



RESEARCH CENTRE
UNIVERSITY OF ŽILINA



**RESEARCH CENTRE
of the University of Žilina**

We support research activities in Slovakia / The project is co-financed by the EU sources.



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...research for people**



Mechanical Engineering

Civil Engineering

Electrical Engineering

Operation and management

**TRANSPORT
MATERIALS
ENERGY
INTELLIGENT SYSTEMS**



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In the years of 2013-2015 was built:

- Basic research infrastructure:
 - 28 laboratories
 - More than 70 specialized and/or unique equipments
- Personnel base:
 - 25 researchers
 - 10 employments for administrative and preparation of the research projects
 - More than 70 external collaborators



06/2014 – 09/2015



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Research areas

- Monitoring and evaluation of the transport infrastructure conditions
- Progressive materials for transport infrastructure and vehicles production
- Design and operation of smart buildings and renewable energy sources



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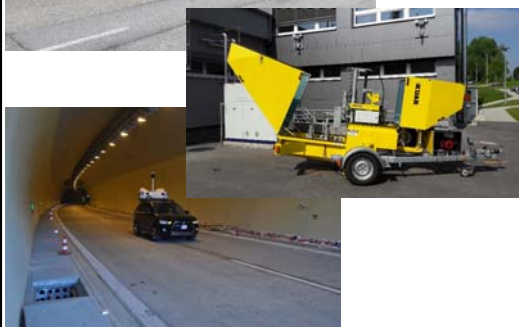
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Mobile laboratories for research and diagnostics of road infrastructure



Visualization of individual road layers and anomalies therein



Research of Intelligent Systems for Automatic Maintenance of Transport Infrastructure



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Cooperation with TNTech Ltd. Company – development of the sensors for concrete and asphalt deformations measurements, utility models No. 93-2014 a 94-2014



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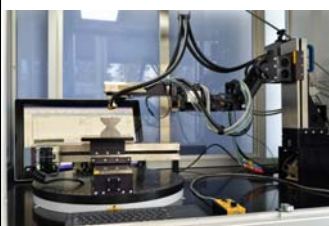
Cooperation with TNTech, Ltd. – Development of anti-icing system of critical spots



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Infrastructure for materials research to increase their service life and safety in various applications

Creation of corrosion map of SR



Assessing the impact of new technologies on the quality of the environment



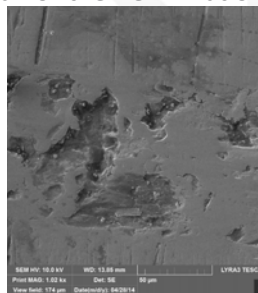
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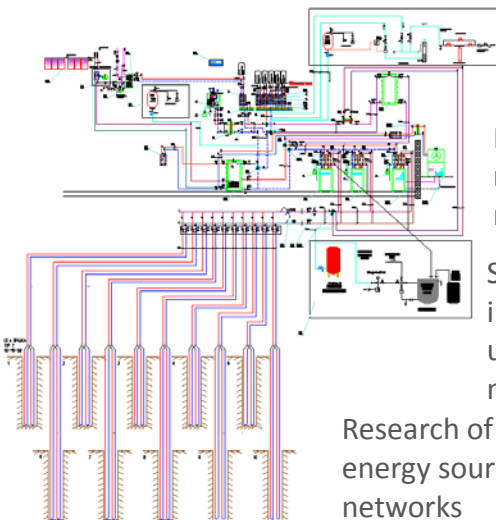
Cooperation with ZVL Slovakia, Kinex Bearings, Schaeffler – Design of anticorrosion system, analyse of degradation of materials for bearings and proposal for their elimination



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Research of Intelligent building management to optimize resource use

Sensor development for intelligent building management using autonomous room management

Research of integration of renewable energy sources into smart buildings and networks



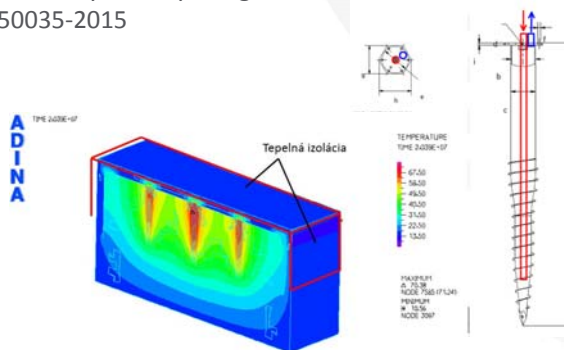
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Research on heat accumulation in the earth and the development of components for heat recovery efficiency – utility designs no. 50071-2015 and 50035-2015



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Research in the field of safety and monitoring of biologically active systems by wireless technology – cooperation with Datatherm, s.r.o.



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Smart research building



<http://building.rc.uniza.sk>

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Most important results

- 4 valid utility designs + 5 pre-filing solutions to protect intellectual property
- 8 Framework Cooperation Agreements with Private Firms + 3 private funded solutions
- 23 submitted HORIZON 2020 projects
- 8 submitted APVV projects, 6 submitted VEGA projects
- 175 scientific articles in collections, 94 scientific articles in journals, of which 7 were published in CC journals



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Regional Technology Transfer Centre

- Supporting scientific and research activities of VC UNIZA
- Linking research activities to industry
- Preparation of research projects especially for applied research and development
- Technology transfer and IPR consulting and Services
- Support and build partnerships for joint research programs



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Incubator

- Search for potential start-up ideas
- Support for the emergence of university start-ups and spin-offs
- Consulting for start-up companies
- Assistance in obtaining startup capital

startup^{isti}
ŽILINA



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Start-up programme for your entrepreneurs

Development of innovative business solutions (from idea to market application):

- business model Canvas
- approaches to validating an idea
- product and intellectual property protection
- types of business models, pricing
- distribution channels and ways of delivering the product to the customer
- marketing tools to promote commercialization and sales
- ICT tools for managing innovative projects
- investing in different phases of business, in the development phase of the prototype or in the growth and scaling of the product
- agile product development
- design thinking (product concept), MVP (the minimal viable product), basics of prototyping



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Summary of services for SMEs

- Participation in the implementation of research projects (national and international consortia)
- Support of national projects building R&D and innovation infrastructure
- Building joint research facilities with companies
- Participation in the creation of updated RIS3 domains (biomedicine, ICT)
- Cooperation on regional development (participation in the updated RIS of Žilina Region 2014+)
- Support for creative industry
- Support of cross-border and Central Europe cooperation in the area of innovation
- Project support for companies (R&D, innovation, education, networking)
- „Research Star“ Competition
- Active incubator with tenants
- Organization of the Research Forum conference
- Participation in university Start-up Programme
- Participation in Start-up Weekend of Žilina region



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Thank you for your attention

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