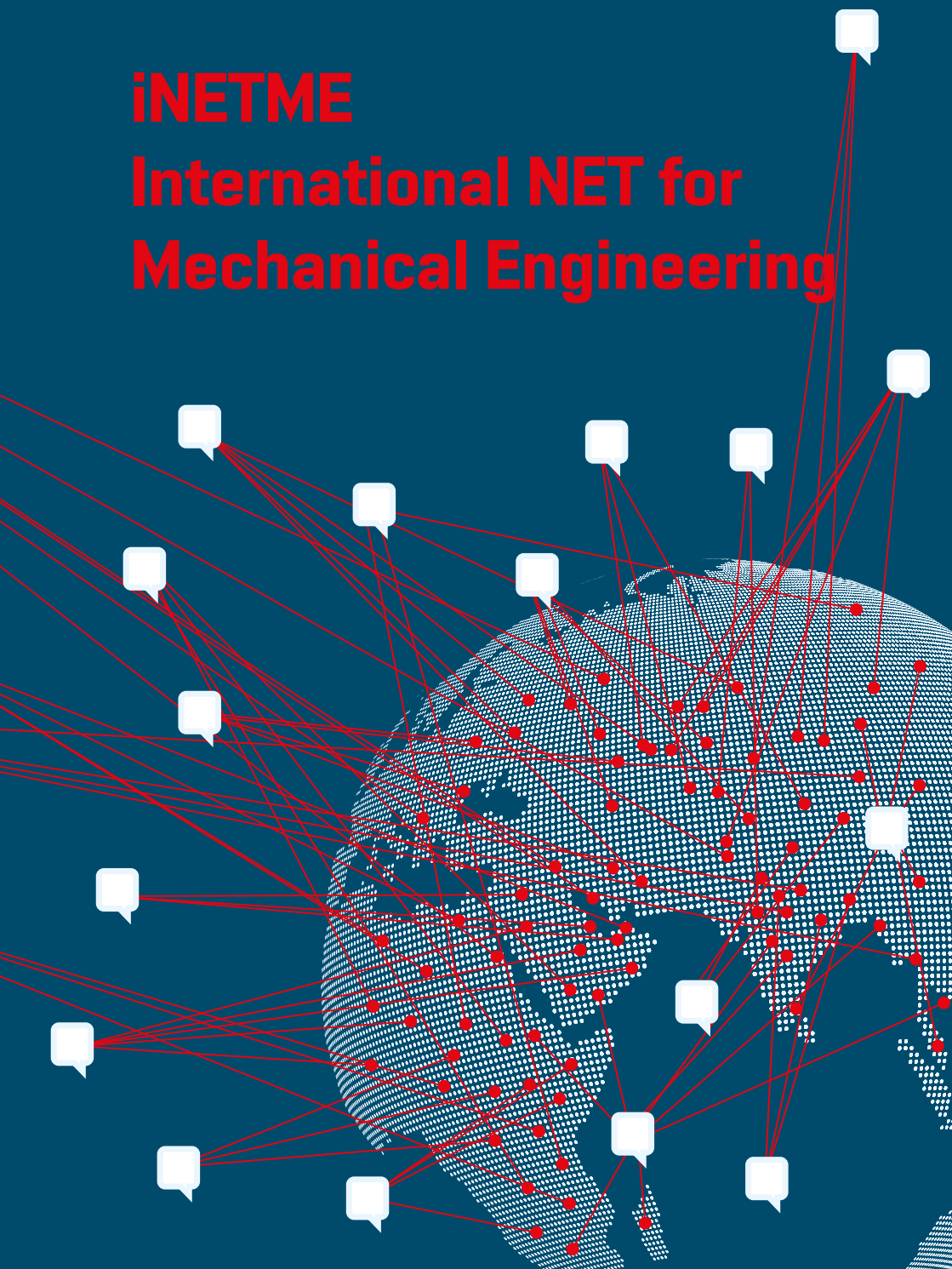
iNETME
International NET for Mechanical Engineering




BRNO FACULTY
UNIVERSITY OF MECHANICAL
OF TECHNOLOGY ENGINEERING


MINISTRY OF EDUCATION,
YOUTH AND SPORTS


INTER-EXCELLENCE

CONTENT

Introduction of iNETME

The iNETME – International NET for Mechanical Engineering focuses on widening informational network of advisory, consultancy and other related services to effectively support the involvement of scientific and research teams from mechanical engineering field in international projects.

The project builds on many years of service network experience of the applicant project office at NETME Centre at the Faculty of Mechanical Engineering, Brno University of Technology. The project is also based on national analysis of Czech research centres involvement in international R&D programmes. We assist the increase of Czech research centres participation in international R&D programmes with support service towards Czech entities – inwards, and also outwards – by proactive networking with TOP institutions in R&D – so-called informational international networking.

We offer professional support service primarily similarly-oriented research institutions in the Czech Republic.

We established non-financial cooperation with Regional Chamber of Commerce (RCC) in Brno which acts in this project as a cooperating organization, to further support increase in participation of Czech research centres in international R&D programmes. RCC associates more than 450 members – these are industry partners and SMEs which are covering the South Moravian region.

We are looking for new strategic partnerships. Will you join us?

Head of the Project

- Faculty of Mechanical Engineering, Brno University of Technology

Project partners – Universities

- Faculty of Mechanical Engineering, Technical University of Liberec
- Faculty of Mechanical Engineering, University of West Bohemia
- Faculty of Mechanical Engineering, J. E. Purkyně University in Ústí nad Labem
- Faculty of Technology, Tomas Bata University in Zlín

Project Partners - Other Institutions

- Brno Regional Chamber of Commerce
- Czech Metrology Institute
- Engineering Test Institute
- Military Research Institute
- Transport Research Centre

Areas supported by the project:

1. Expert service support

- **Dissemination of information** about international programmes at round tables, workshops, seminars, symposia
- **Providing of advisory and consultancy services**
- Utilization of modern technologies in form of online platform which involves proactive identification and search for potential opportunities for participation in international R&D programmes – so called **e-plan**
- **Methodical leadership and assistance with preparation of projects for international providers.** We offer English texts correction by a native speaker, and professional graphic processing and design of projects

2. Informational networking

- Establishment of targeted and systematic **cooperation with world-class abroad institutions**
- 10 work trips to the TOP international institutions, which are the most successful in receiving international projects, will be funded up to 2022
- **Video and printed material** about mechanical engineering in the Czech Republic

The project is funded by INTER-EXCELLENCE program of Ministry of Education, Youth and Sports Czech Republic. The main beneficiary of the grant is NETME Centre, Faculty of Mechanical Engineering Brno University of Technology. The project is realized between June 2019 and November 2022.

