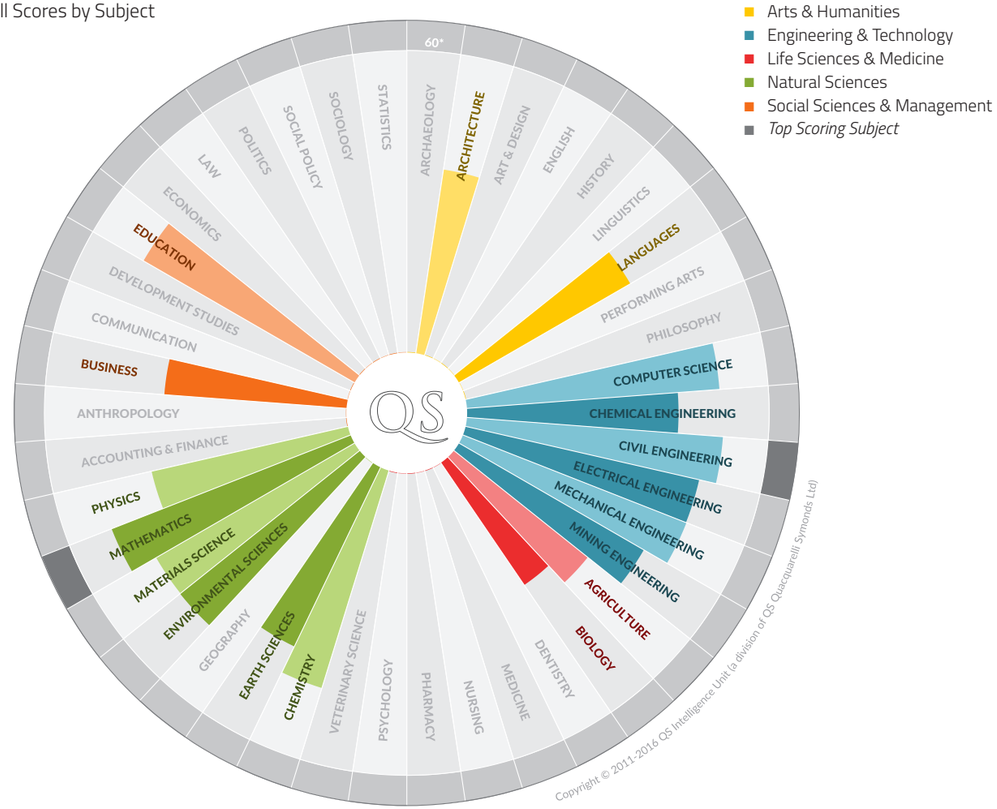
  - ranked 101. – 150. in computer sciences by the prestigious Center for World-Class Universities at Shanghai Jiao Tong University (ARWU TOP 200 world best universities ranking)

- **ARRA – Slovak independent academic ranking and Rating Agency:**

  - since it released its first rankings in 2005, the Faculty of Chemical and Food Technology at STU has been the best technical faculty in Slovakia.
  - the Faculty of Electrical Engineering and Information Technology at STU is ranked within the top 3 of all faculties (in 2015 was ranked second best)

QS World University Rankings by Subject 2016 - SLOVAK UNIVERSITY OF TECHNOLOGY IN BRATISLAVA

