

# Intensive course on: Mechanics of Tire-Pavement Interaction

## Date and location

The course will be held on 26-28 September 2011 in Delft.

## Registration

Registration fee is 400 Euro. It includes lecture notes, lunches and refreshments. To register, please visit the course link at [www.skidsafe.org](http://www.skidsafe.org). The total number of participants is limited, registration will be accepted according to availability. After registration participants will receive a letter of confirmation, travel and accommodation suggestions.

For additional information and course news please refer to [www.skidsafe.org](http://www.skidsafe.org) or contact:

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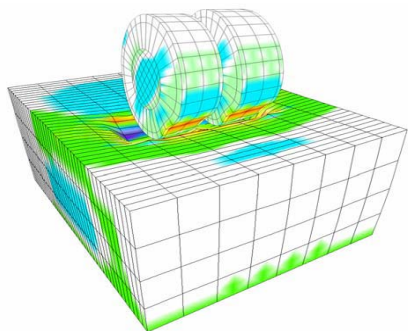


Delft, University of Technology  
The Netherlands

26-28 September 2011

A good skid resistance of the pavement surface is of essence for road safety. Loss of skid resistance can have dramatic material and loss of life consequences. The main factors that influence skid resistance can be grouped into four categories: pavement surface characteristics, vehicle operational parameters, tire properties, and environmental factors.

In the recent past, several significant developments have been made in tire design and manufacturing and in pavement construction, both aiming at improved performance. At the same time, the advent of computational techniques has enabled the development of powerful algorithms which enable simulation of interfacial contact phenomena.

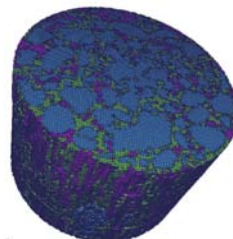


These developments enable understanding and quantification of the interaction phenomena that occur at the tire-pavement interface.



The focused 3-days course on Mechanics of Tire-Pavement Interaction is organized for the pavement engineering industry and the academic community in order to familiarize themselves with tire-pavement interaction phenomena, their laboratory evaluation and computational modeling.

The course is addressed to graduate and doctoral students and researchers. All lectures and course handout materials are in English.



The course will address recent advances in tire-pavement interaction and shall include:

- fundamentals of nonlinear large deformation continuum mechanics
- physical and geometric characteristics of modern pneumatic tires
- laboratory testing and constitutive modeling of the thermo-visco-elastic response of rubber materials
- laboratory testing and constitutive modeling of the thermo-visco-plastic response of pavement materials
- metrics of surface roughness and their laboratory/field determination
- innovative laboratory testing of rubber-asphalt friction
- mechanics of large deformation contact and their application for the development of thermo-visco-plastic interface constitutive models
- techniques for field evaluation of tire-pavement friction
- issues in the finite element modeling of tire-pavement interaction
- the influence of tire characteristics on pavement long term response



## Lecturers:

A. de Bondt  
Ooms Avenhorn  
Groep

M. Kane  
IFSTAR

T. Laursen  
KUSTAR

C. van Gurp  
KOAC-NPC

T. Scarpas  
TU Delft

I. Skrypnik  
Goodyear

M. Villani  
TU Delft