MINISTRY OF EDUCATION, YOUTH AND SPORTS

INTER-EXCELLENCE

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facebook.com/fmebut Technická 2896/2, 616 69 Brno, Czech Republic

Faculty of Mechanical Engineering
Brno University of Technology

Head of the Project

The Faculty of Mechanical Engineering is the largest faculty of the Brno University of Technology located on the campus Pod Palackého vrchem near the Czech Technology Park. The FME is a modern and practice-oriented educational and research institution that provides its students with a high quality education. NETME Centre, R&D Centre of the faculty, is a technology integrator aiming to catalyze innovation in advanced manufacturing and mechanical engineering in the Czech Republic. We help to create knowledge that addresses growth, sustainability and success of the future manufacturing industry in the country.

FME IN FACTS AND FIGURES:

- Founded in 1900
- The largest mechanical engineering faculty in the Czech Republic
- Ranking among the best technical faculties and best-performance research institutions in the Czech Republic
- Over 4 200 students and 500 employees in 15 specialized institutes
- 55 branches in Bachelor's, follow-up Master's and doctoral study branches accredited in Czech and English
- Education in traditional mechanical engineering areas as well as interdisciplinary branches
- Joint and double degree programmes in cooperation with several European universities
- Outstanding students' results in Czech and international competitions
- Over 1 000 graduates each year with excellent career prospects
- Close cooperation with institutes of the Academy of Sciences of the Czech Republic, and other Czech and foreign research institutions
- An important partner for Czech and international industrial companies (Škoda Auto, ČEZ, IBM, Bosch, Honeywell, Volkswagen, POSCO, etc.)
- Two research centres – NETME Centre (New Technologies for Mechanical Engineering) and CEITEC (Central European Institute of Technology) with modern and well-equipped laboratories available for teaching, research and development activities

Institutes

- Institute of Mathematics
- Institute of Physical Engineering
- Institute of Solid Mechanics, Mechatronics and Biomechanics
- Institute of Materials Science and Engineering
- Institute of Machine and Industrial Design
- Energy Institute
- Institute of Manufacturing Technology
- Institute of Production Machines, Systems and Robotics
- Institute of Process Engineering
- Institute of Automotive Engineering
- Institute of Aerospace Engineering
- Institute of Automation and Computer Science
- Institute of Foreign Languages
- Heat Transfer and Fluid Flow Laboratory
- NETME Centre - R&D Centre

- Professional courses for companies (quality management, welding, materials, etc.)
- Organization of international conferences
- The first university FabLab in the Czech Republic was open at this faculty, we are part of the European project FabLabNet

www.fs.tul.cz +420 485 353 108 +420 485 353 535
Studentská 1402/2, 461 17 Liberec I, Czech Republic

Faculty of Mechanical Engineering Technical University of Liberec

The Faculty of Mechanical Engineering is historically the oldest faculty of Technical University of Liberec. It was established in 1953 as the College of the Mechanical Engineering. From that time onwards the College offered academic programmes in Mechanical Technology, and in the Design of Textile, Glass, Ceramics and other Machines. These academic programmes and related research activities corresponded directly to typical industries found in Northern Bohemia.

The direction of the faculty's scientific research and education activities currently focuses on the applied research and development needs with the emphasis on research and development of traditional and modern materials, research, development, and innovation of standard and progressive technologies, design of special machines and equipment, reducing power input and weight. The Faculty of Mechanical Engineering provides and guarantees the expert level for all three study programme types: bachelor, master, doctoral studies. The Faculty offers and provides a wide scope of services, scientific research contracting activities, and lifetime education for the industrial field: materials, mechanics, construction, technology.

Departments

- Department of Applied Mechanics
- Department of Engineering Technology
- Department of Material Science
- Department of Power Engineering Equipment
- Department of the Design of Machine Elements and Mechanism
- Department of Machining and Assembly
- Department of Vehicles and Engines
- Department of Glass Producing Machines and Robotics
- Department of Textile Machine Design
- Department of Manufacturing Systems and Automation

fst.zcu.cz fst@fst.zcu.cz +420 37 763 8001

Univerzitní 22, 306 14 Plzeň, Czech Republic

Faculty of Mechanical Engineering
University of West Bohemia

ABOUT US

The Faculty of Mechanical Engineering is one of the oldest faculties in Plzeň. It ranks among the best educational institutions, with an excellent reputation in science and research. Its accredited study programmes educate highly qualified experts who are in great demand on the job market.

Individual departments offer accredited research programmes as well as doctoral programmes. They are also entitled to carry out procedures for the appointment of associate and full professors.

