

REVIEWER'S FORM
for thesis evaluation



1. Identification of the student

Student:	Jonathan Knudtsen
Thesis:	COMPARISON OF MODELING APPROACHES TO ANALYSIS OF MASONRY ARCH BRIDGES
1 st Institution:	University of Padova
2 nd Institution:	Czech Technical University in Prague
Academic year:	2016/2017

2. Identification of the reviewer

Name:	Petr Řeřicha
Institution:	Czech Technical University in Prague, faculty of Civil Engineering
Position:	Professor

3. Fulfillment of thesis goals

excellent *	above aver.	average <input type="checkbox"/>	below aver. <input type="checkbox"/>	weak <input type="checkbox"/>
Comments: The goals are pregnantly specified and consequently followed. In my opinion, more could not have been achieved in the time and with the resources available.				

4. Academic/scientific/technical quality

excellent *	above aver.	average <input type="checkbox"/>	below aver. <input type="checkbox"/>	weak <input type="checkbox"/>
Comments: Hand solutions, Ring rigid blocks and two non-linear FEM packages are applied. This alone speaks on the quality and effort put in the thesis. The thesis deserves publication since the conclusions appear to be useful for the community of masonry bridges owners, engineers and designers.				

5. Formal arrangement of the thesis and level of language

excellent *	above aver.	average <input type="checkbox"/>	below aver. <input type="checkbox"/>	weak <input type="checkbox"/>
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Comments:

6. Further comments

It is impressive in itself that two non-linear FEM models were set up and solved with two different packages. Highly heterogeneous structures like masonry bridges are famous for troubles in convergence. Observations in conclusions are accurate, the table of work hours for individual solutions is instructive. Author notes the importance of the service load limit for masonry bridges. In my opinion, this limit should be based on the long time deterioration of the barrel joints in reverse load conditions (permissible limit state, Melbourne et al., Bridge Engineering v.160, p.81-87)

7. Grade: __A__

Use the following scale

A (excellent)	B (very good)	C (good)	D (satisfactory)	E (sufficient)	F (fail)
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Prague

July 13, 2017

The Reviewer,

Řeřicha

(type name of the reviewer)