

## I. IDENTIFICATION DATA

<b>Thesis name:</b>	<b>Analysis of historical interior by building performance simulation</b>
<b>Author's name:</b>	<b>Irieix Costa Prieto</b>
<b>Type of thesis :</b>	Master Thesis
<b>Faculty/Institute:</b>	Faculty of Civil Engineering/Institute of Theoretical and Applied Mechanics
<b>Department:</b>	Department of Mechanics
<b>Thesis reviewer:</b>	Prof. Ing. Jiří Hirš, CSc.
<b>Reviewer's department:</b>	Institute of Building Services, Brno University of Technology, CZ

## II. EVALUATION OF INDIVIDUAL CRITERIA

<b>Assignment</b>	The average difficulty topic of the diploma thesis.
<i>Evaluation of thesis difficulty of assignment.</i>	
The assignment of the diploma thesis is on average difficulty. Measurement results were available, analyzes were required, and a model object was created for theoretical simulation.	

<b>Satisfaction of assignment</b>	The assignment of the diploma thesis was fulfilled with minor reservations.
<i>Assess that handed thesis meets assignment. Present points of assignment that fell short or were extended. Try to assess importance, impact or cause of each shortcoming.</i>	
The submitted diploma thesis fulfills the assignment. More attention should be paid to the analysis of measured data (for example, a detailed analysis of the behavior during the day and at night or in different boundary conditions during the year in operation) and the generalization of the conclusions. Detailed measurement and hourly simulation calls for a more detailed analysis of the construction behavior and indoor environment in relation to operation and external climatic conditions.	

<b>Method of conception</b>	The chosen approach and methods of solution are correct.
<i>Assess that student has chosen correct approach or solution methods.</i>	
Processing methods have been chosen correctly. The procedure was simplified and could be extended to a detailed analysis and analysis of the impact of various boundary conditions.	

<b>Technical level</b>	C - Good.
<i>Assess level of thesis specialty, use of knowledge gained by study and by expert literature, use of sources and data gained by experience.</i>	
The student has a good knowledge of the solved assignment of work, the use of scientific literature and documents is also good. In the text there are minor flaws or editorial errors (e.g. The missing numbers and graphs incorrect mathematical symbols on p. 64).	

<b>Formal and language level, scope of thesis</b>	C - Good.
<i>Assess correctness of usage of formal notation. Assess typographical and language arrangement of thesis.</i>	
The formal and language level is on good level. The scope of thesis fulfills the minimal requirements.	

<b>Selection of sources, citation correctness</b>	C - Good.
<i>Present your opinion to student's activity when obtaining and using study materials for thesis creation. Characterize selection of sources. Assess that student used all relevant sources. Verify that all used elements are correctly distinguished from own results and thoughts. Assess that citation ethics has not been breached and that all bibliographic citations are complete and in accordance with citation convention and standards.</i>	

The student presents a relatively small amount of literary sources in the work, the sources for the simulation program are not mentioned. For examples for solutions he could use some proceedings from international SAHC conferences. References are not numbered, so there is no citation reference to them.

### **Additional commentary and evaluation**

*Present your opinion to achieved primary goals of thesis, e.g. level of theoretical results, level and functionality of technical or software conception, publication performance, experimental dexterity etc.*

The thesis solves the current state of the indoor environment and its theoretical solution using dynamic simulation. There is no detailed description of the model for simulation and boundary conditions. The conclusion of the work on page 65 is very simplified and does not contain all proposal for solutions resulting from the analyzes performed.

### **III. OVERALL EVALUATION, QUESTIONS FOR DEFENSE, CLASSIFICATION SUGGESTION**

*Summarize thesis aspects that swayed your final evaluation. Please present apt questions which student should answer during defense.*

The student demonstrated a good ability to solve engineering assignments.

Questions:

How was defined tolerated range of temperature and relative humidity for indoor climate related to historical fresco preservation?

Did you calculate dew point and study the surface temperatures to protect the fresco from condensation?

Which climate data were used?

I evaluate handed thesis with classification grade: **C - Good**.

Date: **July 12, 2018**

Signature: