



With the GERI LIO

**Workshop on INTEGRITY MONITORING FOR TERRESTRIAL USERS
15/12/2015, Ifsttar, 20 rue E. Reclus, Villeneuve d'Ascq, France**

10h-16h

Introduction

With the development of safety critical (as ADAS) and liability critical applications (as Toll collect), the need for integrity monitoring solutions for terrestrial transport users becomes crucial. GNSS integrity has been defined and designed as answers to aeronautical requirements. It requires that the different error sources can be bounded with a very high probability. However, EGNOS or other SBAS solutions, as well as GBAS systems, that integrate integrity information, are not appropriate for terrestrial users as they do not bound local effects properly. Indeed, they are focused on system errors and do not integrate local errors caused by NLOS satellites for example. Multipath are there bounded by a priori values not representative of realistic errors. Furthermore, standard RAIM (Receiver Autonomous Integrity Monitoring) relies on the assumption of single simultaneous failure, not realistic in the case of multipath effects in urban environments, and cannot be used either as developed for aviation. Thus, everybody agrees now that these solutions cannot be used by terrestrial users and that specific mechanisms have to be proposed for these applications.

The aim of the workshop is to present some of the issues based on GNSS used for these critical applications: The computation of the protection levels, that requires a fine characterization of the local effects and new concepts.

Draft agenda

- Basics on integrity. Introduction by *Prof. Letizia Lo Presti, Politecnico di Torino*
- Analysis of the existing methods for GNSS integrity: how local effects can be characterized and included in the PL evaluation in specific land applications?
Prof. Letizia Lo Presti and Sabrina Ugazio, Politecnico di Torino
- Integrity Monitoring of GNSS-aided Positioning in Harsh Environments for Land Applications: Measurements Domaine versus Position Domaine
Mohamed Sahnoudi, ISAE
- IBPL and KIPL algorithms developed by GMV. Remaining issues
Joaquin Cosmen-Shortmann, GMV

Access :

From Aeroport Lille-Lesquin / taxi (15 min)

From Lille Europe train station, Metro line 2 direction St Philibert, stop Gare lille Flandre. Then Metro line 1 direction 4 Cantons, terminus.

Participation is free but registration is mandatory (juliette.marais@ifsttar.fr). Please notice that the number of participants will be limited.