

Programme

The detailed programme is provided below the table

Time	Tue 13-Nov-2018		Wed 14-Nov-2018		Thu 15-Nov-2018		Fri 16-Nov-2018
08:00 - 09:00			Registration				
09:00 - 09:15			Opening				
09:15 – 13:00			Invited Guests Session: Systems and Algorithms		Invited Guests Session: Terrestrial Navigation		Invited Guests Session: Air Navigation
13:00 – 14:30			Lunch		Lunch		Snack
14:00 – 17:30	Tutorials	Associated Event: GSA EDG²E User Forum (Free)					
14:30 – 17:35			Peer-Reviewed Session: GNSS Augmentations and Their Use for Navigation	Peer-Reviewed Session: Navigation in Challenging Environment I	Peer-Reviewed Session: Navigation in Challenging Environment II	Young Researcher Session	
17:10 – 18:00			Cocktail				

TUESDAY NOV 13TH

• **Afternoon :**

Tutorials (The tutorials will be held in parallel. The description of the tutorials is available on the "[Tutorial](#)" section).

- Tutorial #1: **Vision-aided inertial navigation: Enabling accurate positioning in GNSS-denied environments**, by **Jonathan Kelly** (University of Toronto, Canada)
- Tutorial #2: **Dual-frequency multi-constellation GNSS for Civil Aviation**, by **Todd Walter** (Stanford University, USA)
- Tutorial #3: **Processing of future GNSS signals**, by **Christophe Macabiau** (ENAC, France)

Associated Event: GSA EDG²E User Forum (Free)

The main purpose of the GSA EDG²E User Forum is to share the status of the SBAS Dual Frequency Multi Constellation GNSS receiver specification and modes of operation with the future customers and get their feedback and operational point of view. In preparation of the Forum a questionnaire will be sent to all potential attendees and stakeholders. This questionnaire will mainly focus on the operational benefit of the SBAS DFMC receiver. The exploitation of the questionnaire will be performed before the user forum and will drive the content of the presentations.

To register, please follow this [link](#).

WEDNESDAY NOV 14TH

- **Morning :**

9:00-9:15: Opening of ITSNT 2018

9:15-13:00: "Invited Guest" Session #1: Systems and Algorithms

Session moderator: *Olivier Julien (ENAC, France)*

- 9:15-9:50: **Logan Scott** (Logan Scott Consulting, USA), [Towards a Comprehensive Approach for Obtaining Resilient PNT](#)
- 9:55-10:30: **Matteo Paonni** (European Commission, Italy), [New Concepts and Ideas to Improve the Reliability of PNT Service](#)

10:30-11:10: Coffee Break

- 11:10-11:45: **Zak Kassas** (University of California, Irvine, USA), [No GPS, No Problem: Exploiting Signals of Opportunity for Resilient and Accurate Autonomous Vehicle Navigation](#)
- 11:50-12:25: **Francis Soualle** (Airbus DS, Germany), [Perspectives of PNT Services Supported by Mega-Constellations](#)
- 12:20-13:00: Round table with all presenters

13:00-14:30: Lunch

- 14:30-17:05: **Afternoon : 2 parallel sessions**

<p>"Peer Reviewed Papers" Session #1: GNSS Augmentations and Their Use for Navigation *</p> <p>Session co-chairs: Jaron Samson (ESA, France) and Norbert Suard (CNES, France)</p>	<p>"Peer Reviewed Papers" Session #2: Navigation in Challenging Environment I *</p> <p>Session co-chairs: V. Renaudin (IFSTTAR, France) and Z. Kassas (UC Riverside, USA)</p>
<ul style="list-style-type: none"> • 14:30-14:55: Results on Australia and New Zealand Second Generation SBAS and PPP Augmentation System, Julian Barrios Lerma, GMV (Spain) 	<ul style="list-style-type: none"> • 14:30-14:55: Hybridisations Based on Visual Information for the Localisation of Self-Driving Cars, Kevin Honore, Safran Electronics & Defense (France)
<ul style="list-style-type: none"> • 15:00-15:25: Assessment of Satellite Selection Methods under DFMC SBAS Augmentation for LPV-200 Approach Operations, Denis Bouvet, Thales AVS (France) 	<ul style="list-style-type: none"> • 15:00-15:25: 5G positioning and hybridization with GNSS observations, Roc Maymo-Camps, Telespazio (France)
<ul style="list-style-type: none"> • 15:30-15:55: SBAS Guidelines for Shipborne Receiver based on IMO Res. A.1046 (27): EGNOS Performance Assessment in Norwegian Coast, Sergio Magdaleno, ESSP SAS (Spain) 	<ul style="list-style-type: none"> • 15:30-15:55: Bounding Localization Errors with Student Distribution for Road Vehicles, Joelle Al Hage, SIVALab, Université de Technologie de Compiègne, Sorbonne Universités (France)
<p>15:55-16:40: Coffee Break</p>	
<ul style="list-style-type: none"> • 16:40-17:05: gmvBRAVE: A powerful tool for SBAS engineering, Carlos Cuesta-Martínez, GMV (Spain) 	<ul style="list-style-type: none"> • 16:40-17:05: Low-cost high-precision GNSS: challenges and opportunities, Yang Gao, University of Calgary (Canada)

