BRNO UNIVERSITY OF TECHNOLOGY
FACULTY OF ELECTRICAL ENGINEERING AND COMMUNICATION

Opponent Review of Doctoral Dissertation

Applicant: Ing. Martin Kokolia

Title of Dissertation: Electronic Components in Textile Substrates

Opponent: Prof. Miroslav Joler

Opponent's Department: University of Rijeka, Faculty of Engineering, Rijeka, Croatia

In accordance with the Study and Examination Rules of BUT, in his/her review the opponent will mainly comment on:
a) the topicality of the dissertation,
b) whether the dissertation achieved its given objective,
c) the problem-solving procedure and the results of the dissertation along with the concrete contribution of the doctoral student,
d) the significance for practical application or the progress in the field,
e) formal and language qualities of the dissertation,
f) whether the dissertation fulfils the conditions of Section 47 (4) of the Act,
g) whether the student proved his/her creative abilities in the given research field and whether the work does or does not comply with the standard requirements placed on the dissertations in the given field. The review is not valid without this conclusion.
It is necessary to add a concise commentary to each of the points below.

Ad a) Topicality of the dissertation

The topic of the dissertation is very topical.
Comment: The dissertation is very topical in this period and the objectives that were set in the dissertation are relevant.

Ad b) Objective of the dissertation

The objective of the dissertation was partly achieved.
Comment: There were three objectives declared for this dissertation. The text pertaining to each of the declared objectives is loaded with numerous errors and deficiencies that substantially degrade the quality of the text and the presentation of the accomplishments.

Ad c) Problem-solving procedure and the results of the dissertation and the concrete contribution of the doctoral student

The problem-solving procedure and the results of the dissertation are weak.
Comment: The procedures are lacking clarity when it comes to descriptions of the schematics and circuits, photos of the simulated or manufactured structures, without a sufficient degree of labels with variables, annotations, and explanations of the particular parts of the circuits etc. Moreover, there are inconsistencies in the nomenclature of some variables between their representation in the figures vs. vs. their appearance in the text or tables. E.g. there are ambiguities between the notations for lengths and inductances (pp. 11-12), missing values of some variables (Table I) etc. throughout the text.

Ad d) Significance for practical application or progress in the field

The significance for practical application or progress in the field is average.
Comment: The significance of this work is unfortunately reduced due to descriptions and details that are either missing or are incomplete or inconsistent in the text. It is therefore hard to follow, evaluate, or replicate the respective cases.

Ad e) Formal and language qualities of the dissertation

Formal and language qualities of the dissertation are unsatisfactory.
Comment: Formal and language characteristics of this dissertation are blatantly below standards and tolerances on this kind of a document. Clearly, there are way too many typographical and grammatical errors that cannot be justified by any means because every typesetting editor offers spelling checking feature that could have been utilized before the final submission. As for the grammar, a certified translation service could have been hired to improve the text. Furthermore, there are figures without necessary labels, some figure numbers are incorrect (and/or inconsistent with the number in the text), a complete paragraph that was repeated in two spots in the text, missing (parts of) legends in some figures, inconsistent names of variables in the equations and tables. The use of relevant references within the sections is also insufficient. Last but not least, the text is not structured well enough to help a reader distinguish between different designs. Instead, it just starts describing an altered design without a new title or an introductory paragraph (specifically in Ch. 6).

Ad f) The dissertation fulfils the conditions of Section 47 (4) of the Act

The dissertation fulfils the conditions of Section 47 (4)*) Act No. 111/1998 Sb. Higher Education Act: YES

((4) Studies are duly finished with a doctoral state exam and dissertation defence, which prove the ability and readiness to work independently in the field of research or development, or in theoretical and creative arts. The dissertation must comprise original and published results or results accepted for publication.*

Ad g) Creative abilities of the student in the given research field. Compliance with the standard requirements placed on the dissertations in the given field.

The doctoral student did prove his creative abilities in the given research field and the work does not comply with the standard requirements placed on the dissertations in the given field.
Comment: It is difficult to categorically claim whether the student proved or not his creative abilities, based merely on reading this dissertation, and not having an insight into the student's entire work over the years, but this dissertation certainly does not comply with the expected level of presentation maturity and standard requirements in the field. Perhaps it is fair to say that the dissertation sufficiently reflects upon the student's creative ability to work in the field, but certainly does not testify to his ability to adequately describe and present his work and results to the public.

Overall evaluation: Although the dissertation discusses relevant ideas and approaches, the presentation of it is inadequate for the level of a doctoral thesis.

Opponent's questions:
1. Why didn't you run spelling checker before turning your dissertation in and why didn't you use certified language services to cure the text grammatically?
2. It is a bit unusual and somewhat ambiguous to have L0 through L5 labels for both the circuits dimensions and equivalent inductances in Figs. 1 and 2. However, can you identify where L0 through L5 appear in Figs. 1 and 2?
--- additional question(s) to be asked in the live session

I ☐ recommend ☒ do not recommend the dissertation for the defence.

Date: 06.10.2021

Signature: ……[redacted]……..