1. Identification of the student:

**Student:** Kristen Balogh  
**Thesis:** The Effects of Bird Excrements on Copper and Bronze  
**1st Institution:** UPC Barcelona  
**2nd Institution:** Czech Technical University in Prague, Czech Republic  
**Academic year:** 2016/2017

2. Identification of the supervisors:

**Name:** Ing. Zuzana Slížková, Ph.D.  
**Institution:** ÚTAM AV ČR v. v. i.  
**Position:** Head of Department of Particulate media  
**Name:** Ing. Kateřina Kreislová, Ph.D.  
**Institution:** SVÚOM s.r.o.  
**Position:** Executive director

3. General comments

Kristen showed a very active approach to work from the very beginning. She herself proposed the subject of the work that interested her (impact of bird excreta on building materials) and provoked a discussion about how to solve the research topic in the frame of the thesis. She had great plans that we had to narrow to get the job done. Regarding various building materials we agreed to focus on metal materials that are used for roofing and finishing of building parts and that are affected by bird excrements very often. Kateřina Kreislová provided samples of copper and bronze, especially samples of copper after exposition, removed from a historic building roof. After designing the testing procedure and methodology of analytical methods Kristen could use the equipment of laboratories of two research institutions - SVUOM Ltd. and ITAM (including the Centre Excellence in Telc). Kristen became very soon more familiar with the metals corrosion phenomena on the basis of reading scientific articles and actively collaborated in designing experiments. She managed all experimental and analytical works in time; worked very well with experts who have trained her in analytical methods; quickly mastered chemical procedures and instrumental techniques; independently processed the results and evaluated the conclusions. All performed experiments and their results are documented by photos. Kristen showed the ability to quickly study the problem solved, to manage the experiments, and to make proper evaluations and conclusions. Kristen is with no doubts ready to represent her graduation university and in her professional career, on a very good level. Therefore, I recommend her admission to the state exam and to process the defending act of her thesis.

4. Grade: A

Erasmus Mundus Programme  
ADVANCED MASTERS IN STRUCTURAL ANALYSIS OF MONUMENTS AND HISTORICAL CONSTRUCTIONS
Use the following scale

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

Czech Technical University in Prague

July 11, 2017

The Supervisors,

Zuzana Slížková

Kateřina Kreislová