- **17:10-18:00: Cocktail**

THURSDAY NOV 15TH

• Morning :

9:15-13:00: "Invited Guest" Session #2: Terrestrial Navigation:

Session moderator: Dr. Jason Rife (Tufts University, USA)

- 9:15-9:50: **Andrew Dempster** (University of New South Wales, Australia), [Use of GNSS Data as Evidence](#)
- 9:55-10:30: **Karen van Dyke** (Dept. Of Transportation, USA), [Resilient Positioning, Navigation, and Timing](#)

10:30-11:10: Coffee Break

- 11:10-11:45: **Valérie Renaudin** (IFSTTAR, France), [Integrating Human Dimension in the Development of Pedestrian Navigation](#)
- 11:50-12:25: **Jonathan Kelly** (University of Toronto, Canada), [The Past, Present, and Future of Visual-Inertial Navigation](#)
- 12:20-13:00: Round table with all presenters

13:00-14:30: Lunch

• 14:30-17:35: Afternoon : 2 parallel sessions

<p align="center">"Young researcher" Session:</p> <p>Session co-chairs: Marion Aubault (CNES, France) and Francis Soualle (Airbus DS, Germany)</p>	<p align="center">"Peer Reviewed Papers" Session #3:</p> <p align="center">Navigation in Challenging Environment II *</p> <p>Session co-chairs: Ignacio Fernandez Hernandez (European Commission, Belgium) and Michael Meurer (DLR, Germany)</p>
<ul style="list-style-type: none"> • 14:30-14:55: Antenna and Aircraft Radiating Models for a GNSS Multipath Pseudo-Range Error Model, Capucine Amielh, ENAC (France) 	<ul style="list-style-type: none"> • 14:30-14:55: Designing and Evaluating Next Generation of Resilience Receivers, Simón Cancela, GMV (Spain)
<ul style="list-style-type: none"> • 15:00-15:25: Sensor Fusion for Robust Path Duplication in Automated Ground Vehicle Convoys, Dan Pierce, Auburn Univ. (USA) 	<ul style="list-style-type: none"> • 15:00-15:25: Characterization Of Pseudo - Range Multipath Errors In An Urban Environment, Eustachio Roberto Matera, ENAC (France)
<ul style="list-style-type: none"> • 15:30-15:55: Joint Design of GNSS Signal and Message Structure for Galileo 2nd Generation, Lorenzo Ortega, TeSA (France) 	<ul style="list-style-type: none"> • 15:30-15:55: GNSS Cloud-Data Processing Technique for Jamming Detection and Localization, Jung-hoon Lee, Inha University (South Korea)
<p>15:55-16:40: Coffee Break</p>	
<ul style="list-style-type: none"> • 16:40-17:05: Tackling the Scale Factor Issue in a Monocular Visual Odometry Using a 3D City Model, Paul Verleine Gakne, University of Calgary (Canada) 	<ul style="list-style-type: none"> • 16:40-17:05: Receiver Independent Implementation of the Galileo Open Service Navigation Message Authentication, Xabier Zubizarreta, Fraunhofer IIS (Germany)
<ul style="list-style-type: none"> • 17:10-17:35: ESNC University Challenge Presentation 	<ul style="list-style-type: none"> • 17:10-17:35: The Ionosphere Prediction Service for GNSS Users, Fillippo Rodriguez, Telespazio (Italy)

FRIDAY NOV 16TH

• Morning :

9:15-13:00: "Invited Guest" Session #3: Air Navigation

Session moderator: *Laurent Azoulai (Airbus, France)*

- 9:15-9:50: **Jiyun Lee** (KAIST, South Korea), [Local-Area Differential GNSS for UAV Applications](#)
- 9:55-10:30: **Jason Rife** (Tufts University, USA), [Software and GNSS Fault-Monitoring for Automated Aircraft](#)

10:30-11:10: Coffee Break

- 11:10-11:45: **Catherine Ronfle-Nadaud** (DSNA, France), [Risk Assessment for Drones Operation](#)
- 11:50-12:25: **Todd Walter** (Stanford University, USA), [RFI Mitigation for Civil Navigation](#)
- 12:20-13:00: Round table with all presenters

13:00-14:30: Snack

REGISTRATION & ADMINISTRATION

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