STUDIES

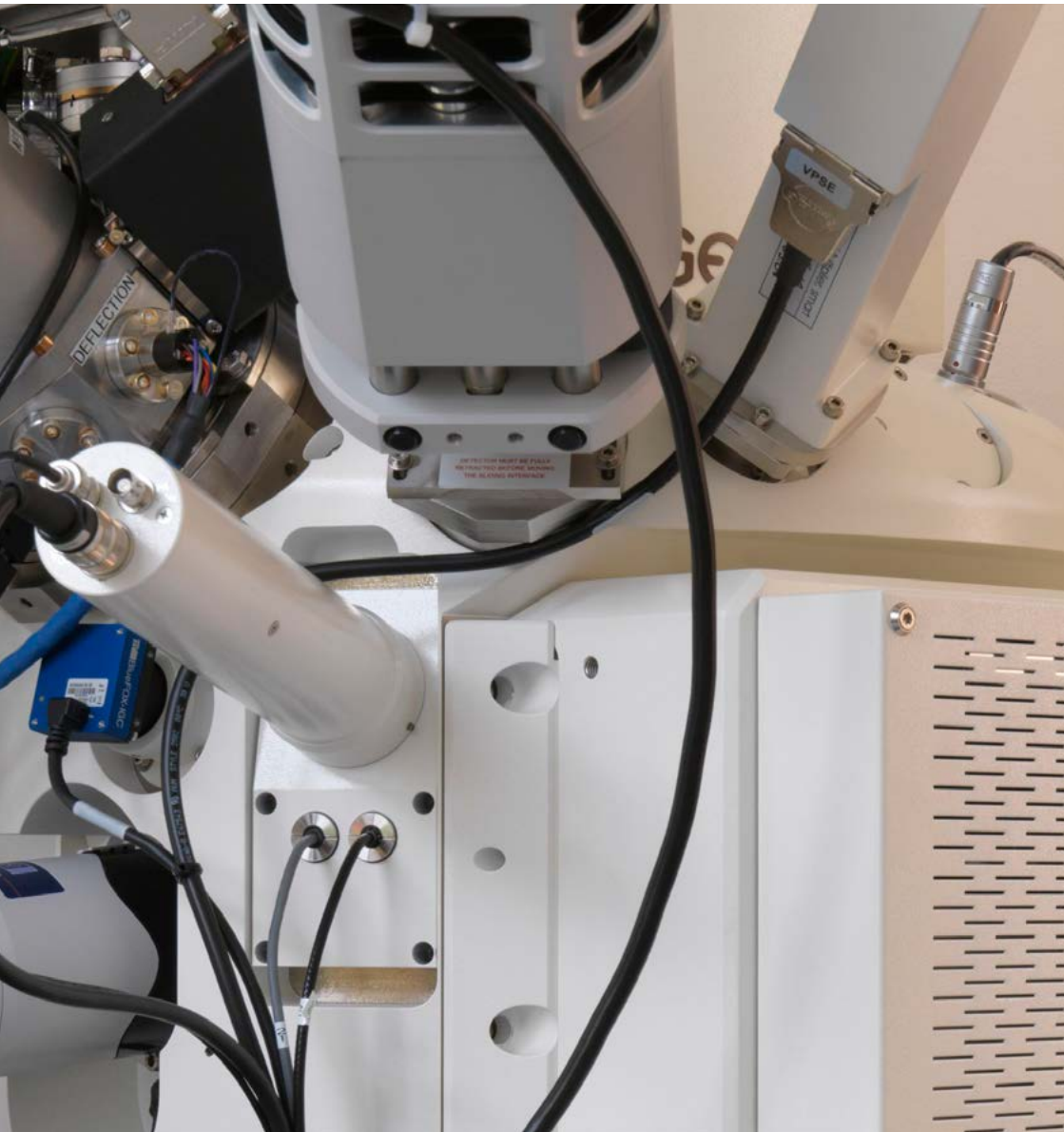
We offer education, research, and development in both modern and traditional engineering disciplines. Our graduates are highly employable both in the Czech Republic and in Europe. Close cooperation with foreign technical universities and industrial companies in Plzeň and the region enables us to offer top-quality education combined with research and development for modern engineering.

DID YOU KNOW... ?

The Faculty also includes the Regional Technological Institute (RTI), a research centre with a great deal of experience in the fields of basic and applied research.

Departments

- Department of Power System Engineering (KKE)
- Department of Machine Design (KKS)
- Department of Material Science and Technology (KMM)
- Department of Industrial Engineering and Management (KPV)
- Department of Machining Technology (KTO)
- Department of Physical Education and Sport (KTS)



www.fsi.ujep.cz Pasteurova 1, 400 96 Ústí nad Labem, Czech Republic

Faculty of Mechanical Engineering Jan Evangelista Purkyně University in Ústí nad Labem

The Faculty of Mechanical Engineering, J. E. Purkyně University in Ústí nad Labem was accredited in June 2006 and established by the rector on September 1st, 2006. It has since become a successful continuation of The Institute of Production Technology and Management established in 1998. The first bachelor degree program began in 1994 through the Department of Technical Education, still part of the Faculty of Education UJEP. It is evident that the whole department has done a lot of work for a relatively short time has managed to create the first technical faculty in the Usti region. From a historical point of view, the region has been at the forefront of industrial production thus creating the need for a technical faculty at a university level.

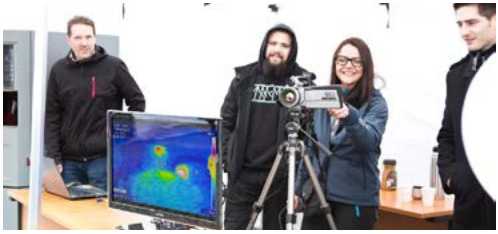
The role of the faculty is to prepare graduates for the industrial production sector, mainly in the Ústí region, and to service the production technology and management industry. For this purpose, was established the Science and Technology Park of the faculty. Its origin and development being linked to the increasing amount of work dedicated to industrial production and especially engineering character.

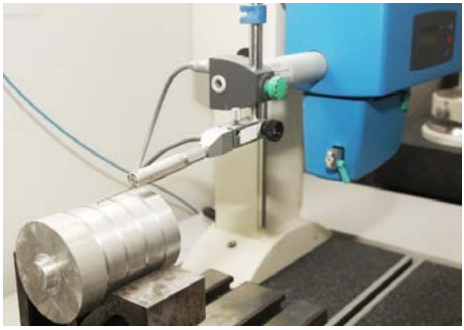
The faculty is still developing, thanks to the active and systematic work of academic staff and technical staff. During the existence of the constitution, and then the faculty, there was a significant development laboratories and quality equipment, a significant increase in the quality of education, to develop research and cooperation with industrial production

The faculty has experienced success in the form of a nationwide journal Manufacturing Technology, edited since 1996. Next, it is also responsible for the establishment of a congress in Precision Machining ICPM, the foundation of a faculty industrial board, accreditation of several study programs, including doctoral degree and finally successful evaluation by The Accreditation Commission of the MEYS CR in 2008. The intention of the faculty management and all faculty staff (academic and operational workers) is to create a pleasant environment and optimal study conditions while improving the quality of all faculty doing and the preparedness of graduates.

