


Kaunas University of Technology

Name of the organisation :	Kauno technologijos universitetas (Kaunas University of Technology)	
Address:	K. Donelaičio 73, Kaunas, LT-44249, Lithuania (KTU Central office) Studentų 50, Kaunas (Faculty of Informatics)	
Tel:	+370 37 30 03 50 (Secretary of the Faculty of Informatics)	
Fax:	+370 (37) 324 144	
Web site:	www.ktu.edu https://if.ktu.edu/ (Faculty of Informatics)	

Name of the contact person :	Vida Drąsutė	
Function:	Project manager	
Address:	K. Baršausko 59-A332, Kaunas, LT-51423, Lithuania (Contact address for postal communication)	
Tel:	+370 616 50453	
E-mail:	vida.drasute@ktu.lt	
Name of the contact person :	Vida Drąsutė	

Name of the researcher :	Dr. Dalia Čalnerytė	
Function:	Assoc. Prof. at Applied Informatics Department	
Address:	K. Baršausko 59-A340, Kaunas, LT-51423, Lithuania	
E-mail:	dalia.calneryte@ktu.lt	

Name of the researcher :	Dr. Andrius Kriščiūnas	
Function:	Assoc. Prof. at Applied Informatics Department	
E-mail:	andrius.krisciunas@ktu.lt	

Type of organisation:

SME School University Public Authority
 Training No Profit NGO

Fields of action:

SMEs Youth Universities Public Authorities
 Equal opportunities Schools Unemployed

Other (Specify)

Description of the organisation

Kaunas University of Technology (KTU) – the largest technical university in Lithuania, known for its linkages with business, leadership in scientific research, flexible interdisciplinary study programs. KTU is situated in Kaunas, the second largest city of Lithuania, which is a significant centre of industry, transport, science and culture.

KTU Mission is to provide a research-based studies of international level, to create and to transfer knowledge and innovative technologies for sustainable development and innovative growth of the country, to provide an open creative environment that inspires leaders and talented individuals.

There are 9 faculties in KTU, including the Faculty of Informatics. Faculty of Informatics in KTU (KTU IF) has all possibilities to develop studies processes and their quality and accessibility, e-Learning and strong, well developed infrastructure for studies.

The University successfully implements European education programmes and closely collaborates with Lithuanian and foreign industry. University scientists carry out 70 per cent of country's higher education researches for business. Strategic priorities of KTU activities: talented and motivated students, teachers and researchers, a critical mass of world-class teachers, researchers and foreign students, unity of studies and science, close contact with business and industry, interdisciplinary and trans-domain research and studies, international recognition in advanced knowledge and future technologies development and transfer, participation in global knowledge networks, quality of activities and efficient management, inspiring and friendly environment, dissemination of knowledge and values among the society.

Most educational strategists, scientists, and practitioners in advanced countries keep up-to-date STEM subjects and their teaching, taking into account the rapid change in the field of science and technology and the rise of interdisciplinary integration. STEM education was focused on curriculum reform in many countries (included Lithuania), because of clear understanding that students' academic performance in science, technology, engineering and mathematics determines the country's economic development and competitiveness. While implementing the education reform in Lithuania, much attention is paid to development of non-formal education, establishment of STEAM centres aiming to involve more than one third of all pupils in activities of such centres.

Since 2016 Lithuania is setting up 10 STEM centres to boost interest in science and engineering. The interactive educational centres operate in different Lithuanian towns (the plan is to operate in 10 different

tows), allowing students to explore some of the developments in technology and scientific research and conduct their own experiments. The facilities will also welcome members of the public. KTU joined 27 institutions consortium in August, 2020 and documents were signed and confirmed by the LR Ministry of Education, Science and Sport. Centres will house four laboratories dedicated to biology and chemistry, physics and engineering, robotics and IT, and a lab customized to the needs of a particular town.

Experience of the organization in previous European projects

Our scientists actively participate in different national and international programs, projects, researches, conferences while producing different outputs and presenting publications. We develop more than 15 projects per year in the Faculty of Informatics which involves different departments.

