



**IRF**  
GLOBAL

# Road Traffic & Environment Management

*From Simulation to Sustainable Operation*

**Online Training**  
**May 9 - 19, 2022**



## Online Training

16 Professional Development Hours



# ROAD TRAFFIC & ENVIRONMENT MANAGEMENT: *From Simulation to Sustainable Operation* May 9-19, 2022

## Background

Traffic congestion and emissions remain harmful by-products of vehicle ownership which policy makers, traffic planners & network managers can mitigate through a range of instruments.

Traffic simulation provides a powerful means through which planners can forecast and manage congestion by accurately simulating the interaction of all vehicles and pedestrians – from a macroscopic to a microscopic level – as well as anticipate likely impacts of new developments. However, traffic prediction modelling is a vast domain in which a wide range of models suited for specific purposes exist. Moreover, the development of new forms of mobility, including shared mobility and micromobility, require planners to stay on top of this fast-moving discipline.

In parallel, the deployment of connected vehicles and next generation traffic management solutions are giving rise to new technological enablers, collectively designated as Cooperative ITS (C-ITS), that allow the effective exchange of data through wireless communication technologies between components and actors of the transport system, between vehicles and infrastructure (vehicle-to-infrastructure or V2I). C-ITS services are key to addressing increased road traffic congestion by enabling new mobility services that contribute to the achievement of emissions reductions.

### Why Online?

- Earn 16 Professional Development Hours
- Expert training by professionals for Professionals: access IRF's unique curriculum and lectures developed by world-class specialists
- Accelerated learning processes: get up to speed and gain new insights in less time and with no travel constraints
- Full access to learning materials and session recordings
- Small classrooms & scheduled One-on-One sessions with instructors
- Self-paced options available
- Interactive group projects and case studies
- Receive IRF Certification

## Format

The lectures will be taught over a two-week period with live 2-hour on-line sessions held Monday through Thursday. Upon completion of the training program, the IRF will administer an on-line knowledge test. Participants with a score of 80% of the exam will be awarded with a certificate verifying their successful completion of the course.

## Learning Objectives

The course is designed to support participants' learning objectives in the following areas:

- ✓ Understand the theory and techniques behind traffic forecasts & road demand estimates
- ✓ Leverage simulation tools to optimize urban traffic flows
- ✓ Gain an understanding on how to benefit from ITS solutions in reducing emissions and mitigating environmental impact of road transport,
- ✓ Anticipate emerging opportunities to deploy Cooperative ITS for safer, smarter and greener road transport,
- ✓ Learn the best practices from European case studies with focus on cities,
- ✓ Acquire the knowledge to identify the most effective ITS solutions and C-ITS services according to operational needs.

## Target Audience

- National Road & Transport Agency Executives
- Highway Engineers and Managers
- Urban Planners
- Transportation Consultants
- Environmental Managers

## Instructors



**Ing. Lucas M. Vozzi**

Lucas is a civil engineer with a specialization in pedestrian and vehicle modelling and GIS databases developed in Argentina, Chile, Colombia, Ecuador, Perú and México. As a certified trainer, Lucas regularly delivers lectures and training course in popular simulation and modelling software, such as PTV Visum, Vissim, Viswalk and Vistro.



### Vincent Blervaque

Vincent Blervaque has an extensive 20 years' experience in ITS. He worked at ERTICO ITS Europe from 2001 to 2014 as Director of Development and Deployment where he was responsible for European research and innovation projects and ITS deployment initiatives. His expertise include also international cooperation on connected and automated driving, especially with US and Japan.

## Schedule

Mondays, Tuesdays, Wednesdays & Thursdays (09:00 AM– 11:00 AM US EDT / 14:00-16:00 GMT)

Module 1 – Day 01	<ul style="list-style-type: none"><li>• Urban congestion &amp; environmental impacts</li><li>• Introduction to Travel Forecasting &amp; Traffic Impact Analysis</li><li>• ITS solutions for congestion &amp; emission reduction</li><li>• Case Study: Environment optimized Traffic Management</li></ul>
Module 1 – Day 02	<ul style="list-style-type: none"><li>• Macro modelling applications</li><li>• Case study – practical exercises</li></ul>
Module 1 – Day 03	<ul style="list-style-type: none"><li>• Micro modelling applications</li><li>• Case study – practical exercises</li></ul>
Module 1 – Day 04	<ul style="list-style-type: none"><li>• MicroMobility &amp; Shared Mobility</li><li>• Modelling for environmental management</li></ul>
Module 2 – Day 01	<ul style="list-style-type: none"><li>• Introduction to Cooperative ITS &amp; its role in traffic management</li><li>• Learnings from large scale implementation of C-ITS Projects</li><li>• Case study – Bordeaux</li></ul>
Module 2 – Day 02	<ul style="list-style-type: none"><li>• The European perspective of C-ITS deployment - C-ROADS</li><li>• C-ITS in cities</li><li>• Case Study - Lisbon/Porto</li></ul>
Module 2 – Day 03	<ul style="list-style-type: none"><li>• C-ITS for smarter and safer signalized intersections</li><li>• Case Study – Brno or Vienna or Kassel</li><li>• Future scenarios: connected, cooperative &amp; automated roads</li></ul>
Module 2 – Day 04	<ul style="list-style-type: none"><li>• Other ITS use cases:<ul style="list-style-type: none"><li>○ Road User Charging</li><li>○ Mobility as a Service</li></ul></li><li>• The ITS for Climate Impact Mitigation Alliance</li><li>• Course conclusion</li></ul>

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## **International Road Federation**

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