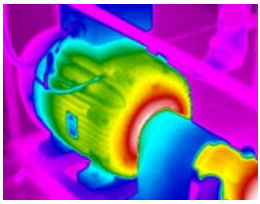
Departments

- Department of Machines and Mechanics
- Department of Technologies and Materials Engineering
- Science and Technology Park





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Vavrečkova 275, 760 01 Zlín, Czech Republic

Faculty of Technology
Tomas Bata University in Zlín

The Faculty of Technology consists of 9 departments. Each of them focuses on different study subjects and dedicates the time to different kinds of research, while looking at technologies from specific viewpoint. Altogether the departments create a functional team of people who are the heart and soul of the faculty.

Undeniable part of life at the Faculty of Technology are laboratory coats, measurements, deviations, analyses, statistics, protocols and graphs, which together result in creative research activities. This multidisciplinary approach to technologies as whole, that takes into account both chemical, technological and engineering knowhow, makes us one of the best faculties in the world when it comes to polymer engineering, chemistry and management of technological processes.

This comes out as no surprise as the research in the field of mechanical engineering and polymers is deeply rooted not only at the history of our faculty but also in the history of our region.

Furthermore, in 2014 the Laboratory Center of the Faculty of Technology (U15) was built and established. Of course, it was equipped with state-of-the-art technological equipment, which provides an awesome environment for teaching students, high quality research activities as well as collaboration with different companies.

Department of Production Engineering proudly and successfully educates plastics and engineers, without whom the aerospace and automotive industry would not survive even for one day. The demand in the labor market for new professionals in this degree program is four times higher than the number of graduates produced.

Our students can use contemporary equipment in the laboratories in the area of conventional and unconventional machining, injection molding, rapid prototyping, mechanical properties measurement of materials (metals, polymers, composites) or metrology. Another area of our interest is the use of designer software such as CAD,

Departments

- Polymer Centre
- Department of Food Analysis and Chemistry
- Department of Physics and Materials Engineering
- Department of Chemistry
- Department of Environmental Protection Engineering
- Department of Polymer Engineering
- Department of Food Technology
- Department of Fat, Surfactant and Cosmetics Technology
- Department of Production Engineering

CAM and CAE to model various parts, tools and machines to produce or machine these tools.

Therefore every day we have the opportunity to continue ensuring ourselves and our students that science is not boring, but creative and fun.

www.ic40.cz info@ic40.cz +420 532 194 922
Výstaviště 405/1, 603 00 Brno, Czech Republic

Brno Regional Chamber of Commerce

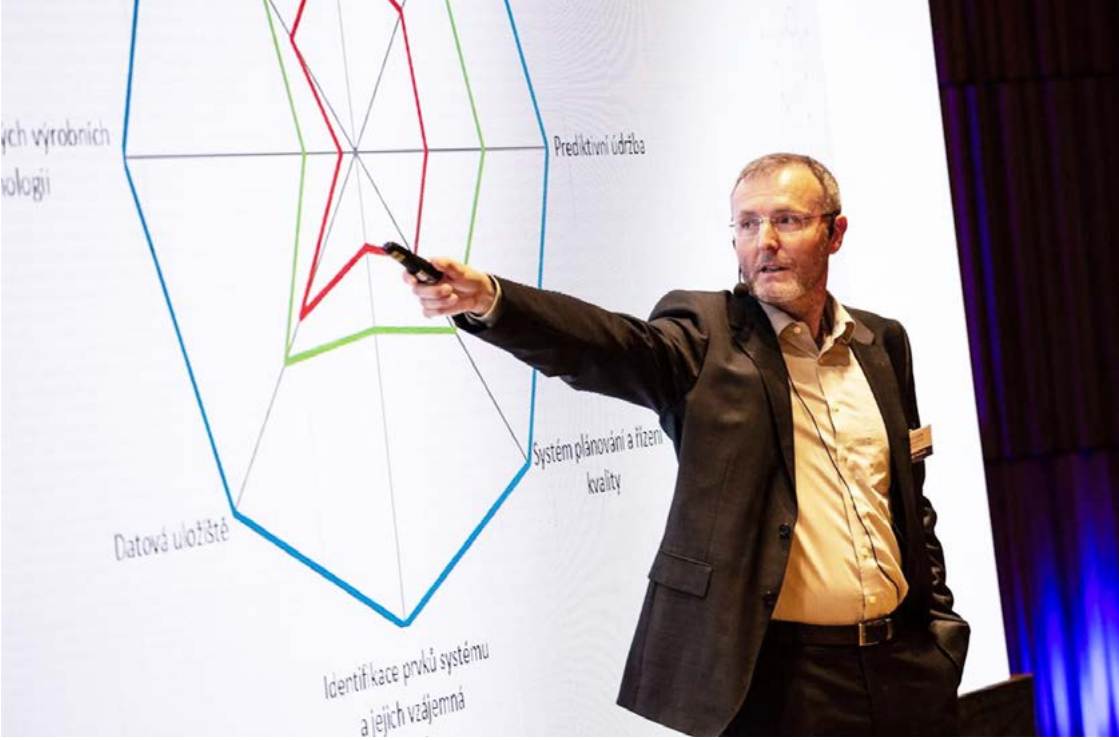
Brno Regional Chamber of Commerce (RCC Brno) is an independent legal entity within the network of the Czech Chamber of Commerce. It works to support entrepreneurial activities and to promote and protect the interests of its members as well as to find the links between SMEs, MNC, universities and ministries or governmental organizations.

The RCC Brno is the largest regional chamber of commerce in Czech Republic. It represents over 450 members (including SMEs, large companies, academical institutions, middle educations, research institutions etc.)

