CTU in Prague
Faculty of Civil Engineering
Department of Building Structures

Master thesis assessment

Student: Tomás Pospíchal
Thesis Title: The Influence of an Urban Heat Island on the Energy Design of a Building
Thesis Supervisor: Prof. Ing. Petr Hájek, CSc, Feng, Prof. Tzu-Ping Lin PhD
Reviewer: Dr. Zsuzsa Szalay PhD, Budapest University of Technology and Economics
Date of Thesis Submission: 01. 2019

I. Evaluation Criteria

Evaluation Criteria	A	B	C	D	E	F	Not Rated
Objectives and thesis assignment	☒	☐	☐	☐	☐	☐	☐
Level of expertise	☐	☒	☐	☐	☐	☐	☐
Suitability of used methods	☒	☐	☐	☐	☐	☐	☐
Formal and graphic level	☒	☐	☐	☐	☐	☐	☐
Thesis clarity	☐	☒	☐	☐	☐	☐	☐
Student's ability to apply engineering approach	☒	☐	☐	☐	☐	☐	☐

Note: The fields in the table are checked by double-clicking the mouse on the box (select "Default = checked"), or place an X it in the appropriate cell of the table.

II. Comments

Basis for evaluation of individual criteria (required, ¼ - ½ page):

The topic of the thesis is very up-to-date, as there is intensive research on the effect of urban heat islands and climate change on building design and occupant comfort. The student had a great possibility to learn from the experiences in Tainan and make some comparisons. Some analysis is carried out for both cities, some only for Tainan, most of them only for Prague. This is acceptable, but the objectives should have been clearly defined in the introduction.

The thesis provides some valuable results with the help of new and innovative methods, such as the Local Climatic Zone classification and the Urban Heat Island mapping of Prague. These results can serve as a basis for further research and many interesting analyses.

The number of literature sources is sufficient, but some of the references are incomplete, e.g. journal titles and date of download for web sources is missing. There are no reference

numbers in the text, only the sources of the figures are depicted. The graphics in the thesis have a high quality. The thesis is in general well written, with some grammar errors and some misspellings. The thesis text is clear and easy to follow; however, the structure is not always logical.

Overall, it is laudable that such a comprehensive analysis has been carried out. I assume most of the tools were not included in the regular curriculum at the Faculty of Civil Engineering and the student had to make a special effort to learn these tools.

III. Debate topics

For the purposes of debate, I recommend the following (required):

- **Please explain which factors influence a measurement with an infrared camera (external conditions, emissivity of materials, distance of objects etc)?**
- **In which ways does a green roof influence outdoor and indoor thermal conditions?**

VI. Overall Assessment

As a reviewer I evaluate the submitted thesis with the grade:

A

Grading scale used:

A	B	C	D	E	F
excellent	*very good*	*good*	*satisfactory*	*sufficient*	*failed*

V. Result

Based on the above as a Reviewer:

☒	I recommend the master thesis for defense
☐	I don't recommend the master thesis for defense

Budapest, 31.01.2019.

Zsuzsa Szalay PhD