



International Mechatronics Studies

Leibniz University Hannover

## DAAD Scholarship Experience Report

Topic: First semester at Peter the Great St. Petersburg State Polytechnic University

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## 1. Introduction

In this paper I would like to provide general description of the first semester of Leibniz University Hannover “International Mechatronics Studies”. This double-degree program is run with Peter the Great St. Petersburg State Polytechnic University cooperation . Students spend two first semesters in Russia studying theoretical part of materials and then two semesters in Germany spend their time in laboratories and on preparing their master thesis. I would like to say that I am grateful for the opportunity to attend the DAAD International Studies Scholarship Program. This grant has helped not only for me but also for all students to focus on studying and on good results, which are the highest priority. Studying abroad could not be possible if Leibniz University Hannover has not given me this possibility. I treat this chance very seriously and I will always bear in mind to represent well Leibniz University Hannover abroad. I try to work hard and the results are already noticeable. I gain the highest possible average grade and I will do everything do maintain it in next semesters.

## 2. About the author

My name is Hubert Truchan and I am from Poland. I have finished engineering studies at the Warsaw University of Technology in the Faculty of Mechatronics, specialty Automation. Now I am a student of Double-Degree “International Mechatronics Studies” at Leibniz University Hannover. I will spend the first year of studies at Peter the Great St. Petersburg University and afterwards one year in Leibniz University Hannover. In the first semester of “Intelligent Systems” program in Russia I have prepared semester course project, called “Language Identification Using Neural Network Knowledge Bases”. I had a practice in Siemens Company in Warsaw as a manager assistant in the Infrastructure & Cities section.



### 3. University

All lectures and laboratory activities take place in one the newest building of Peter the Great St. Petersburg State Polytechnic University. Lecture rooms are spacious and modern. Laboratories are well-equipped and prepared according the newest standards. The Laboratory measurement, actuators and drivers are provided by market leaders such as Festo, Siemens or Schneider.



*Photo 1. Institute of Information Technologies and Control Systems*



*Photo 2. The main hall of Institute of Information Technologies and Control Systems*



*Photo 3. Institute of International Education Programs. Admission floor*





*Photo 4. Institute of Information Technologies and Control Systems Canteen*

In the university there is also well-equipped library with the studying room where students have possibility to work on computers and in quiet solve homework tasks. The library is open until late night hours so it is perfect solution for hard working students.



*Photo 5. Institute of International Education Programs Library*

## 4. Education

The level of education is a big positive surprise. All laboratories are equipped with the newest solutions provided by top brands like Siemens, Festo or Schneider. Through one semester we have learned from the basics the C# programming language in Software Development Technologies. We have started to build our own Window Applications and to implement C# it in finding the function minimum during Methods of Optimization subject. One of my friends who worked in IT for several years told me that we have learned so much through this semester, that he needed three years to do it on his own. We have learned also how to use basic MatLab toolboxes and Simulink to build the models of different motors. The Neural Network Toolbox has been used to prepare semester course project which was the part of Neuroinformatics and Neurotechnologies subject. During Research Seminar we have learned a lot of about the institute's laboratories abilities and how we can use them in future.



*Photo 6. Department of Control Systems and Technologies laboratory*



In other laboratory the abilities of a robotic arm were presented. The solution of a remote checkers game was shown. The game can be run with the computer of the opponent who is in other city like Moscow