RCC Brno helped to initiate Industry Cluster 4.0 which gathers approximately 30 companies mainly from RCC Brno members which are implementing or producing or developing tools of so called Industry 4.0 (it covers for example digitalization of manufacturing process, clouds tools, automations, augmented or virtual reality, predictive maintenance, robotization, etc.). Other activities of the Cluster are: an annual international conference of the best practices and successful implementation of Industry 4.0 in Czech companies or foreign experience which attracts more than 200 participants every year. For more: www.konference.ic40.cz . Besides that, the Cluster organizes seminars, excursion and cooperation between companies and also scientific partners. The Cluster developed a system of company evaluation of actual level and readiness for Industry 4.0 which was later adopted by Czech Ministry of Industry and Trade and one of its programs.

For more details about the Cluster, please see: www.ic40.cz

The other area of responsible and innovative approach of the RCC Brno is an initiation and participation in the CIH (Cybersecurity Innovation Hub) which consists of the following members: Brno University of Technology, Masaryk University, NUKIB = National Cyber Security Center, Brno Regional Chamber of Commerce, Network Security Monitoring Cluster, Industry Cluster 4.0). The aim was to create a strong partner for industry in the area of Cyber Security, creation of KYPO for industry (Cybernetic polygon), develop and educate employees and be proactive in creation of R&D impulses for research and implementation of outputs. For more details see: www.cybersecuritydih.cz



Besides activities mentioned above, RCC Brno provides services for members in areas such as:

- Support for international trade (CIT*, EEN export documents, offers and quotes)
- Education, with support of Czech Ministry of Labour and Social Affairs
- Consulting (taxes, subsidies, innovation, ecology, law, marketing, patents, real estate etc.)
- CzechPoint services (digital state)
- Competition of SMEs in the region
- And many others - or more, please see: www.rhkbrno.cz

www.cmi.cz Okružní 31, 638 00 Brno, Czech Republic

Czech Metrology Institute

Czech Metrology Institute provides uniformity and precision of measuring instruments and measurement in all the fields of research, technical and economic activities in the range of Law about metrology Nr. 505/90 Sb. in valid issue. The Czech Metrology Institute is located in Brno, Czech Republic.

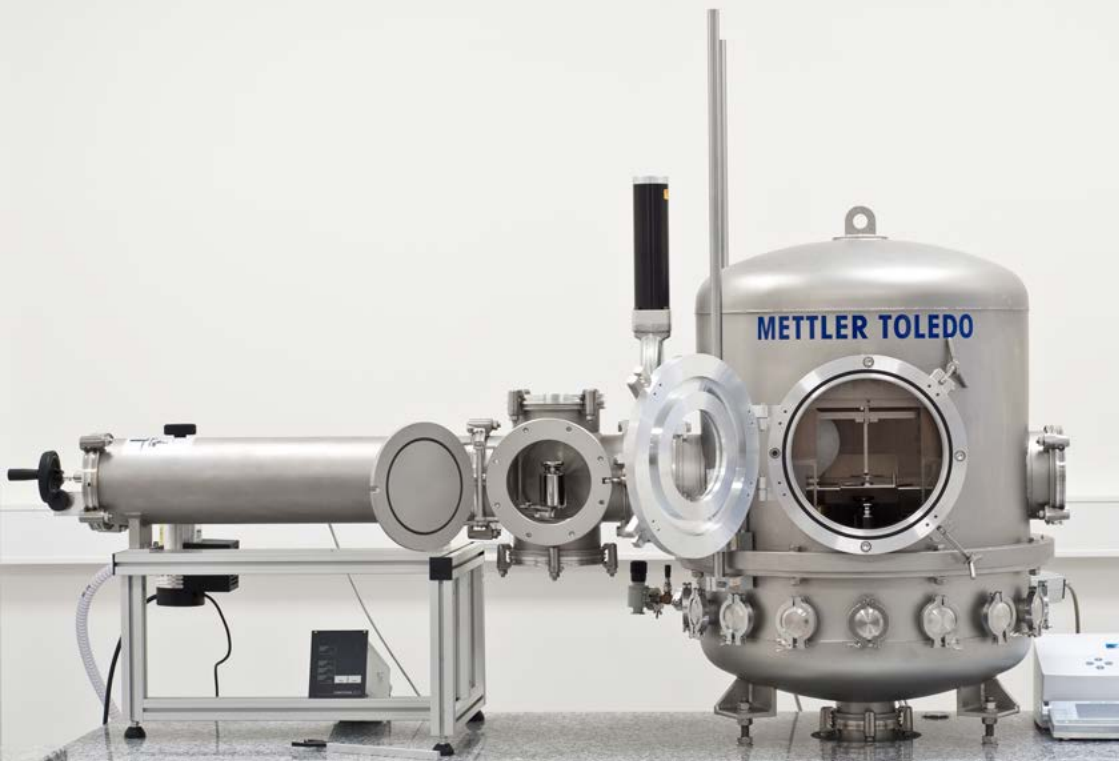
The Institute provides services in all basic fields of metrology:

- Fundamental metrology, maintenance and development of national standards, research and development in metrology
- Transfer of units, calibration of standards and measuring instruments
- Legal metrology, type approvals of legal metrology instruments, initial and subsequent verification of measuring instruments, metrological supervision, conformity assessment in metrology

Institute provides certification of reference materials, provides state metrology assessment of measuring instruments and other services too. CMI cooperates in many national bodies.

Strategic goals to be achieved by Czech metrology in international cooperation in the long term are as follows:

- To get fully involved in the international subdivision of work in metrology and to take part in projects aimed at management of metrology and R/D In metrology
- To be active in projects of technical aid in metrology financed both from national funds as an OECD member (Czech Development Agency) and from European ones (EuropeAid etc.)
- To get involved in preparation of harmonized metrological regulations
- To submit and promote own concepts of developments in metrology both in regional and world-wide frameworks
- To systematically gather new information for technical development of the institute in individual fields of measurement and to improve qualification and expertise of the staff (short-term stays and internships)
- To raise the standard of metrological traceability in the Czech Rep. by regular participation in various types of international comparisons of physical standards
- To extend the CMI metrological services to other EU member countries by exploiting the benefits of the EU Single Market (harmonized legislation, non-tariff zone)


METTLER TOLEDO

www.szutest.cz Hudcova 424/56b, 621 00 Brno, Czech Republic

Engineering Test Institute (SZU)

SZU is the EC Notified Body 1015, accredited for assessment of conformity to 13 EC directives. Besides conformity assessment, SZU offers to its customers specialized services of the testing laboratory and of the certification body for certification of products, management systems and persons, functions as an inspection body, calibration laboratory, and offers a wide spectrum of educational programmes and training.

