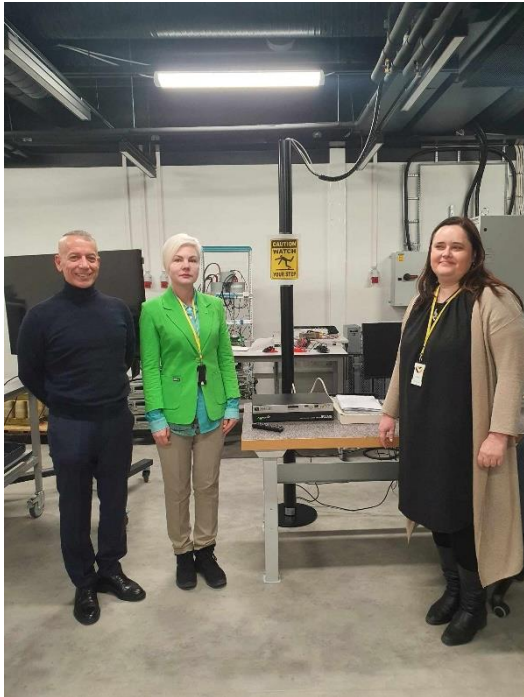# VISIT TO UNIVERSITY OF VAASA

Riga Technical University, professor Nadezda Kunicina, senior researcher Jelena Caiko

We used the grant NORDTEK Travel Grants for Teachers for period for the exchanging: 4 days (18.03.2025-21.03.2025).

The aim of this academic mobility was sharing of expertise and knowledge as well as achievements in information and communication technologies, and security of cyber-physical systems in order to improve quality of teaching, abilities of students and improve content of lectures in Industrial safety in field of Cyber-physical systems.

The mobility aimed in tutoring and development of teaching materials for Cybersecurity and Resilience of Critical Infrastructures. The results of mobility will be used by professor Nadezda Kunicina for development of content for study program Cybersecurity Engineering https://www.rtu.lv/en/studies/all-study-programmes/open/cybersecurity-engineering?id=180 study subjects: DE0832 Control Fundamentals of Critical Infrastructures 6.0 ECTS in lecture content development for protection of power supply systems; DE0833 Industrial Safety 6.0 ECTS in lecture content development for digital twin application for industrial systems, and Study Subject DE0484 Design of Adaptive Systems 6.0 ECTS, used also in study programme Adaptronics https://stud.rtu.lv/rtu/spr_export/prog_pdf_en.167 for lectures in adaptive system regulation.

The results of mobility will be used for development of content for study program Adaptronics https://www.rtu.lv/en/studies/all-study-programmes/open/adaptronics?id=167 study subjects: DE0484 Design of Adaptive Systems 6.0 ECTS for practical works in adaptive algorithms for system regulation and examples from power supply and digital twins, developed by senior researcher Jelena Caiko.

The main achievements of this academic mobility was sharing of expertise and knowledge as well as new methods in information and communication technologies, informatics engineering, digitization, control and security of cyber-physical systems in order to improve quality of teaching, abilities of students and new lectures in field of Cyber-physical systems. RTU and University of Vaasa has applied for Erasmus Strand 2 project Targeted Capacity Building Training to Strengthen the Cybersecurity and Resilience of Ukraine's Critical Infrastructures to increase academic cooperation. The primary goal of the CySCI project is to enhance the cybersecurity in education of Ukraine's critical infrastructure engineers, with a particular focus on the energy sector, water supply systems, and Internet communications, and to support digital transition of Ukraine. This goal is being pursued by advancing cybersecurity education in Ukrainian higher education institutions (HEIs) and industries. A key aspect of the project is the development of a

Digital Learning Ecosystem for cybersecurity. This ecosystem is built on three pillars: A Competence-Oriented Curriculum Model, shared specialized cybersecurity courses, and real-time simulation-based cybersecurity laboratories within educational institutions. The NORDTEK mobility allowed to visit laboratories of Vaasa University and agreed on content development for future collaboration in academic content development for study programs in Cybersecurity engineering and Adaptronics.