Some of KTU strategic priorities, which meet the project aims are: a considerable number of world-class teachers, researchers and international students; unity of studies and science; interdisciplinary and trans-domain research and studies; international recognition in advanced knowledge and future technologies development and transfer; inspiring and friendly environment; dissemination of knowledge and values in the society and others.

Erasmus+ projects into which the team who will cooperate in this project was involved during the last years:

- Videogames for Teachers (V4T) (2017-2019)
- Geoethics Outcomes and Awareness Learning (GOAL) (2017-2020)
- MathE - Improve Math Skills in Higher Education (2018-2020)
- Councelling for Refugee and Migrant Integration into the Labour Market - Development of Courses for Higher Education and Public Employment Services" (CMinaR) (2016-2019)
- CONNECT! - Connecting Career Counselling and Human Resource Development in Enterprises for Higher Education and Training in Practice (2019-2022)
- COSY Thinking - Enhancing higher education on COMplex SYstems THINKING for sustainable development (2020 – 2023)

Scientific projects:

- (*researchers: Dalia Čalnerytė, Andrius Kriščiūnas*) Design of Machine Learning Based Algorithm for Personnel Scheduling, contract No. PP59/2013, implementation period: 2020.04-2020.12, funding source: KTU
- (*researchers: Rimantas Barauskas, Andrius Kriščiūnas, Dalia Čalnerytė*) Industrial mushroom cultivation technology based on Artificial Intelligence, contract No. SV9-2225, KTU-UAB Aksonas, implementation period: 2019.03-2020.12
- (*researchers: Andrius Kriščiūnas, Dalia Čalnerytė*) Combination of Image Decomposition and Artificial Intelligence to Identify Evolution of Process, contract No. PP-91L/19, implementation period: 2019.04-2019.12, funding source: KTU
- (*researchers: Rimantas Barauskas, Andrius Kriščiūnas, Dalia Čalnerytė*) Analysis of the feasibility to create a real estate market change assessment system, contract No. SV9-2070, KTU-UAB Lituka, implementation period: 2018.12-2019.03
- (*researchers: Rimantas Barauskas, Dalia Čalnerytė, Andrius Kriščiūnas*) Algorithm to construct a schedule for flight service staff, contract No. SV9-1470, KTU-UAB NFQ Technologies, implementation period: 2018
- (*researchers: Rimantas Barauskas, Dalia Čalnerytė, Andrius Kriščiūnas*) Extension of algorithm to construct a schedule for flight service staff, contract No. SV9-1799, KTU-UAB NFQ Technologies, implementation period: 2018
- (*researchers: Rimantas Barauskas, Dalia Čalnerytė, Andrius Kriščiūnas*) Numerical Models of Short-Wave Physical Behavior in Micro and Nano Structures, contract No. PP-32/08, implementation period: 2018.04-2018.12, funding source: KTU
- (*researchers: Rimantas Barauskas, Dalia Čalnerytė, Andrius Kriščiūnas*) Algorithm to identify time moment of pressure drop with respect to pressure monitoring results, contract No. SV9-1421, KTU-UAB Axioma, 2017
- (*researchers: Rimantas Barauskas, Dalia Čalnerytė*) Numerical modelling and investigation of thermal properties of ceramic-containing textile materials, contract No. MIP-044/2014, implementation period: 2014 – 2016, funding source: LMT (Lithuanian Science Board)

Experience and Expertise of the organization in the project's subject area

One of main research areas in the Faculty of Informatics is e. learning technology creation and efficient applications development, studies improvement processes. Also personnel participates in Studies programs quality evaluation, administration and management. KTU IF scientists are involved in the field of STEAM analysis and the creation of multidisciplinary models.

One of aims in the University, as well in the faculty is to involve students and teachers from different educational institutions into projects development, analysis stage, as well as in dissemination, valorisation and exploitation processes.