SZU is a testing facility recognized by CSA (Canada and the US), a testing laboratory registered in EHPA (European Heat Pump Association), a KEYMARK authorized certification body for heat pumps, and an accredited laboratory within MCS (Microgeneration Certification Scheme). It is also a UIAA accredited testing laboratory (International Mountaineering and Climbing Federation) for all climbing equipment, and a DVGW accredited laboratory (Deutscher Verein des Gas- und Wasserfaches) for gas and water fittings and gas appliances. In addition, SZU is a recognized testing laboratory for the KCS and S-Mark certification in Korea.

SZU is one of the largest test, inspection and certification organizations in the Czech Republic, with sites in Brno and Jablonec nad Nisou.

SZU also operates in a number of countries outside the European Union, through either direct representations or partners. It is represented in many countries of Asia and South America.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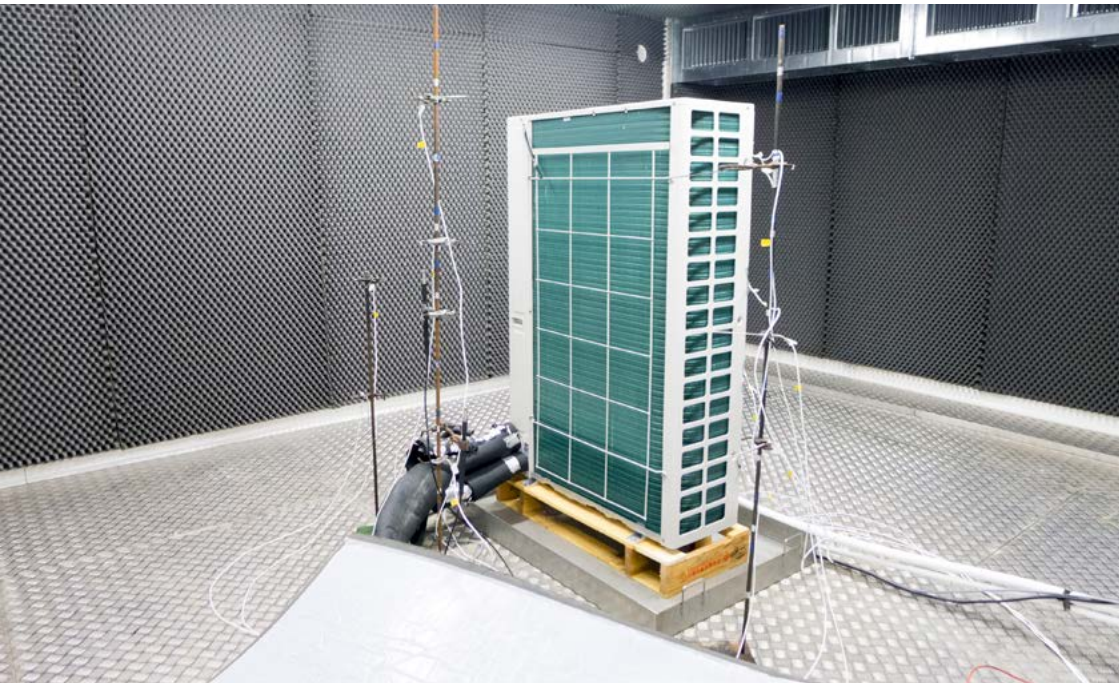
PLUS



www.vvubrno.cz jancova.e@vvubrno.cz +420 543 562 193

Eva Jančová, M.Sc., DESS, Veslařská 230, 637 00 Brno, Czech Republic

Military Research Institute

Military Research Institute (VVÚ), state enterprise, is the only state-owned company issued by Ministry of Defence of Czech Republic that holds the character of a research institute.

It ensures meeting strategic and other significant interests of the state in the field of defence and security, the development of capacities of the Army of the Czech Republic, armed forces and the Emergency System of the Czech Republic as well as it performs the activities of industrial and business nature to ensure supplies and services needed to guarantee the defence and safety of the Czech Republic and discharges liabilities based on the membership in NATO and the EU. VVÚ performs research and experimental development assignments connected to higher innovations.

Centre of testing

The Centre of testing is an accredited testing laboratory no. 1449. The Centre was accredited in 2004 and has been accredited by Czech Accreditation Institute with Certificate of Accreditation no. 141/2014 with Appendix no. 1 added to the certificate. The subject matters of the accreditation are:

- Testing climatic and corrosive resistance of coating systems and products;
- Mechanical properties of metal and ceramic materials, determining parameters of texture roughness, metallographic testing;
- Testing spectral characteristics and determining colour coordinates and colour difference values in camouflage materials.

The Centre of testing is divided into 3 parts:

- Testing laboratory of climatic and corrosive resistance
- Material testing laboratory
- Testing laboratory of camouflage devices

1. Testing laboratory of climatic and corrosive resistance

The subject of testing laboratory of climatic and corrosive resistance are:

- metal materials,
- metal and non-metal inorganic coatings,
- coatings and coating systems,

- engineering, electro-technical and electronic products,
- systems of temporary protection of products (conservation devices, inhibitors of corrosion, coating materials etc.)