Overall Scores by Subject

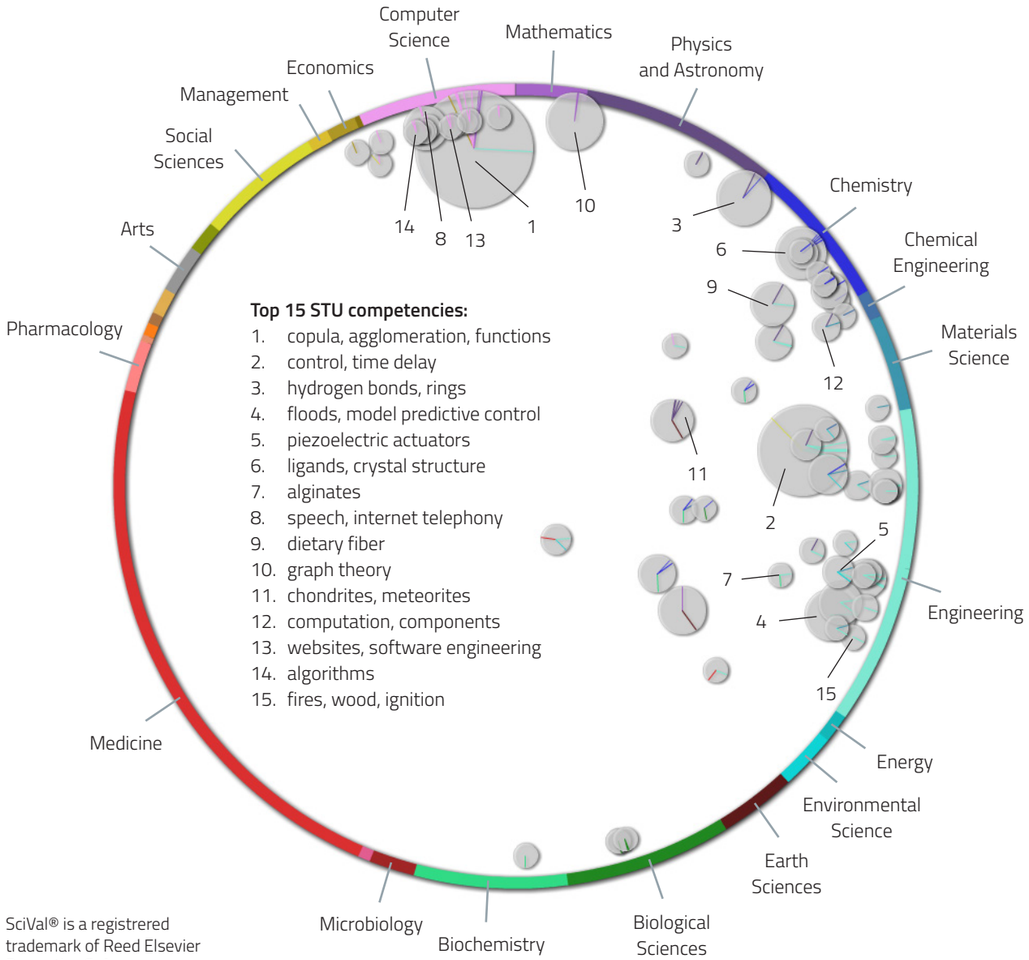


SCORED IN 18 SUBJECT

RANKED IN 1 SUBJECT

* The maximum possible score in any subject is 100 but the scale here is dynamically set to highlight the differences between disciplines at the given university

Scival spotlight profile of STU



Top 15 STU competencies in science

1. **COPULA, AGGLOMERATION, FUNCTIONS**
   prof. RNDr. Radko Mesiar, DrSc.
   Department of Mathematics and Constructive Geometry, Faculty of Civil Engineering
   Tel.: +421 (2) 59 274 414, +421 (2) 59 274 703
   radko.mesiar@stuba.sk

2. **CONTROL, TIME DELAY**
   prof. Ing. Mikuláš Huba, PhD.
   Institute of Automotive Mechatronics, Faculty of Electrical Engineering and Information Technology
   Tel.: +421 (2) 60 291 771
   mikulas.huba@stuba.sk

3. **HYDROGEN BONDS, RINGS**
   doc. Ing. Jozef Kožíšek, CSc.
   Department of Physical Chemistry, Faculty of Chemical and Food Technology
   Tel.: +421 917 674 368
   jozef.kozisek@stuba.sk

4. **FLOODS, MODEL PREDICTIVE CONTROL**
   doc. Ing. Monika Bakošová, PhD.
   Institute of Information Engineering, Automation and Mathematics, Faculty of Chemical and Food Technology
   Tel.: +421 917 669 053
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5. **PIEZOELECTRIC ACTUATORS**
   prof. Ing. Boris Rohaľ-Ilkiv, CSc.
   Institute of automation, measurement and applied informatics, Faculty of Mechanical Engineering
   Tel.: +421 (2) 57 296 702
   boris.rohal-ilkiv@stuba.sk

