BACHELOR'S THESIS ASSIGNMENT

I. Personal and study details

Student's name: **Květoňová Šárka**

Personal ID number: **434915**

Faculty / Institute: **Faculty of Electrical Engineering**

Department / Institute: **Department of Measurement**

Study program: **Open Informatics**

Branch of study: **Computer Systems**

II. Bachelor's thesis details

Bachelor's thesis title in English:

LoRa Based Smart Button

Bachelor's thesis title in Czech:

Inteligentní tlačítko s LoRa komunikací

Guidelines:

Design and realize smart button with an e-ink display, additional binary/analog inputs, and LoRa communication interface. Use the NUCLEO-L073RZ development kit with an ultra-low-power 32-bit STM32L0 microcontroller. The device should be equipped with push buttons, e-ink display connected via SPI. Use the Thingsnetwork platform together with Node-RED (or alternative) programming tool for creating a simple demo application.

Bibliography / sources:

[1] STMicroelectronics datasheets, http://www.st.com
[2] The Things Network documentation, https://www.thethingsnetwork.org/
[3] Node-RED documentation, https://nodered.org/
[4] Ganssle, J.: The Art of Designing Embedded Systems, Elsevier Science, 2008.

Name and workplace of bachelor's thesis supervisor:

doc. Ing. Radislav Šmíd, Ph.D.,   Department of Measurement,   FEL

Name and workplace of second bachelor's thesis supervisor or consultant:

Date of bachelor's thesis assignment: **09.01.2018**   Deadline for bachelor thesis submission: _____

Assignment valid until:
by the end of summer semester 2018/2019

_____
doc. Ing. Radislav Šmíd, Ph.D.
Supervisor's signature

_____
Head of department's signature

_____
prof. Ing. Pavel Ripka, CSc.
Dean's signature

III. Assignment receipt

The student acknowledges that the bachelor's thesis is an individual work. The student must produce her thesis without the assistance of others, with the exception of provided consultations. Within the bachelor's thesis, the author must state the names of consultants and include a list of references.

_____
Date of assignment receipt

_____
Student's signature