

REGISTRATION

MECHANICS OF HEAVY-DUTY TRUCK SYSTEMS

To register please complete the details and fax, post or e-mail the form to: Jonathan Miller, Engineering Dept, Cambridge University, Trumpington St, Cambridge, CB2 1PZ, UK

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MECHANICS OF HEAVY-DUTY TRUCK SYSTEMS



A FOUR DAY EVENT, LED BY
CHRIS WINKLER, BOB ERVIN
and RICHARD RADLINSKI

UNIVERSITY OF MICHIGAN TRANSPORTATION
RESEARCH INSTITUTE

Cambridge University
Engineering Department
Cambridge, UK



23 - 26 April, 2007

INTRODUCTION

Cambridge University and the Cambridge Vehicle Dynamics Consortium (CVDC) are pleased to present a four-day event focussed on the dynamics of heavy goods vehicles. The event will include the definitive UMTRI course on heavy truck dynamics as well as hardware and software demonstrations and hands-on exercises.

The heavy truck is a complex mechanical system, requiring its own modelling techniques, analysis programs, parameter measurement methods and test procedures. These will all be discussed during the event. Attendees will also have the opportunity to tour the Cambridge laboratories and see a demonstration the CVDC computer-controlled experimental vehicle.

THE INSTRUCTORS

Chris Winkler is a Research Scientist in the Engineering Research Division of the University of Michigan Transportation Research Institute. Chris has been involved in research into the dynamic behaviour of heavy-duty trucks throughout his 33-year career at UMTRI. Chris is the current chairman of the Vehicle Dynamics Committee of SAE and a US delegate to the Vehicle Dynamics and Road Holding committee of ISO.

Bob Ervin is the former Head of the Engineering Research Division of the University of Michigan Transportation Research Institute. He is a world authority on heavy vehicle dynamics, having directed UMTRI's world-leading research in this area for many years. Bob is also an authority on intelligent vehicle-highway systems, crash avoidance, and driver behaviour. He is an experienced and inspiring lecturer.

Dick Radlinski Over his 40 year career, Dick Radlinski has established himself as an eminent authority in heavy duty brake technology and systems. For 25 years he worked for the National Highway Traffic Safety Administration in research and testing of vehicle brakes and the development of safety regulations. Dick started LINK-Radlinski in 1993 and has led the company to becoming a leading supplier of independent brake testing services and brake testing equipment in the US, Mexico and Canada.

WHO SHOULD ATTEND?

In addition to engineers involved in vehicle dynamics, this event is intended for persons engaged in technical activities such as truck design, truck equipment selection, fleet safety operations, accident reconstruction, development of truck safety standards and highway/truck interactions.

Prerequisites: Bachelor's degree in engineering or the equivalent background. Some experience or training in analysis or measurement of braking, steering or ride behaviour of cars or trucks. A familiarisation with the means for simulating vehicle system behaviour using computers is not necessary, but is helpful.

THIS EVENT WILL INCLUDE

- ❑ An overview of vehicle dynamics theory
- ❑ Tyres, suspensions, brakes and steering systems
- ❑ Unit truck, articulated vehicle and driver modelling
- ❑ Ride, rollover, handling and braking
- ❑ Hand-on exercises in vehicle simulation
- ❑ Instrumentation and field-testing of heavy vehicles
- ❑ Lab tour and demonstration of the CVDC experimental vehicle

COSTS

The event fee is £1300. This includes a copy of the comprehensive course manual, which covers all aspects of heavy vehicle dynamics, and the course dinner on Wednesday night 25th April.

Accommodation will not be provided, but special rates for course members have been negotiated with the Royal Cambridge Hotel, which is adjacent to the course venue. More information about accommodation can be found on the course web site: www.cvdc.org/course07.html