

EXCHANGE OF KNOWLEDGE IN POWER ELECTRONICS AND ELECTRICAL DRIVES

Kaspars Kroics, researcher and lecturer at Riga Technical University, has completed a teacher exchange visit to Tampere University funded by Nordtek.

The aim of this mobility was sharing of expertise and knowledge in power electronics and electrical drives as well as development of new theoretical course materials and improvement of practical and calculation exercises.

Effective teaching of electric drives is important for the electrical engineers and mechatronic engineers as almost half of the global produced electrical energy is consumed by electric motor drives. Efficient electric drives allows reduction of energy consumption of industrial processes and in other applications. During the visit Kaspars Kroics



prepared new lectures in Control of Electric Drives course. The experience exchange and the development of study content was done together with lecturer Hossein Hafezi from Faculty of Information Technology and Communication Sciences at Tampere University. There was possibility to attend the laboratory works of student groups and see how practical exercises help increasing students' problem-solving and team-work capabilities.

During the visit to electrical drives laboratory it was possible to see laboratory test benches used for students practical exercises. Both universities have laboratory test benches for DC motors, PMSM, and induction motors that can be further improved since the technology is evolving fast. Also creation of new test benches was discussed in a concept level. The discussion and testing of ideas are going to continue in the near future.

The meetings with researchers from Tampere University gave insight into current research topics and projects. Some topics are quite similar in both universities, several research ideas were discussed and mutual interest has been expressed to evolve these ideas further and work on joint research publications. Hopefully the visit will promote further research and teaching collaboration between universities.

The time of the mobility: 13.01.2022. – 04.02.2022.