

Department of Computer Science and Engineering

College of Engineering, University of Nevada, Reno

CS 791 HCI Graduate Topics on Human-Computer Interaction

Study Required for Midterm Test #1

March 8, 2016

Version 2

This written, closed-book, 70-minute test will take place on **Tuesday, March 15, 2016** in SEM-201 from 1:00 pm (regular classroom and time). The test weights 13% in the course grade.

A Chapters Required from the textbook *Human-Computer Interaction: An Empirical Research Perspective* by I. Scott MacKenzie:

Chapter 1	HISTORICAL CONTEXT
Chapter 2	THE HUMAN FACTOR
Chapter 3	INTERACTION ELEMENTS

Note: from items A above, **Sub-section 1.6.2** The psychology of HCI (1983), the text on pages 78-79 related to **Figure 3.9** (Google Street View), and **Section 3.6** More about degrees of freedom are not required.

B Research papers (5 in total), presented by graduate students.

Paper 1: [Llorach et al, 2014] on Simulator Sickness – presented by Sam Tregillus

Possible questions:

- Q1. In what ways does simulation sickness differ from other motion sicknesses like car sickness or sea sickness [Llorach et al, 2014]?
- Q2. Name several factors that can contribute to feeling more or less simulation sickness [Llorach et al, 2014].
- Q3. What are the main research hypotheses as well as the main results of the [Llorach et al, 2014] paper?

Paper 2: [Chen et al, 2014] on Duet – presented by Manju Palathingal

- Q4. Describe the design space used in Duet for the interaction of a smartphone and a smartwatch [Chen et al, 2014].
- Q5. List and describe the gesture and sensing techniques used in [Chen et al, 2014].
- Q6. Describe in detail one of the following joint interactions used in Duet [Chen et al, 2014]: Home Screen, Email, Map, or Reader.

Paper 3: [Jones et al, 2013] on IllumiRoom – presented by Hirav Parekh

- Q7. What are the different ways in which the Focus + Context illusion can be applied [Jones et al, 2013]? Name all 4 ways and explain in depth two of them.
- Q8. How does the IllumiRoom system work even without a projector screen? What do the authors do in order to make it work and what are the factors that help make this effect work? [Jones et al, 2013]
- Q9. Name all the illusions (e.g., texture displacement) demonstrated in the [Jones et al, 2013] paper and explain 3 of them in detail.

Paper 4: [Fasola and Mataric, 2010] on Robot Exercise Instructor – presented by Meera Sebastian

- Q10. Describe the significance of the [Fasola and Mataric, 2010] paper.
- Q11. Explain how the robot recognizes the user's arm gestures in the [Fasola and Mataric, 2010] paper. Also, describe the arm pose recognition algorithm.
- Q12. In the [Fasola and Mataric, 2010] paper, explain how the system builds the people's trust in the robot's helpfulness.

Paper 5: [Vaish et al, 2014] on Twitch Crowdsourcing – presented by Prasun Dey

- Q13. Related to the [Vaish et al, 2014 paper] explain what is the Channel factor.
- Q14. Describe several concerns regarding crowdsourcing [Vaish et al, 2014].
- Q15. Give several examples where we can use crowdsourcing—see paper [Vaish et al, 2014].