2. Material Testing Laboratory

Able to conduct:

- analysis according to demands of a customer,
- testing characteristics of material and product quality,
- consultancy,
- complete team solution in the fields of:
  - Metallography, macroscopic documentation and analysis of macro-structures (macro-etches, and others), metallographic analysis by photo-emission, possibly scanning electron microscopy, quantitative metallography (image analysis, evaluating purity, size of grains, ratio of phases, porosity, micro-hardness and others).
  - Scanning electron microscopy, chamber for big samples, imaging using regimes of secondary and reflected electrons, analysis of image in all regimes, fractographic analysis.
  - Methods of x-ray elemental analysis, energetic-dispersive analysis (from boron to americium), x-ray mapping, analysis in point, line segment, plane, special analytical programmes to combine morphological and elemental analyses.
  - Mechanical testing using traction, pressure, flexure, wedge tensile test, fracture tenacity under static load, studying metal fatigue, flexural impact test, testing dynamic fracture tenacity, measuring Brinell, Rockwell and Vickers scale, measuring micro-hardness.
  - Macroscopic documentation, technical documentation at the laboratory, macroscopic documentation of objects (magnification 0.3 to 100 times), blacl and white as well as colourful imaging.
  - Special methods and technology.
  - Measuring roughness with graphic output of parameters Ra and Rz including processing on PC, able to measure in laboratory as well as working conditions.

3. Testing Laboratory of Camouflage Devices

The testing laboratory of camouflage devices is accredited facility of testing laboratory no. 1449. The laboratory with long-lasting experience in the field of camouflage is accredited to conduct these accredited tests:

- Identification of materials by spectral reflectance in the range of 0.3 – 2.5 μm,
- Determining colour coordinates and colour difference values of materials.
- The testing is conducted particularly in order to evaluate relevant physical optical properties of materials with camouflage patterns according to corresponding Czech Defence Standardisation, although they also allow to determine spectral reflectance and colour difference even for material of non-military character.
- The object of testing can be textile materials, coating etc.

www.cdv.cz cdv@cdv.cz +420 541 641 711

Líšeňská 33a, 636 00 Brno, Czech Republic

Transport Research Centre (CDV)

History

CDV – Transport Research Centre is a public research institution, established according to the law 341/2005 Coll. on public research institutions, and the only one research body under the Czech Ministry of Transport. Established in 1993 as a legal successor of then federal (Czecho-Slovak) Transport Research Institute, CDV has continued in a more than 60-years tradition.

In 2007, CDV became a public research institute. Since 2014, CDV has also been an appraisal institute in the fields related to transport and civil engineering.

Present

Through its research focus, CDV – Transport Research Centre, covers the key needs of transport development in the Czech Republic at national, regional and local levels. The institute covers traditional fields, such as road safety, construction technology, maintenance, repairs and reconstruction of transport infrastructure, including geotechnical aspects and diagnostics of transport structures, impacts of transport on the environment, transport economy, multimodal transport, traffic psychology, traffic education, traffic demand modelling, management systems, geographic information systems, check-in and parking systems, telematic controlling systems, etc.

Research outcomes are directly applied in practice through different methods.


CENTRUM
DOPRAVNÍHO
VÝZKUMU

Our International Projects

We welcome and actively seek international cooperation. We can assume the role of a coordinator or a partner in framework programs. With regard to other forms of financing, the Project support department of iNETME can help researchers to find suitable partners and identify appropriate grants. We would like to share some of our international projects with you. We are happy to provide further information.

FabLabNet – Making Central Europe more competitive by unlocking the innovation capacity of Fab Labs within an enhanced innovation ecosystem

Interreg CE283, 07/2016 - 06/2019

FabLabNet aims to foster international networks and links both with schools and businesses. The project joins a number of fablabs into a central European network. Project shares experiences and develop activities to boost their knowledge and capacity, following trends set by the European movement that emphasizes new business models, and marks the difference in current cultural & business world.

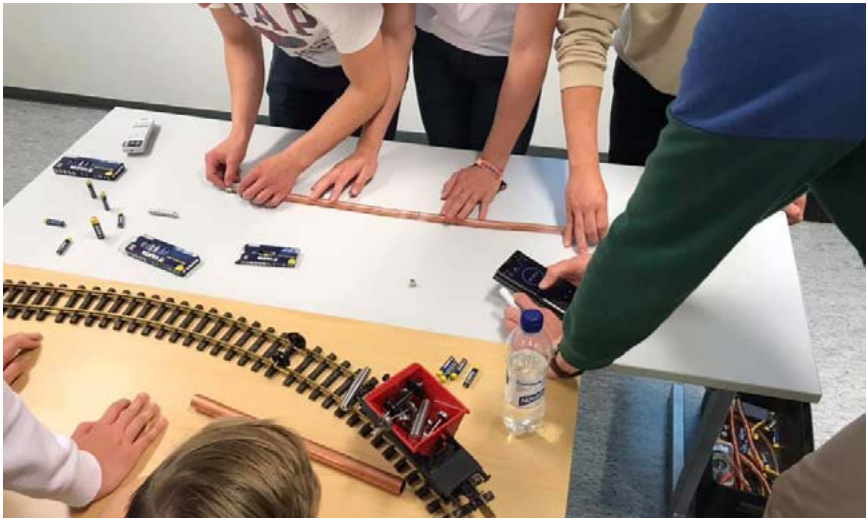
www.interreg-central.eu/Content.Node/FabLabNet.html

RISEN – Railway Infrastructure System Engineering Network

H2020-MCSA-RISE-2015_691135, 04/2016 - 03/2020

RISEN aims to produce the next generation of engineers and scientists needed to meet the challenge of providing sustainable, smart and resilient railway infrastructure systems critical for maintaining European competitiveness. The emphasis will be placed on the resilience and adaptation of railway and urban transport infrastructures using integrated smart systems. Such critical areas of the research theme will thus be synergised to improve response and resilience of rail infrastructure systems to climate change, extreme events from natural and human-made hazards, and future operational demands.

www.cordis.europa.eu/project/rcn/199615_en.html



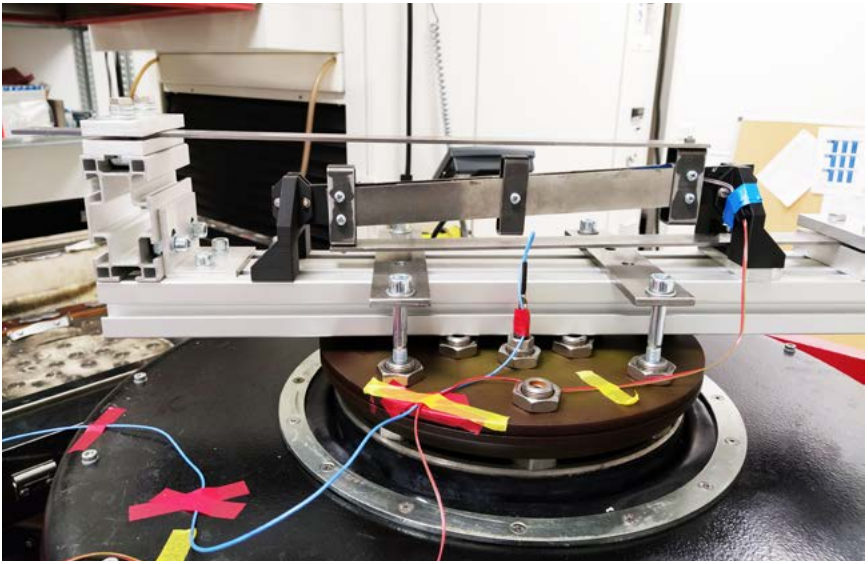
ETALON: "Energy harvesTing for signAlLing and cOmmunicatioN systems"

H2020-S2RJU-OC-2017_777576, 06/2017 - 02/2020

The ETALON project focus is the adaptation of energy harvesting methodologies for trackside and on-board signaling and communication devices. The project scope is divided into two work-streams. The first is the development of competitive solutions for enhancing train integrity functionalities, including provision of suitable energy supply for on board train integrity devices. Emphasis is also placed on considering the proposition of a robust communication system. The second work-

stream focuses on the development of competitive energy harvesting solutions for enhancing trackside object controller deployment, with the vision to minimizing trackside infrastructure, especially cabling.

www.cordis.europa.eu/project/id/777576



ImAppNIO: "Improving Applicability of Nature-Inspired Optimisation by Joining Theory and Practice"

CA COST Action CA15140, 06/2018 - 02/2020

The scientific aim of the project is to design advanced evolutionary algorithms (EA) that are applicable in the up to date complex engineering optimizing and designing problems. Another objective is to adapt such algorithms for different user-defined platforms. The project is divided into three solution phases. Within the first phase, new and hybrid evolutionary algorithms will be designed and evaluated. The implementations of HPC (High Performance Computing) and embedded systems will be realized in the second phase, where the pre-defined efficiency will be emphasized. Within the third phase, the practical applications will be elaborated. This final phase will prove the efficiency of the proposed algorithms and practical applicability w.r.t. the predefined real tasks.

www.cost.eu/COST_Actions/ca/CA15140?

LEVEL-UP: Protocols and Strategies for extending the useful Life of major capital investments and Large Industrial Equipment

H2020_869991, 10/2019 - 09/2023

Europe is still lacking an efficient systemic multi-level approach that enables a recursive, cost-effective, holistic and integrated application of circular principles to the digital uplifting of factory 4.0 capital investments; addressing issues at product, process, system as well as the entire value-chain levels, integrating best practices from emerging enabling digital technologies and avoid a two speed digital transformation across industries in different sectors. LEVEL-UP will offer a scalable platform covering the overall lifecycle, ranging from the digital twins setup, modernisation actions to diagnose and predict the operation of physical assets, to the refurbishment and remanufacturing activities towards end of life

 www.cordis.europa.eu/project/id/869991

Optimising Design for Inspection

COST Action_CA18203, 10/2019 - 10/2023

Ultrasound based NDE techniques, energy harvesting and wireless sensor networks are being increasingly demonstrated to be effective in monitoring damage in aerospace components at a laboratory setting (TRL 3). These components include critical elements such as airframe, engines, landing gears and control surfaces. However there is an urgent need to integrate these approaches and techniques at the inception of an aircraft. This COST Action will bring together the top European experts across these areas to support the development of an integrated framework for optimised self-sensing structures capable of diagnosis and prognosis, together with demonstrators and educational activities, including training programs, which will ultimately lead to cleaner and safer skies.

 www.cost.eu/actions/CA18203

Will you join us?

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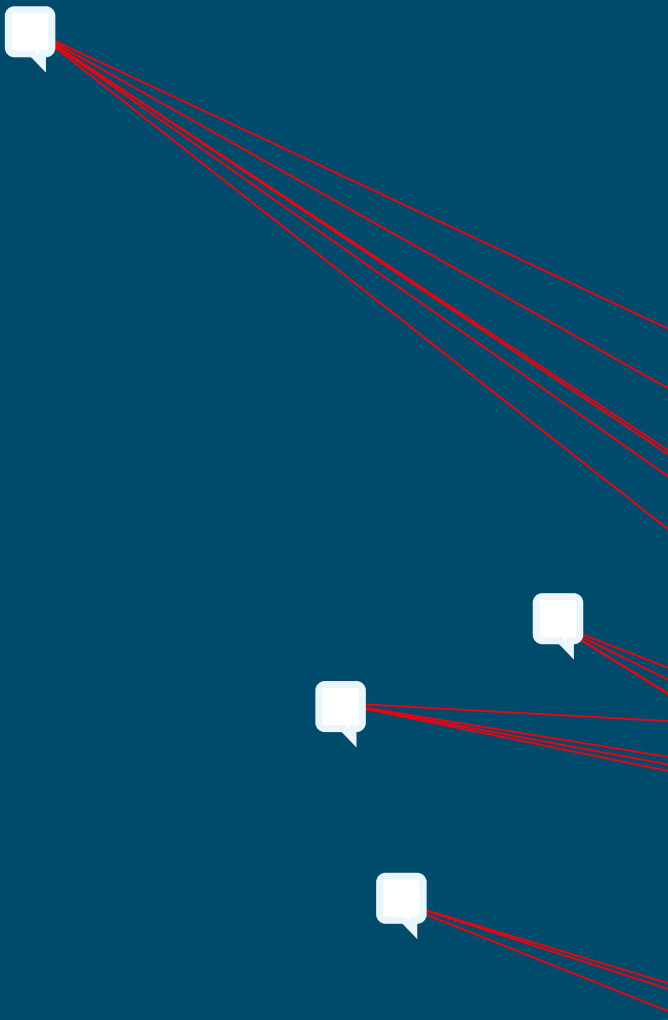

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