



**XXIV<sup>th</sup> World  
Road Congress  
Mexico 2011**  
Mexico City 2011.

## 6<sup>th</sup> Symposium on Pavement Surface Characteristics

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## **SURF Symposia are official PIARC events**

- The doors to partnership with different organisations.
- Every four years following PIARC's World Road Congress.
- 70 years of tradition



## About the themes

- The themes for the SURF 2008 Symposium reflected technological developments of the time.
- The program was prepared with 13 sessions on 7 topics.
- Pavement surface appraisal techniques.
- Provided a picture of current knowledge about vehicle/pavement interactions.



## **The Scientific Committee**

- The Scientific Committee was chaired by Mathieu Grondin – Canada and supported by members of TC
- The 120 abstracts received, 80 were accepted and 50 papers were invited for presentation.
- The 170 attendees from 39 countries.



## Assessment of the pavement

- New equipment and new survey methods for road surface characteristics, such as measurement of longitudinal and transverse profiles, skid resistance, noise emissions and surface defects, as well as non-contact microtexture, macrotexture and megatexture measuring methods. Use of common road vehicles to collect information on road surface characteristics.
- Standardization of methods, test control and quality assurance plan.



## Data analysis tools

- New analysis and interpretation tools for surface characteristics.
- Development techniques for performance models and applications.



## Performance criteria

- Use of road surface condition measurements for the acceptance of roadwork and risk assessments (techniques and requirements).
- Levels of service and user expectations.
- Short- and long-term specifications related to performance contracts and public-private partnerships.



## Pavement management

- New performance indicators and road surface characteristics indices used in pavement and road asset management.
- Levels of service, types of maintenance and repair intervention and implementation of investment strategies.
- Other experience in pavement management such as the use of remaining service life indices, the management of a high class road system compared to a less-traveled road network, and management of an urban road network.





## Assessment and management of unpaved roads

- Equipment, methodology and analyses used to manage unpaved road networks.



## **Trends in vehicle-road interaction and their impact on design and management**

- New and future vehicle developments (tyre, suspension, weight, traffic trends, etc.) and their influence on design and management.



## Others topics related to vehicle-road interaction

- New and future road surfaces taking into account noise reduction, resistance to aggregate polishing, pollution, speed, comfort, vibrations, minimizing energy consumption, etc.
- Relation between road surface characteristics, geometry and road safety for cars and trucks.



## **A questionnaire about future PIARC SURF events.**

- The majority of the respondents support the idea that the SURF event should continue as it is.
- Quite a lot of suggestions how to continue.



## Opinions for future SURF developments.

- The main organiser should remain PIARC.
- With different possible co-organizers.
- SURF events to be organized every 4 years.
- Program to be widened.



## Issues to be tackled in the future:

- Road surface characteristics.
- Flexible and semi-rigid pavements.
- Concrete pavements.
- Road maintenance management.
- Impact of road infrastructure on road safety.



## **New issues to be tackled in the future:**

- Definition and characterization (and measurement) of surface properties.
- Impact of road surface properties on road safety, on the environmental consequences of road traffic, and on the durability of functional performances.



## **New issues to be tackled in the future:**

- Functional objectives in road design, road operation procedures, road maintenance management.
- Design of road materials and improvement of road construction techniques to meet surface and functional requirements, and to save energy and non-renewable resources.
- The effect of tyre, car and trucks design on road surface properties.





## What is next



WORLD ROAD  
ASSOCIATION  
MONDIALE  
DE LA ROUTE  
AIPCR PIARC

7th Symposium on **SURF 2012**  
**PAVEMENT SURFACE CHARACTERISTICS**  
September 19-22, 2012 ■ Norfolk, VA

*Smooth, Safe, Quiet & Sustainable Travel Through Innovative Technologies*

Organisers: WRA with  
FHWA  
AASHTO  
Virginia Tech University

[WEB: www.cpe.vt.edu/surf2012](http://www.cpe.vt.edu/surf2012)



Thank you for your attention

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