Our scientists actively participate in different national and international programs, projects, researches, conferences while producing different outputs and presenting publications. We develop more than 15 different projects per year in the Faculty of Informatics which involves different departments. Some of KTU strategic priorities, which meet the project aims are: a considerable number of world-class teachers, researchers and international students; unity of studies and science; interdisciplinary and domain research and studies; international recognition in advanced knowledge and future technologies development and transfer; inspiring and friendly environment; dissemination of knowledge and values in the society and others.

Employees which collaborate in "STEAM Active" project are from Faculty of Informatics, different departments in IF: Dean's office (for management), Software Engineering Department, Department of Applied Informatics. Researchers develop streamline scientific research and implementation activities in the area of information and communication technologies, videogames, assessment of studies modules, e-testing platforms, researches, improvements of study processes and blending them with business challenges. One of aims in the University, as well in the faculties, which takes part in "STEAM Active" project, is to involve students and teachers from different educational institutions into projects development, analysis stage, as well as in dissemination, valorisation and exploitation processes.

Contributions that can be provided to the project

- Participation in research in the project and developing intellectual outputs
- Administration of the project activities and finances ensuring correct management, as well fluent collaboration with project coordinating and managing institutions.
- Involvement of associated partners/beneficiaries and other needed institutions of the project and ensuring collaboration with them.
- Producing needed reports
- Participating in project dissemination, evaluation, quality ensuring activities
- Developing project results and other needed activities

Reasons of involvement in the project

We seek to achieve the aim and objectives related to the project and to develop activities together.

We also seek to get and to share our practise and experience with other European institutions.

Within the project we seek:

- Unity of studies and science
- International recognition in advanced knowledge and future technologies development and transfer
- Dissemination of knowledge and values in the society and others
- Promotion of a multidisciplinary approaches in education.
- Promotion of a learner-centred pedagogical approaches where each single student involved in the project - supported by their teachers and the project experts
- Integration of ICT in the education process.
- Exploitation of new forms of flexible learning based on an appropriate use of ICT as the project's

deliverables will be available online and on mobile

- Creation of a transnational network of secondary schools that will be directly involved in the project activities as associated partners.

As well for teachers, researchers, students benefit will feel on raising their qualification (to teach and train students on project's topics, to develop activities together).

Contact Person's Experience and Expertise

Vida Drašutė is project manager in KTU IF Dean's office and has 15 years of experience in projects management, as well as in formal and non-formal education improvement and development analysis of educational possibilities, quality, adaptation of different methodologies in various education levels, development of critical thinking, e-learning and tools for e-learning encouragement in educational institutions, organization of courses, collaboration with different educational institutions. She is a board member of Lithuanian Distance and eLearning Association and evaluator of e. learning programs provided by different institutions. She has long lasting experience in projects coordination while she has managed and coordinated more than 30 projects in different areas on national and international levels. Her main duties are management, research and analysis work. She is also responsible for projects' and events' dissemination and public relations.

Researcher dr. Dalia Čalnerytė is assoc. professor at Applied Informatics Department, Faculty of Informatics, KTU and a member of the research group "Multi-disciplinary models" (https://en.ktu.edu/research/research-at-divisions/rg_multi-disciplinary-models/). Her area of research is numerical analysis, optimization and modelling of physically based behavior. She teaches practice of the KTU courses on the topics of "Numerical Methods and Algorithms", "Algorithm Analysis and Design", "Computational Intelligence and Decision Making". D. Čalnerytė prepared Moodle courses for the KTU modules on the topics of modelling of the physical behavior and numerical analysis in cooperation with the other researchers of the group.

Researcher dr. Andrius Kriščiūnas is assoc. professor at Applied Informatics Department, Faculty of Informatics, KTU and a member of the research group "Multi-disciplinary models". He works on scientific projects mostly related to topics of physical based behavior simulations with finite element methods, optimization and computer vision models. He also teaches theory and practice of the KTU courses such as "Algorithm Analysis and Design", "Numerical Methods and Algorithms", "Computational Intelligence and Decision Making", etc. In cooperation with the other researchers of the group he prepared several Moodle courses.