



## I. IDENTIFICATION DATA

<b>Thesis title:</b>	<b>Structural Analysis of Historic Reinforced Concrete Building - Fuchs' Cafe in Prague</b>
<b>Author's name:</b>	<b>Bradley John Scheuer</b>
<b>Type of thesis :</b>	master
<b>Faculty/Institute:</b>	Faculty of Civil Engineering (FCE)
<b>Department:</b>	Department of Mechanics
<b>Thesis reviewer:</b>	Petr Kabele; Cristiana Nunes
<b>Reviewer's department:</b>	Department of Mechanics, FCE; ITAM Academy of Sciences CR

## II. EVALUATION OF INDIVIDUAL CRITERIA

<b>Assignment</b>	<b>challenging</b>
<i>How demanding was the assigned project?</i>	
The student selected a challenging case study, whose objectives included clarifying the concept of the bearing system of a historic R/C building, identifying critical locations and members which should be subjected to further inspection and probing and, for members where sufficient information was available, evaluating their bearing capacity. The thesis was done within the scope of the international project CONSErVation of 20th century concrete Cultural Heritage in urban changing environments (CONSECH20) supported by the JPI CH Heritage in Changing Environments program.	

<b>Fulfilment of assignment</b>	<b>fulfilled</b>
<i>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.</i>	
To fulfill the objectives, the student constructed a 3D CAD model and a computational (finite element) model of the building. Due to restrictions arising from the COVID-19 pandemic, he could not inspect the building himself; however, he used information from reports of previous inspection and diagnosis works, historic sources, and other literature. By performing the numerical static analysis and interpreting the results, he completed all the assigned tasks. Moreover, he proposed the concepts for repairing damaged members and for further maintenance of the building.	

<b>Activity and independence when creating final thesis</b>	<b>A - excellent.</b>
<i>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.</i>	
Despite the fact that he could not travel to Prague due to the pandemic, the student maintained a very positive and proactive attitude throughout the whole semester. He regularly, at least once in a week, held online meetings with his supervisors, for which he was always well prepared to discuss and present his progress. At the same time, he showed a good deal of independence, e.g., by acquainting himself with the local codes, surveying/translating literature, or selecting appropriate FE program. In spite of that, the final version of the thesis was delivered just on deadline, so the supervisors did not have an opportunity to review it in detail before the submission.	

<b>Technical level</b>	<b>A - excellent.</b>
<i>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?</i>	
The methodology is technically sound, based on current codes and computational methods. The student integrated expertise that he gained not only through the SAHC coursework, but also by self-study and from his previous professional experience. The work procedure is well explained.	

<b>Formal level and language level, scope of thesis</b>	<b>A - excellent.</b>
<i>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?</i>	



## THESIS SUPERVISOR'S REPORT

The thesis is written in an excellent English and follows the general rules for notation and formal arrangement of technical publishing. The extent is appropriate for Master's thesis.

### **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?*

In addition to the sources provided by the supervisors, the student was took initiative in acquiring additional information, mainly form online resources (note that he had to work from home due to the pandemic restrictions). It should be also noted that many of the existing reports are available only in Czech, so a translation was necessary. The bibliographic citations conform to the ethical standards.

### **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.*

Although, due to the unfortunate pandemic situation, we were able to interact only through videoconferencing, we enjoyed supervising Brad's thesis work. During the time of our collaboration, he showed a great deal of reliability, diligence, and independent thinking. We believe the thesis brings some new perspective on the Fuchs' Cafe building structures, which may not only contribute to its future restoration but, also to aid in the fulfillment of the CONSECH20 objectives, since Fuchs' Café is one of the main project case studies.

### **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 **A - excellent**.

Date: **25.7.2020**

Signature: