HUMAN FACTORS AND EXPLICIT ROAD SAFETY

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Clarion Resort — Pinewood Park Inn
201 Pinewood Park Drive
North Bay, Ontario

FEE:

$ 965.00 + 7% GST ($1,032.55)

Continental breakfast, coffee and a buffet lunch daily are included in the course fee.

To register, please email the attached form to hfn@hfn.ca or fax to (416) 596-6946 and mail your payment to 118 Baldwin Street, Toronto, ON M5T 1L6.

(We regret that we cannot accept credit cards.)

WORKSHOP DESCRIPTION

The workshop is intended to provide valuable insights into safety engineering, driver abilities, and limitations which need consideration in highway design and traffic engineering.

Course Objectives

- Awareness of basic principles of safety engineering
- Awareness of driver limitations in vision, attention, information processing, and perception-reaction time
- Intersection collisions: Sources of driver error, cost-beneficial countermeasures, case studies
- Lane departure crashes: Sources of driver error, cost-beneficial countermeasures, case studies

Who Should Attend

- Traffic engineers and technologists
- Highway designers
- Police accident reconstructionists
- Government traffic safety managers
- Fleet managers

Course manuals containing copies of overheads will be provided to all participants.

Certificates of Attendance will be provided to those who have attended 90% or more of the sessions.

Previous Courses

Presentations of similar material have been made as follows:

Human Factors & Explicit Road Safety — Vancouver, B.C., October 2003.

Fundamentals of Highway Safety (for U.S. FHWA) — New York (2003), Nashville, Atlanta (2004), Harrisburg (2005)

An Introduction to Road Safety Science — May 2004, March 2003, April 2002, October 2001, & June 2001.

The Science of Highway Safety, MTO, 6 regions. Oct. 1998 — Feb. 2000.

Institute of Transportation Engineers, Annual Conference, Toronto. August, 1998.

Reference contacts and individual CV's are available on request.

SPEAKERS

Dr. Alison Smiley is President of Human Factors North Inc. and an adjunct professor in the Department of Mechanical and Industrial Engineering at the University of Toronto and in the Department of Civil Engineering at Ryerson University, Toronto. She has over 30 years experience in the measurement of driver performance. She has acted as an expert witness in over 150 car, truck, train and boat accident cases, starting with the Royal Commission of Inquiry into the Hinton Train Collision in 1986. Dr. Smiley is past Chair of the U.S. N.R.C. Transportation Research Board Group 3, Operations, Safety and Maintenance of Transportation Facilities (1998 - 2001) and a member emeritus of TRB's AND10 Vehicle User Characteristics Committee. She is the 1997 recipient of the U.S. Human Factors and Ergonomics Society's A.R. Lauer Safety Award for outstanding contributions to the human factors aspects of highway safety.

Ms. Geni Bahar, P.Eng., is a Senior Transportation, Traffic and Road Safety Consultant with over 25 years of experience in managing projects in both the research and consulting engineering environments. She is Vice-President of iTRANS Consulting Inc. Ms. Bahar has led multidisciplinary teams in projects where her safety engineering research experience has allowed her to bring safety explicitly to the practitioners' world. She is a member of the ITE International Safety Council, the TRB Operational Effects of Geometrics, the TRB Sub-Committee for the Highway Safety Manual and the TAC Road Safety Committee.

PROGRAM

Day 1

MORNING

Fundamental Road User Characteristics and Limitations (AS)

- Human characteristics that impact driving
- Driver attention, limitations in information processing
- Visual search during driving
- Expectancy and driver response to warning signs
- Variables affecting perception-reaction time

Driver Adaptation (AS)

- How drivers adapt
- Behavioural compensation
- Response to safety countermeasures
- Using adaptation to control speed

AFTERNOON

Introduction to Principles of Safety Engineering (GB)

- Safety and security
- Collision counts and safety
- Safety as a stable entity

Road Network Safety Performance Evaluation Process (GB)

- Safety and traffic databases
- Safety performance functions and applications
- Ranking of projects

Safety Improvement Programs (GB)

- Diagnosis and selection of cost-effective countermeasures
- Integration with other safety non-engineering programs
- night visibility

Day 2

MORNING

Intersection-related Collisions (GB/AS)

- Intersection-related collision statistics
- Driver limitations in intersection negotiation:
    - Detecting the intersection
    - Identification of signalization and paths
    - Gap judgment at intersections
    - Decision-making in the dilemma zone
    - Impact of layout
    - Age factors
- Management of potential conflicts at intersections
- Intersection collision types and related traffic and design elements
- Explicit safety at intersections
- Countermeasures

Intersection-related Collisions: Case Studies (GB/AS)

AFTERNOON

Lane Departure Collisions (GB/AS)

- Lane departure statistics
- Driver behaviour incurves
- Response to loss of directional control
- Driver drowsiness
- Keeping vehicles in the travel lane
- Providing opportunities to recover control of vehicle
- Reducing crash severity
- Targeting roadside improvements
- Countermeasures

Lane Departure Collisions: Case Studies (GB/AS)

COURSE CONCLUSION / CERTIFICATE