



The Centre for Accident Research and Road Safety – Queensland

presents

Professor Gerald Matthews, University of Cincinnati

at

The CARRS-Q Breakfast Series

Driver Stress and Road Safety: A Transactional Approach

Stress and anxiety are quite commonly experienced in vehicle driving, and may compromise driver safety. One of the difficulties of research in this area is that stress depends both on driver characteristics (some drivers are stress-prone), and on environmental stressors such as congestion and weather conditions. I will outline a transactional model of driver stress that is based on cognitive theories of stress. Appraisal and coping processes shape both subjective experience and performance and safety. These cognitive processes depend, in turn, on the interaction between the driver's personality and external stress factors. The transactional model provides the basis for distinguishing different forms of stress, including anger and anxiety that may be associated with different patterns of vulnerability to impairment. I will outline key results from field studies of driver stress and controlled experiments using a driving simulator that support the transactional approach. I will also look at some challenges for the transactional model, such as the role of psychobiological factors, and at its human factors applications.

Gerald Matthews is Professor of Psychology at the University of Cincinnati. He obtained his Ph.D. from Cambridge University in 1984, and he has previously held faculty positions at Aston University and the University of Dundee in the United Kingdom. His research on driver behaviour focuses on the interplay between driver performance and stress and fatigue factors. Specific interests include use of simulator methods for inducing stress, the effects of vehicle automation on fatigue, and the assessment of individual differences in driver stress vulnerability. His other research interests include cognitive models of personality, the assessment of acute states of stress and fatigue, and emotional intelligence. He has published over 200 journal articles and book chapters on these topics. He has been elected President-Elect of the Traffic and Transportation Psychology division of the International Association for Applied Psychology, Secretary-Treasurer of the International Society for the Study of Individual Differences, and Chair of the Individual Differences in Performance Technical Group of the Human Factors and Ergonomics Society. He is also an associate editor for *Personality and Individual Differences*, a consulting editor for *Journal of Experimental Psychology: Applied*, and a series editor for the Ashgate Publishing book series on human factors in road and rail transport.

**The CARRS-Q Breakfast Seminars continue to be well attended events -
Be sure to book early for what promises to be an insightful and informative event.**

Date:

7.30am – 9am
Tuesday 20 July 2010

Venue:

The Map Room
Hotel Conrad
William Street
Brisbane

Registration: \$70 (incl. GST) per person or \$600 (incl. GST) per table of 10
\$55 (incl. GST) discounted rate for full-time students
Please register using the form on page 2.

Closing date: Wednesday 14 July 2010