Exam 521 12 nov 18   **Name:**

Frank Ritter
10 questions, 100 points total, 20% of the course. **90 min. exam.**
Open book, open notes. You are expected to primarily use readings from the course. You can reference
papers from the course by (author(s), year). Other citations need a full, complete reference at the end of each
answer.

1. [5 points] Short answers (1 points per)

Why is prospective memory important for computer applications or interfaces?

When should you study the user?

Give an example of a haptic interface.

Is an exam an example of an ill-structured problem?

Note four aspects of learning curves.

2. [10 points] What is the biggest problem in or with or for the risk-driven spiral model development approach? That is, if you were to work on improving it, broadly defined, what would you do?

3. [10 points] Describe how your thesis (MS or PhD) project can be performed using the risk-driven spiral model.

4. [20 points] (a) Describe these methods and (b) where they fit in the Risk driven incremental commitment model. (c) Note advantages and disadvantages.

(a) Keystroke logs

(b) Verbal protocol analysis

(c) Task analysis

(d) Search logs

(e) Scenarios

(f) Models of users

(g) Surveys

(h) Situation awareness

(i) Design prototypes

(j) [another method]

5. [10 points] You have had four users from your group test an interface, and 3 of them prefer interface A, and 1 prefers interface B. What can you conclude from this result about interface A and B?

6. [10 points] Describe four risks that can arise when running a study that can make the results invalid, and how to avoid these four risks.

7. [10 points] What could be automated in HCI to help improve HCI design and to improve interfaces? How could it be automated?

8. [10 points] What human factors/HCI issues does the Kegworth air disaster illustrate, list up to 20.

9. [10 points] Organize the objects in terms of expected and type of impact, and audience for impact (provide a list, and use full title, not just letter):
   a. Conference paper
   b. Book chapter
   c. Book (monograph)
   d. Textbook
   e. Magazine article
   f. Piece of software
   g. Web site

    h. Movie
    i. Journal article
    j. Encyclopedia chapter
    k. Handbook chapter

Note two advantages and two disadvantages to each.

10. [5 points] What would have been a better question to ask on this exam? (you must include why, but answer is not required)