

Assessment by thesis supervisor

PhD candidate: **Ing. Nikita Zemtsov**

Title of the thesis: **Model Predictive Control for Demand Response of Thermostatically Controlled Loads**

Ing. Nikita Zemtsov received his bachelor degree in Automation and Control at Novosibirsk State Technical University (NSTU) in 2012. After that he studied a double degree program at NSTU and Faculty of Mechatronics of TU of Liberec. He obtained his master degree from both TUL and NSTU in 2014. Then he was admitted to PhD study program Technical cybernetics at Faculty of Mechatronics (TUL), Czech Republic.

He has been a very diligent and hardworking student and researcher from the very beginning of his study. I was really impressed by his activity and independent thinking and I have enjoyed working together with him.

Ing. Nikita Zemtsov has also been a prolific author. At this moment his Scopus record includes 10 publications and his H-index is 3. During the whole time of his study he was involved in research project Advanced technologies for heat and electricity production funded by Technology Agency of the Czech Republic. The topic of his PhD thesis is closely related to the objectives of this project.

He has spent a long research stay (5.5 months from mid-September 2016 to the beginning of February 2017 and May 2017) at the Department of Applied Mathematics and Computer Science of the Technical University of Denmark in Lyngby. There he worked together with professors J. B. Jørgensen and H. Madsen and he has extended his research experiences and the scope of his thesis by participating in large European research project SmartNet. This project was focused on integrating renewables into electricity grid i.e. to topic closely related to the objectives of Nikita Zemtsov's thesis. This stay also resulted in two joint publications.

In conclusion I would like to say the following. Ing. Nikita Zemtsov has done highly proficient research and he has met all other requirements on PhD candidates as specified by the relevant Study regulations. I do fully recommend his thesis for defense and further proceeding to be awarded the PhD degree.



Liberec 10 April 2019

doc. Dr. Ing. Mgr. Jaroslav Hlava – thesis supervisor