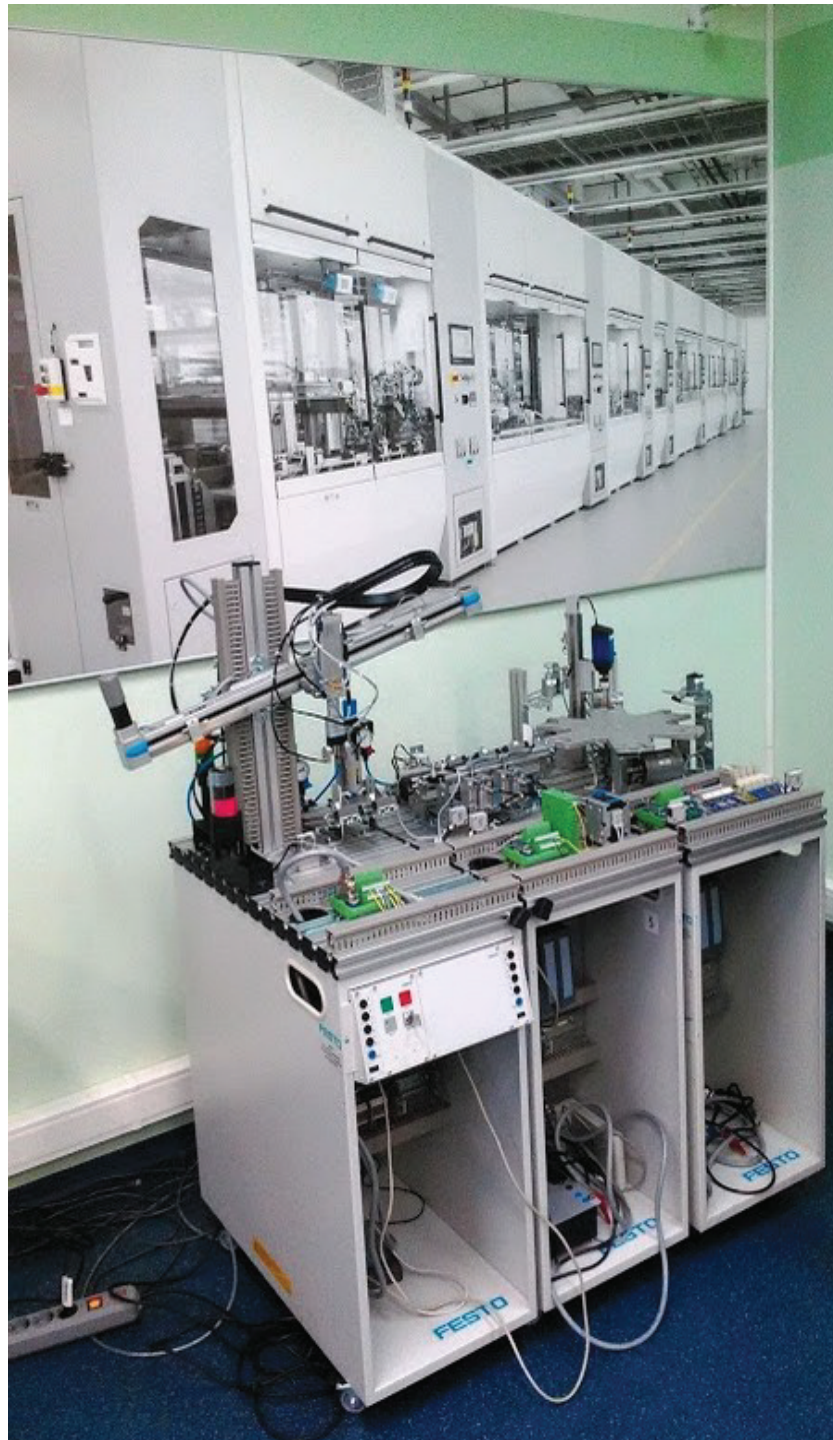


*Photo 7. Department of Control Systems and Technologies robotic arm*



*Photo 8. Festo laboratory of the water level in the tanks simulation*





*Photo 9. Festo part of assembling car line simulation*

## 5. Social and cultural life

Saint Petersburg is considered as the most beautiful city in the world. A huge amount of monuments and museums like Hermitage Museum, The State Russian Museum, Peterhof Palace or The State Museum St Isaac's Cathedral. All those buildings are connected by channels, which makes the city covered with magical atmosphere. All facades are decorated in detail which, combined with the enormity of the city, makes a big impression. Not without the reason Saint Petersburg was the capital of Russian Empire for over two hundreds years.

I had the possibility to visit all mentioned architectural monuments. One of the biggest impressions made on me was the exhibition "Ivan Aivazovsky. The 200th Anniversary of the Artist's Birth", which was the temporary exhibition of The State Russian Museum



Photo 10. Ivan Aivazovsky "Jesus Walks On Water", Original Title: *Хождение по водам*, 1888



*Photo 11. Ivan Aivazovsky “Stormy sea at night”, Original title: Буря на море ночью, 1849*

After the sunset Petersburg turns into an absolutely different city. The main facades are highlighted and on the streets turns up students and young people. Especially in the city center there are a lot of places to relax and to spend nice time with friends.

## 6. Summary

I am very glad that I have possibility to take part in Double-Degree “International Mechatronics Studies” at Leibniz University Hannover. It gives me the bigger picture of what it is happening in global education trends and provides priceless experience in industrial fields. With the DAAD help International Students Scholarship the stay in Peter the Great St. Petersburg State Polytechnic University is even more effective and pleasant. This semester was unforgettable and rich in educational and cultural events. I can state that I am stronger, smarter and harder working than a half year ago. Thank you for successful cooperation and I hope that it will be continued in the future.