



[www.cost-tu0702.org](http://www.cost-tu0702.org)

**FINAL CONFERENCE**

**COST ACTION TU0702**

**“Real-time Monitoring, Surveillance and Control  
of Road Networks under Adverse Weather  
Conditions”**

**21<sup>st</sup> and 22<sup>nd</sup> of May 2012  
Helsinki, Finland**

**Second Announcement**



**EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY**

## **COST Action TU0702**

COST (European Cooperation in Science and Technology) is an intergovernmental European framework for international cooperation between nationally funded research activities. COST creates scientific networks and enables scientists to collaborate in a wide spectrum of activities in research and technology. COST activities are administered by the COST Office (website: [www.cost.eu](http://www.cost.eu)).

The COST Action TU0702 ([www.cost-TU0702.org](http://www.cost-TU0702.org)) titled “*Real-time Monitoring, Surveillance and Control of Road Networks under Adverse Weather Conditions*” is a research network established under the aegis of the COST organization. The main objective of this Action is to better understand the impacts of weather on freeways/motorways as well as on urban networks highway operations and to develop, promote and implement strategies and tools to mitigate those impacts.

## **The Conference**

This final conference of the Action is intended to disseminate the overall scientific work of the Action carried out during the last four years. The final outcomes and the results from the work of the Action will be presented in a series of technical presentations organised into different sessions based on the themes of the Action. The main themes of the Action include:

- Pavement surface conditions during adverse weather
- Traffic Modelling for Weather Dependent Control Applications
- Weather modelling and Management
- Traffic management strategies during adverse weather conditions for improved traffic safety

All the technical presentations will be made by members of the Action and invited external experts.



The conference will take place in Helsinki prior the 16<sup>th</sup> International Road Weather Conference (SIRWEC) on the 21<sup>st</sup> and 22<sup>nd</sup> of May 2012.

The venue of the conference will be at the Helsinki Convention & Exhibition Center, Finland.

## Who should attend?

Researchers, practitioners and students from all field of engineering and engineering systems, particularly traffic and road engineering and meteorologists those with expertise or interest in the field of weather and traffic.

## Contact

Information concerning accommodation and travel will be found in the SIRWEC website (<http://www.sirwec2012.fi/?page=info>).

For the conference program and additional information please visit the SIRWEC-TU0702 Webpage: <http://www.sirwec2012.fi/?page=cost>

Please feel free to contact the TU0702 Chair, Prof. Nour-Eddin El Faouzi ([nour-eddin.elfaouzi@ifsttar.fr](mailto:nour-eddin.elfaouzi@ifsttar.fr)) for any further information.

## Registration

Registration is done via an online registration system operated by TAVI Congress Bureau and is required from all participants.

Please follow this link to register:  
[https://secure.tavicon.fi/form.php?conference\\_id=146&language\\_id=1](https://secure.tavicon.fi/form.php?conference_id=146&language_id=1)

If you have any questions concerning the registration form or procedure, please contact TAVI Congress Bureau at [sirwec.conference2012@tavicon.fi](mailto:sirwec.conference2012@tavicon.fi)



## ACTION'S SIGNATORIES

### COST institutions

Austria  
Belgium  
Czech Republic  
Denmark  
Finland  
France  
Germany  
Greece  
Iceland  
Netherlands  
Poland  
Portugal  
Romania  
Spain  
Sweden  
Switzerland  
Turkey  
United Kingdom

### Non COST institutions

Australia  
Japan  
Action's Chair  
Dr. El Faouzi Nour-Eddin  
IFSTTAR  
Grant Holder  
Nathalie Joly  
ERT

ESF provides the COST Office  
through an EC contract



CSO Approval date : 16/11/2007  
Entry into force : 29/01/2008  
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### Address for correspondence

IFSTTAR  
Transport and Traffic Engineering LICIT  
case 24, 25 avenue François Mitterrand F69675  
Bron cedex - FRANCE  
For further information about the COST action,  
please contact: elfaouzi@inrets.fr



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REAL-TIME MONITORING, SURVEILLANCE  
AND CONTROL OF ROAD NETWORKS  
UNDER ADVERSE WEATHER CONDITIONS

## TOWARDS WEATHER-RESPONSIVE TRAFFIC MANAGEMENT STRATEGIES

The goal of Action TU0702 is to better understand the impacts of weather on freeways/motorways and urban highway network operations, and to develop, promote and implement strategies and tools to mitigate those impacts.

Adverse weather conditions can significantly influence traffic operations, traffic flow stability, and safety. Advanced technologies for collecting and archiving weather data are valuable adjuncts in the development of intelligent weather-based traffic management strategies and monitoring and control systems.

Traffic flow is highly dependent on weather conditions and research dealing with this issue is limited. In view of the paramount importance of having weather-based tools available, this project focuses on the development of techniques to improve road management and safety in adverse weather. More precisely, the action TU0702 will develop tools for achieving weather-sensitive traffic management and control.

The action brings together researchers actively engaged in weather and road network management. It concentrates on mutually complementary methods for modeling, estimation and control that improve the safety and efficiency of traffic flow networks.

The project will also address issues related to road surface state monitoring. The planned models and estimators will support advanced control strategies that incorporate fusion of multiple sensor data and information.

## STRUCTURE AND RESEARCH PROGRAM

The Cost Action TU0702 is divided into two working groups (key areas), developing collaborative research at different level:

### WG1. MODELLING WEATHER IMPACT ON TRAFFIC

This working group deals with traffic modelling, estimation and control under different weather conditions.

The tasks undertaken within this WG are divided into three working packages (WP):

1. WP1. State of the art review, traffic and weather data needs and integration
2. WP2. Traffic modelling, estimation and control under different weather conditions
3. WP3. Decision support system for traffic monitoring and users' information.

### WG2. MODELLING WEATHER IMPACT ON ROAD SURFACE AND PAVEMENT

Working Group 2 focuses on the modelling of weather impact on road surface and pavement. Several tasks will be undertaken within this WG:

1. WP1 . Tools for road surface monitoring
2. WP2 . Analysis of weather impacts on different types of pavement
3. WP3. Tools development for reducing the effects of weather.

## NETWORKING AND DISSEMINATION OF KNOWLEDGE

COST TU0702 has successfully established a strong connection with both academic and professional communities:

— Membership on the AHO10 TRB "surface transportation weather" committee.

— Strong links to the main international initiatives dealing with traffic management and/or weather information (e.g., the FHWA road weather program-CLARUS, SIRWEC, PIARC, Network of Excellence NEARCTIS, TU0903).

— Interaction with the end-users of the Action's achievements: motorway operators, private companies, local authorities.

Dissemination of the results of the action occurs through the COST resources and interfaces:

— Participation to the main conferences relevant to the action's activities (e.g. TRA, TRB, ITSWC, WCTR, SIRWEC ...)

— Short-term Scientific Missions

— Training school on ...

