**Evaluation Criteria for Master's and Bachelor Theses**

The evaluation criteria that follow are meant for Masters and Bachelor theses but to they may also serve as a guideline for PhD theses. For the latter, the scientific content is weighted much more heavily and the advancement beyond the state of the art is an additional important requirement, whereas it is only a bonus for Bachelor and Master Theses.

In grading your thesis, I will grade each of these categories. The overall grade for the thesis simply is the weighted average over the individual scores. You have to obtain a passing grade in every criterion to get a passing grade for the thesis.

- ❒ Scientific content: novelty, strength, and scope of the contribution (20%)
  In a class, the maximum contribution you can make (or score you can achieve) is limited by the assignments and the exams. But there is no upper limit to the contribution you can make in a thesis. A stronger contribution (intellectual, creativity, effort, ...) should be rewarded. This category acknowledges your personal investment and your intellectual contribution. Did you come up with something truly novel? Did you address a particularly difficult topic? Are there any extraordinary aspects of your thesis (time-consuming experiments, inter- or transdisciplinarity, innovative evaluation methods, human experiments…)? Are your conclusions particularly insightful? Are they well-supported by your work? Note that it is not necessary for your thesis to have a positive outcome to get a good grade; a negative outcome, e.g. something does not work and here is why, can be just as interesting if it is presented and analyzed well.

- ❒ Scientific argumentation (20%)
  This contribution discussed in the previous point should be presented and defended in an overarching, logically grounded argument, supported solidly by an understanding of the nature of the problem, by knowledge of the research field, and by a justification of the employed techniques. This logical argument should also form the basis of the scaffolding (or story line) of the thesis. Every section of the thesis should be presented from the point of view of that argument. Every section should be an integral component of the argument. Every section should provide important information and support for understanding the argument. (See also stage one and two of the next section on writing.) Are the experiments designed so as to support your scientific arguments? Are the results evaluated appropriately and do you draw the right conclusions? Have you also described the limitations of your ideas/methods/experiments? Are illustrations used to aid the presentation? Are graphs types appropriately chosen for the data? Do the graphs make the main point easily accessible?

- ❒ Technical strength (20%)
  The thesis is an opportunity for you to show what you have learned during your studies and from your independent literature study for the thesis. Do you bring to bear a solid understanding of computer science? Do you understand the necessary technical background? Are you capable of identifying appropriate solutions for the problems you encounter? Have you mastered the techniques/methods/algorithms/concepts and their application? Does the thesis contain an adequate exposition of the relevant technical background?

- ❒ Scholarliness (20%)
  Do you know the state of the art? Do you know the most relevant works in your area? Can

you group and present them in a way that supports and advances your scientific argument? Do you present the necessary technical background in an accessible and complete manner?

- Execution (20%)
  Is the writing understandable and correct? How is the thesis structured formally? Are images and graphs properly labeled? Are references and sources properly cited? Is the bibliography complete (page numbers etc.)? Does the paragraph/image/graph structure of each section help the reader to understand the argument? It is also important that you properly document the software that you have written for your thesis. We will likely want to further use or develop the software and this makes a complete technical documentation mandatory. Your software should have a full documentation, a separate document explaining the architecture and a document with examples of how to install and run the software. Please also document all scripts that generated data for your thesis.