THESIS SUPERVISOR'S REPORT

I. IDENTIFICATION DATA

Thesis title:	**Long-term evolution of seizure characteristics in a mouse model of epilepsy**
Author's name:	**Richard Köplinger**
Type of thesis :	bachelor
Faculty/Institute:	Faculty of Electrical Engineering (FEE)
Department:	Department of Circuit Theory
Thesis supervisor:	Ing. Jan Kudláček, DiS., Ph.D.
Supervisor's department:	Department of Physiology, Second Faculty of Medicine, Charles University

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment	**challenging**

How demanding was the assigned project?

The goal was to replicate on mouse data the analyses performed by Schroeder et al. (2020) on human data. The original analyses were very complex partly due to high number of EEG channels recorded in the human patients. We adopted few modifications since we only analyzed one channel from each mouse. The student had to manually review over 500 seizures and remove the ones containing artifacts.

Fulfilment of assignment	**fulfilled**

How well does the thesis fulfil the assigned task? Have the primary goals been achieved? Which assigned tasks have been incompletely covered, and which parts of the thesis are overextended? Justify your answer.

The assignment was fulfilled.

Activity and independence when creating final thesis	**B - very good.**

Assess whether the student had a positive approach, whether the time limits were met, whether the conception was regularly consulted and whether the student was well prepared for the consultations. Assess the student's ability to work independently.

The student had few periods of dormancy which were however compensated by high activity in other periods. The student was always perfectly prepared for the consultations. The student had a good ability to work independently although my supervision was needed. Although he did not come up with any original ideas he could draw inspiration from the literature. He had a very positive approach.

Technical level	**C - good.**

Is the thesis technically sound? How well did the student employ expertise in his/her field of study? Does the student explain clearly what he/she has done?

The student used the appropriate methods. It would have been beneficial to devote more time to testing various values of the parameters of the analyses such as length of a smoothing window. Also, more analysis methods could have been combined.

Formal level and language level, scope of thesis	**B - very good.**

Are formalisms and notations used properly? Is the thesis organized in a logical way? Is the thesis sufficiently extensive? Is the thesis well-presented? Is the language clear and understandable? Is the English satisfactory?

The thesis is nicely formatted and logically organized. It is sufficiently extensive and written in good English.

Selection of sources, citation correctness	**A - excellent.**

Does the thesis make adequate reference to earlier work on the topic? Was the selection of sources adequate? Is the student's original work clearly distinguished from earlier work in the field? Do the bibliographic citations meet the standards?

The thesis is based mainly on one reference. Additional 11 references are used in the Introduction and Discussion.

Additional commentary and evaluation (optional)
Comment on the overall quality of the thesis, its novelty and its impact on the field, its strengths and weaknesses, the utility of the solution that is presented, the theoretical/formal level, the student's skillfulness, etc.
The thesis provided valuable preliminary results on the characteristics of seizures in the mouse model of epilepsy.

III. OVERALL EVALUATION, QUESTIONS FOR THE PRESENTATION AND DEFENSE OF THE THESIS, SUGGESTED GRADE

Summarize your opinion on the thesis and explain your final grading.

The grade that I award for the thesis is **B - very good.**

Date: **5.6.2024**   Signature: