

Opponent's review of the Doctoral Thesis

Candidate Claudio Pagani

Title of the doctoral thesis Multiscale modeling of masonry structures

Study Programme _____

Tutor _____

Opponent Katrin Beyer

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Topicality of the doctoral thesis theme

Commentary: The thesis of Claudio Pagani addresses the modelling of masonry structures at various scales from the macro-level, which models each pier and spandrel with only a single element, to the micro-level, which represents units and mortar joints explicitly. The thesis topic is therefore rather broad. Most PhD candidates would focus on developing novel methods with regard to one modelling approach and possibly apply a second one for validation. The candidate demonstrates his excellent knowledge of existing modelling approaches for masonry structures at these scales as well as his ability of implementing such models and developing refinements. I congratulate the candidate to the excellent work. I congratulate him for his broad knowledge, which will equip him very well for future research work.

excellent above average average below average poor

Fulfilment of the doctoral thesis objectives

Commentary: The objectives were fully obtained.

excellent above average average below average poor

Research methods and procedures

Commentary: The research methods were appropriate. See comments attached.

excellent above average average below average poor

Results of the doctoral thesis – dissertant's concrete achievements

Commentary: See comment above.

excellent above average average below average poor

Importance for practice and for development within a branch of science

Commentary: In due time, the results will have an impact on engineering practice.

excellent above average average below average poor

Formal layout of the doctoral thesis and the level of language used

Commentary: The results are very well presented. The figures are of a very high quality.

excellent above average average below average poor

Remarks

See attached report. The candidate already responded to this report and accounted for the comments.

Final assessment of the doctoral thesis

The thesis is excellent.

Following a successful defence of the doctoral thesis I recommend the granting of the Ph.D. degree

yes no

Date: 27.9.2021

Opponent's signature: *Kath Beyl*