6. LIGANDS, CRYSTAL STRUCTURE

prof. Ing. Roman Boča, DrSc.
Department of Inorganic Chemistry, Faculty of Chemical and Food Technology
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7. ALGINATES

prof. Ing. Michal Rosenberg, PhD.
Institute of Biotechnology, Faculty of Chemical and Food Technology
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8. SPEECH, INTERNET TELEPHONY

prof. Ing. Ivan Baroňák, PhD.
Institute of Telecommunications, Faculty of Electrical Engineering and Information Technology
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9. DIETARY FIBER

doc. Ing. Jolana Karovičová, PhD.
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10. GRAPH THEORY

prof. RNDr. Jozef Širáň, DrSc.
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11. CHONDRITES, METEORITES

prof. Ing. Marcel Miglierini, DrSc.
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Tel.: +421 (2) 60 291 167
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12. COMPUTATION, COMPONENTS

prof. Ing. Stanislav Biskupič, DrSc.
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13. WEBSITES, SOFTWARE ENGINEERING

prof. Ing. Mária Bieliková, PhD.
Institute of Informatics, Information Systems and Software Engineering, Faculty of Informatics and Information Technologies
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14. ALGORITHMS

doc. Ing. Ivan Sekaj, PhD.
Institute of Robotics and Cybernetics, Faculty of Electrical Engineering and Information Technology
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15. FIRES, WOOD, IGNITION

prof. Ing. Karol Balog, PhD.
Institute of Safety, Environment and Quality, Faculty of Materials Science and Technology
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karol.balog@stuba.sk

TOP research projects

Horizont 2020

Climate action and environment

INREP – Towards Indium free TCOs (2015 – 2017)
prof. Ing. Alexander Šatka, CSc.
Institute of Electronics and Phototonics, Faculty of Electrical Engineering and Information Technology
Tel.: +421 (2) 60 291 656, +421 (2) 60 291 883, +421 (2) 60 291 815
alexander.satka@stuba.sk

INSPIRATION – INtegrated Spatial PlannIng, land use and soil management Research ActTION (2015 – 2018)
prof. Ing. arch. Maroš Finka, PhD.
Institute of Management
Tel.: +421 905 612 465
maros.finka@stuba.sk

Energy

ingREeS – Setting up Qualification and Continuing Education and Training Scheme for Middle and Senior Level Professionals on Energy Efficiency and Use of Renewable Energy Sources in Buildings (2015 – 2018)
doc. Dr. Ing. arch. Roman Rabenseifer
Department of Building Structures, Faculty of Civil Engineering
Tel.: +421 (2) 59 274 439
roman.rabenseifer@stuba.sk

Information and communication Technologies

NEWTON – Networked Labs for Training in Sciences and Technologies for Information and Communication (2016 – 2019)
prof. Ing. Gregor Rozinaj, PhD.
Institute of Telecommunications, Faculty of Electrical Engineering and Information Technology
Tel.: +421 (2) 60 291 703, +421 (2) 68 279 414
gregor.rozinaj@stuba.sk

Nanotechnologies, Advanced Materials, Advanced Manufacturing and Processing, and Biotechnology

HISENTS – High level Integrated SEnsor for NanoToxicity Screening
prof. Ing. Peter Šimon, DrSc.
Department of Physical Chemistry, Faculty of Chemical and Food Technology
Tel.: +421 918 674 530
peter.simon@stuba.sk

TEAMING, SlovakION – Slovak Centre of Excellence in Ion Beam and Plasma Technologies for Materials Engineering and Nanotechnology (2015 – 2016)
doc. Ing. Maximilián Strémy, PhD.
Advanced Technologies Research Institute, Faculty of Materials Science and Technology in Trnava
Tel.: +421 906 068 721
maximilian.stremy@stuba.sk

Marie Sklodowska-Curie Actions

papabuild – Advanced physical-acoustic and psycho-acoustic diagnostic methods for innovation in building acoustics
doc. Monika Rychtáriková, PhD.
Department of Building Structures, Faculty of Civil Engineering
Tel.: +421 (2) 59 274 434
monika.rychtarikova@stuba.sk

ImageInLife – Training European Experts in Multilevel Bioimaging, Analysis and Modelling of Vertebrate Development and Disease
prof. RNDr. Karol Mikula, DrSc.
Department of Mathematics and Constructive Geometry, Faculty of Civil Engineering
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ECSEL

PowerBase – Enhanced substrates and GaN pilot lines enabling compact power applications (2015 – 2018)
prof. Ing. Alexander Šatka, CSc.
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alexander.satka@stuba.sk

OSIRIS – Optimal SIC substR ates for Integrated Microwave and Power CircuitS (2015 – 2018)
prof. Ing. Jaroslav Kováč, CSc.
Institute of Electronics and Phototonics, Faculty of Electrical Engineering and Information Technology
Tel.: +421 (2) 60 291 652, +421 (2) 60 291 858
jaroslav.kovac@stuba.sk

IoSense – Flexible FE/BE Sensor Pilot Line for the Internet of Everything
prof. Ing. Daniel Donoval, DrSc.
Institute of Electronics and Phototonics, Faculty of Electrical Engineering and Information Technology
Tel.: +421 (2) 60 291 358
daniel.donoval@stuba.sk

Patents

Patents

- P 287845 Multifunction device for modification of the cellulose materials and a method of modifying the cellulose materials
- P 288075 Three-chamber gasifier
- P 288206 Machinery worm
- P 288302 Additive for the Cetane number increase of diesel fuels and bio-diesel fuels, and its use)
  – filed also international application PCT/SK2014/050015 and a European patent application EP14727092.0
- P 288360 Pellet mill

Patent applications

- PP 5024-2011 Magnetic-field-controlled transistor and a method of measuring the size of the power electronic element switching current
- PP 142-2011 Process of producing acicular aragonite from the calcium hydroxide waste
- PP 5035-2012 Process of producing parts from composite materials
- PP 5019-2013 Car body and its manufacturing
- PP 5013-2013 Structural set of mobile modular flood barrier elements
- PP 51-2013 Method of diagnosing the early stage of arteriosclerosis
- PP 107-2013 Multipurpose bio-monitoring sensor
- PP 108-2013 Method of preparing a stable calcium layer
- PP 28-2014 System of increasing the safety of tunnel capacity
- PP 29-2014 System of the autonomous robot trajectory control
- PP 70-2014 Bismuth-Silver based solder with the addition of Lanthanum
- PP 5014-2014 Axial extruder, mainly for the purpose of the extrusion and/or mixing of pastes)
  – filed international application PCT/IB2015/052668

- PP 50038-2014 Preparation of Clostridium sp. immobilizers into the polyvinyl alcohol gel for the production of organic acids and chemicals
- PP 5035-2014 Laboratory equipment for the determination of the parameters impact in compressing particular substances
- PP 53-2015 Experimental testing device for the purposes of the dynamic, thermal and tribology analyses of the of disc brakes components
- PP 5022-2015 Compaction machine with rotating drum and a stationary mandrel
- PP 5023-2015 Modular multifunctional technological complex for the treatment of metal skeletons particularly of the old vehicles
- PP 50042-2015 Method of reading the image code in an industrial process and a system of its implementation
- PP 5036-2015 Separator unit of aerosol particles and a separating device
- PP 5040-2015 Pressing fixture for thermomechanical analysis of powder materials during uniaxial compression
- PP 69-2015 High-pressure [low-flow] pump innovation
- PP 72-2015 Cover with the feature of charging the accumulators of mobile phones, tablets and tablephones from solar energy
- PP 73-2015 System for determining the useful life of electric motors
- PP 5045-2015 Integrated two-stage supersonic ejector
- PP 81-2015 Tool for reinforcing the surface layers of steel products - in action
- PP 96-2015 Rope for rope conveyor
- PP 5047-2015 Multifunctional granulator
- PP 5004-2016 Measuring preparation for measuring geometric parameters of axisymmetric rotating parts of thin metal sheets vs. the printed material anisotropy and measuring method PP 5011-2016 Active solder and soldering method
- PP 2-2016 Technology of making square holes

Patent applications filed internationally

- Patent applicationTEMPERATURE SENSOR FOR MICRO-ELECTROMECHANICAL SYSTEMS AND METHOD FOR THE PRODUCTION THEREOF filed in Spain P201431530 and subsequently filed international application PCT/ES2015/070752 – applicants: The Consejo Superior de Investigaciones Cientificas (CSIC) and STU
- European patent application entitled PROCEDURE AND APPARATUS FOR MEASURING A D.C. MAGNETIC FIELD BASED ON MAGNETOSTRICTIVE EFFECT IN MAGNETIC WIRES pod číslom EP15195921.0 – applicants The Consejo Superior de Investigaciones Cientificas (CSIC), Helmholtz-Zentrum Dresden - Rossendorf e. V. (HZDR) and STU

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