

XIVth International Winter Road Congress Andorra 2014



*“Reconciling road safety and sustainable development
in a context of climate change and economic constraints”*

Call for Papers

The World Road Association is calling for individual contributions on selected topics for the XIVth International Winter Road Congress to be held in Andorra-la-Vella, 4-7 February, 2014.

Accepted papers will be presented during poster sessions and included in the Congress proceedings. Outstanding contributions will be selected for oral presentation during the technical sessions of the Congress.

Publication of the accepted papers is subject to the registration of at least one of the co-authors to the Congress.

SUBMISSION OF ABSTRACTS AND FULL PAPERS

Contributions are invited only on the topics described below. Authors are invited to submit an abstract using the on-line facility from the Congress website at: www.aipcrandorra2014.org **before 31 December 2012**.

The abstract must be submitted in either English or French, with a maximum of 400 words.

All papers must be original work available to be released for publication. Material that has been previously published will not be accepted. Any reference of a political, commercial or advertising nature must be excluded from the papers. The indication of a brand name should be excluded in the title and in the abstract. The abstracts will be reviewed anonymously by the PIARC Technical Committees and decisions will be notified to the authors by E-mail **before 1 April 2013**.

Authors of accepted abstracts will be invited to submit a full paper on-line **before 31 July 2013**. These will be reviewed by the PIARC Technical Committees and decisions regarding publication and requests for amendments will be notified to the authors **before 31 October 2013**.

The full papers can be submitted in one of the official languages of the Congress: English, French or Spanish. If the paper is submitted in Spanish, it is strongly recommended to include a translation in English or French for the review.

The criteria to assess the papers will be based on the originality of the content, the technical interest and the applicability and transferability of the results.

DATES TO REMEMBER

Call for papers	From May 2012
Deadline for abstracts	31 December 2012
Notice of acceptance of abstracts	1 April 2013
Deadline for full text of papers	31 July 2013
Notice of review of papers	31 October 2013
XIVth International Winter Road Congress Andorra 2014	4-7 February 2014

PIARC PRIZES 2014

A prize will be awarded to the best papers among individual contributions as result of the call for papers.

More information will be released later on the Congress website.



CONTACT INFORMATION

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TOPICS FOR THE CALL FOR PAPERS

Papers are solicited on the following topics exclusively – Papers that fall outside this scope will not be considered.

Topic 1. Winter service and climate change

How climate change affects winter conditions and what are the impacts of climate change on winter service? In some cases the winter becomes harsher and in other more moderate. How do winter service organizations respond considering benefit/cost analysis with appropriate planning periods, and opportunities for technology? Examples of adaptation of practices in road winter operations to climate change will be examined.

Topic 2. Costs and benefits of winter service in a constraint budgetary context

The economic crisis is a concern to many countries while expectations for winter service remain high. Adapting the delivery of winter service to decreasing budgets is necessary. What impacts have there been regarding training? Have there been changes to winter maintenance equipment fleets particularly regarding modular equipment? Which solutions to consider?

Topic 3. Extreme events in winter time

Some winter events are so intense that hundreds of users become stranded on motorways and entire communities or even countries become isolated. During these extreme events standard response plans are no longer valid. Case studies describing such extreme events will address specific organization, management, and cooperation between highway authorities and other agencies. Discussion points include established plans to cope with resource limitations that are likely during extreme events of extended duration such as management of strategic salt reserves, manpower working limits, equipment reliability, and prearranged agreements for assistance from other sources. Communication plans designed for road users and management strategies for private, heavy and commercial vehicles, and emergency response vehicles should also be included.

Topic 4. Winter service management

This topic provides an update on a wide range of winter maintenance management activities. Reports on level of service and the relationship between operational strategies and the effect on mobility like accident rates, types and severity, and travel time reliability will be covered. Updates on innovations, technology and information for decision-making such as meteorology and advanced forecasts, road weather information systems and the next generation of winter maintenance decision support systems will be made. This topic will also address measures suited for vulnerable users such as cyclists, pedestrians, and disabled persons or those with reduced mobility.

Topic 5. Operational approaches, equipment and products for winter conditions

Developments in equipment, technology, and materials for controlling snow and ice will be explored. Presentations will address properties, performance, life cycle analysis, impacts on the environment, and sustainability of winter maintenance operational approaches, equipment and materials. The topic will review the evolution of techniques for removing snow and ice including snow plowing, material spreading, and chemicals and abrasives used in winter maintenance. Alternative approaches to traditional methods are becoming available. A discussion would also include the control of drifting snow, detection and protection from avalanche, and solutions as the use of geothermal energy sources.

Topic 6. The road user in winter conditions

The road user is an important partner in providing winter service. The needs of road users in winter vary depending on the type of their trip (personal, commercial-freight and other heavy vehicles, and responding to emergencies). How do we learn these needs to form appropriate management plans and communicate in the best way to them? For example, smart phones, apps on vehicle communication systems, and social media may be viable ways to communicate winter situations to road users and communication from the road user by the same methods could provide valuable information to the road authorities. Vehicles have evolved to include many driving aids, safety features, and methods to communicate with its operator. How have these advances helped winter mobility and how can we take advantage of them in the provision of winter service? Special individualized equipment and communication strategies for vehicles and vulnerable users (pedestrians, cyclists, and those with reduced mobility) could also be presented.

Topic 7. Road tunnels in winter conditions

Papers are invited which detail recent ideas, knowledge and experience relating to any of the following topics:

- Maintenance and operation under severe climate conditions
- Measures to improve safety under risks related to winter climate
- Measures to prevent or reduce water seepage and icicles
- Impact of cold tunnel environment on the performance of equipments (fire fighting systems, etc.)
- Implications on users behaviour

Topic 8. Road bridges in winter conditions

Papers are invited which detail recent ideas, knowledge and experience relating to any of the following topics:

- Impact of de-icing salts on bridges, alternative deicing methods, and measures for protection
- Design and management of specific elements under winter conditions (expansion joints, barriers, cables, curbs, etc.)
- Scouring of bridges due to melting ice condition
- Behaviour of (semi-) integral bridges under extreme winter condition.