

# GNSS TECHNOLOGY ADVANCES IN A MULTI-CONSTELLATION FRAMEWORK

21-22 JANUARY, 2016

ROME SOGEI - VIA MARIO CARUCCI, 99

# DAY 1: GNSS PROGRAMMES UPDATES AND PNT SOLUTIONS ADVANCES

- 08:30 09:15 Registration
- 09:30 09:45 Welcome address by Sogei Chairman and CEO, Cristiano Cannarsa

#### INTRODUCTORY SPEECHES

- 09:45 10:30 Huge data Sets: the topological approach M. Rasetti (Politecnico di Torino)
- 10:30 11:15 SBAS Integrity: Current status and future perspectives P. Enge (University of Stanford)

#### Session 1: PNT, UBIQUITOUS POSITIONING AND SDR

- 11:50 12:30 The Case for Recording IF Data for GNSS Signal Forensic Analysis Using a SDR G. Lachapelle (formerly CRC/iCORE Chair in Wireless Location, University of Calgary)
- 12:30 13:10 Progresses about Indoor Positioning Techniques Innovations A. Neri (Università di Roma Tre)
- 14:10 14:50 SDR Technology Updates K. Borre (Danish GNSS Center)
- 14:50 15:30 A totally SDR-based Low Cost Augmentation System for Institutional Applications R. Capua (Sogei)

## Session 2: Privacy, Anti-spoofing, Authentication

- 15:30 16:10 The impact of the European privacy regime on indoor and outdoor location technology development: the new challenges in light of the future EU General Data Protection Regulation A. del Ninno (Università LUISS)
- 16:40 17:20 Anti-Spoofing and Authentication techniques Progresses and Advances O. Pozzobon (Qascom)
- 17:20 18:00 GNSS and Timing: the need for a global PNT infrastructure M. Lisi (ESA)

## DAY 2: RAIL: THE LATEST FRONTIERS OF HIGH ACCURACY AND HIGH INTEGRITY APPLICATIONS

### Session 3: Rail and GNSS, a ROADMAP FOR EXPLOITATION

- 09:45 10:30 Keynote on Galileo Programme Status G. Calini (GSA)
- 10:30 11:00 High Integrity applications for Rail applications and the role of international collaboration P. Enge (University of Stanford)
- 11:00 11:30 The role of satellite applications for the ERTMS evolution A. Chiappini (ERA)
- 12:00 12:30 Satellite based train control systems for local and regional lines F. Senesi (RFI)
- 12:30 13:00 Roadmap for technology development and validation F. Rispoli (Ansaldo STS), A. Neri (Radiolabs)
- 14:00 14:30 The Certification Process in the ERTMS-ETCS Train Control System A. Lippi (ANSF)

### Session 4: Rail & Satellite, the role of stake-holders

- 14:30 15:00 The vision from European Rail Industry P. Gurnik (UNIFE)
- 15:00 15:30 The role and contribution of Italian Space Agency: M. Caporale (ASI)
- 16:00 16:30 GNSS application method within ETCS: basis for efficient multi-constellation solutions A. Filip (University of Pardubice)
- 16:30 16:45 Round Table: from technology to operations by exploiting satellite assets
- 16:45 17:00 Closing Remarks

Moderators: Roberto Capua; Ennio Ionni

INFO: GNSSWorkshop@sogei.it

