"LUCIAN BLAGA" UNIVERSITY OF SIBIU
FACULTY OF ENGINEERING
Department of Computer Science, Electrical
Electrical and Electronics Engineering

APPROVED (date)
15.03.7070

Head of Computer Science,

and Electronics Engineering

ES

THEMATIC PLAN FOR DISSERTATION

Student's name and surname *Popa Carmen*.

Study program *Embedded Systems*.

1. Subject *Localization and mapping with autonomous robot, based on lidar sensor.*

2. Deadline *01.07.2020*

3. Basic elements for the project

Science articles, books;

Development tool: Arduino IDE and MATLAB.

Hardware: Arduino, chassis (wheels, motors, motor driver), lidar sensor, wireless connector

4. Problems to be solved

Creating a robot that will be able to construct and use a map of the environment, based on the lidar sensor, and localize itself within it. The map will be in 2D and 3D formats.

Based on this map, the robot will automatically detect the obstacle in front of it and avoid it by turning itself in another direction.

6. Advices schedule (every week)

Twice a week.

7. Theme released on **10.03.2020**.

Theme received by student:
Date 10.03.2020
Student's signature _____

SCIENTIFIC ADVISOR,

_____
(name and signature)