

GRADING

50% Article eval
30% M/Final exams
20% Presentation

Winter 2003

IOE 591 TRANSPORTATION HUMAN FACTORS

UMTRI 157

Thursdays 3:10 – 4:50 p.m.

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Textbooks

H = Engineering Psychology and Cognitive Ergonomics: Volume Five, Aerospace and Transportation Systems. Edited by Don Harris. Ashgate Publishing Company, 2001. ISBN 0-7546 1337 2

TV = Principles and Practice of Aviation Psychology. Edited by P. Tsang and M. Vidulich. Lawrence Erlbaum Associates, Publishers, New Jersey, 2003. ISBN 0-8058-3390-0.

THFJ = Transportation Human Factors Journal

+ = Written evaluation due at start of class

Jan 9 **How to read a journal article**
KRE 2001 Chapter 5

Jan 16 **Intelligent Transportation Systems**
THFJ, 2(4), 2000, 359-379. IVIS. *Kantowitz*
+H21 The effects of sleep loss, time pressure and workload on ATC
 performance. *Lichacz*

Jan 23 **Mental Models in ITS**
H1 Application of human performance data and quantitative models
 to the design of automation. *Parasuraman*
H40 Conflicting demands in the driving task. *Lansdown*

+THFJ, 2(4), 2000, 297-312. Speed Reduction Mechanisms. *Godley*

Jan. 30 **Display Design - Automotive**

H 45 Occlusion as a technique for evaluating in-car displays. *Keinath, Baumann, Gelau, Bengler, Krems*

+H 49 Positioning peripheral vision-warning devices for snow plough operations. *Ward, Smith, Anders*

+THFJ, 1(4), 1999, 347-376. Display alternatives for in-vehicle warning and sign information. *Lee, Gore, Campbell*

Feb 6 **Display Design - Aviation**

H 7 Auditory alerting system. *Ulfvengren*

TV Chapter 5 Aviation displays. *Wickens*

+H 13 Assessing patterns of head motion behaviour for adapting multisensory interfaces. *Bolia, Nelson*

Feb 13 **MID-TERM EXAM**

List of two articles for evaluation and presentation due

Feb 20 **ATIS HF Guidelines**

THFJ, 1(3), 1999, 207-224. Developing HF Guidelines. *Campbell*

Feb 27 **SPRING BREAK**

Mar 6 **Mental Workload**

H 41 Size matters. *Young, Stanton*

H 42 Age- and/or expertise specific modes of coping with mental workload. *Zimmer, Zimmer, Scheufler, Kaiser*

+H43 The Signal Location Task as a method quantifying the distribution of attention. *Hoger*

Mar 13 **STUDENT PRESENTATIONS (practice)**

Mar 20 **Driver Workload**

H 44 Design and usability of driver-information-systems and carPCS. *Weimper & Roessger*

H 48 Baselineing behaviour. *Stedmon, Carter, Bayer*

+ THFJ, 1(4), 1999, 295-309. The effects of in-vehicle distraction. *Hancock*

Mar 27	Aviation HF	
	TV Chapter 1	Introduction to aviation psychology. <i>Tsang, Vidulich</i>
	TV Chapter 4	Mental workload and situation awareness. <i>Vidulich</i>
	H 29	Investigation on the dependence of pilot workload and flight simulation fidelity level. <i>Bauschat</i>
Apr 3	Aviation HF	
	TV Chapter 7	Pilot action and tasks. <i>Wickens</i>
	TV Chapter 9	Automation and human performance in aviation. <i>Parasuraman, Byrne</i>
	H 38	Failures in pilot-controller communications and their implications for datalink. <i>Gibson, Megaw, Donohoe</i>
Apr 10	STUDENT PRESENTATIONS (Grade)	
