



## GNSS SIGNALS 2009 PROGRAM

Day 1 - Thursday 10th December 2009

08:00	<b>Registration</b>
	<b>Welcome Session</b>
09:00 - 09:30	<i>Jean-Luc Gerner, European Space Agency (ESA), Netherlands; Jean-Luc Issler, Centre Nationale d'Etude Spatiales (CNES), France; Michael Meurer, German Aerospace Center (DLR), Germany; Bernd Eissfeller, University of Federal Armed Forces (UniBW), Germany</i>
09:30 - 10:00	<b>Keynote: European GNSS Programmes Status and Perspectives on Signals</b> <i>Frédéric Bastide, European Commission</i>
10:00 - 11:20	<b>Session 1: GNSS Receiver Processing and Performance Assessment</b>
10:00	<b>Quantization Losses in GNSS Receivers</b> <i>A.Pratt, QinetiQ, UK; J.A.Avila-Rodriguez, University FAF Munich, Germany</i>
10:20	<b>Methodologies for the determination of the minimum required carrier to noise ratio to receive GNSS signals</b> <i>M.Paonni, M.Anghileri, J.A.Ávila Rodríguez, S.Wallner, B.Eissfeller, University FAF Munich, Germany</i>
10:40	<b>Cyclostationarity analysis and use of MBOC signals</b> <i>M.Sahmoudi, V.Calmettes, M.Bousquet, ISAE/SupAero, Toulouse University, France</i>
11:00	<b>Attitude Bootstrapped Relative Positioning for Spacecraft</b> <i>P.J.Buist, Delft University of Technology, The Netherlands; P.J.G.Teunissen, Delft University of Technology, The Netherlands and Curtin University of Technology, Australia; S.Verhagen, G.Giorgi, Delft University of Technology, The Netherlands</i>
11:20 - 11:40	<b>Coffee Break</b>
11:40 - 13:00	<b>Session 2: Multi-Frequency Signal Processing</b>
11:40	<b>Multifrequency Multisatellite Carrier Tracking</b> <i>K.Giger, P.Henkel, Technical University of Munich (TUM), Germany; C.Günther, Technical University of Munich(TUM) and German Aerospace Center (DLR), Germany</i>
12:00	<b>Performance of Extreme Sensitive Signal Processing Using Long Coherent Integration Times for an Ultra Tight Coupled GNSS/INS Pedestrian Navigation System</b> <i>T.Pany, IFEN GmbH, Germany; T.Wörz, AUDENS ACT Consulting GmbH, Germany; J.Winkel, IFEN GmbH, Germany; R.Schweikert, AUDENS ACT Consulting GmbH, Germany; G.López-Risueño, European Space Agency, The Netherlands</i>
12:20	<b>Evolutionary Navigation Systems</b> <i>J.J.Floch, M.Ouedraogo, D.Oskam, EADS Astrium, Germany; S.Vaccaro, D.Llorens del Rio, D.Fernandez, JAST; M.Schoenhuber Johanneum Research, Austria; F.Fernandez, European Space Agency, The Netherlands</i>
12:40	<b>Estimation of phase and code biases on multiple frequencies with a Kalman filter</b> <i>P.Henkel, Z.Wen, Munich University of Technology (TUM), Germany; C.Günther, Technical University of Munich(TUM) and German Aerospace Center (DLR), Germany</i>
13:00 - 14:30	<b>Lunch</b>
14:30 - 16:10	<b>Session 3: Multipath</b>
14:30	<b>Implementation of Digital Beamforming in GNSS Receivers</b> <i>C.Fernández-Prades, P.Closas, J.Arribas, Centre Tecnològic de Telecomunicacions de Catalunya, Spain</i>
14:50	<b>Adaptive beam-forming antenna for ranging stations</b> <i>F.Letestu, M.Revol, Thales Avionics, France</i>
15:10	<b>BOC ambiguity resolution aided by virtual sub-carrier tracking for multi-path mitigation</b> <i>N.Martin, H.Guichon, Thales Aerospace, France</i>
15:30	<b>Multipath mitigation in GPS/Galileo receivers with signal processing techniques</b> <i>K.Benachenhou, E.Sari, M.Hammadouche, Aeronautic Department of BLIDA, Algeria</i>
15:50	<b>Effect of Multipath on Code-Tracking Error Jitter of a Delay Locked Loop</b> <i>M.Vergara, F.Antreich, M.Meurer, German Aerospace Center (DLR), Germany</i>
16:10 - 17:10	<b>Poster Session / Coffee Break</b>
	<b>GIANO: Galileo Interferometer Scatterometer and Observer</b> <i>G.Pirazzi, C.Dionisio, N.De Quattro, Intecs S.p.A., Italy; N.Perdicca, University of Rome La Sapienza, Italy</i>
	<b>Regulatory conditions on the global use frequency spectrum allocated to the RNSS</b> <i>H.Kuhlen, EADS Astrium GmbH, Germany</i>
	<b>The role of the ESSP in the detection of EGNOS Performance anomalies and their evaluation</b> <i>E.Lacarra, S.Cilla, R.Roldán, ESSP-SAS, SPAIN</i>
	<b>A ground-based system for monitoring interplanetary weather</b> <i>P.Duffet-Smith, Cavendish Laboratory, University of Cambridge, UK</i>
	<b>Sensing atmospheric turbulence by GNSS phase observations</b> <i>M.Vennebusch, Institut für Erdmessung, Leibniz Universität Hannover, Germany</i>
	<b>Efficient Design of Thread-Based Real-time software GNSS receiver in multi-core system</b> <i>K.Yong-Soo, Navigation and Control System Laboratory / Konkuk University, Korea</i>
	<b>Correlation and Randomness Properties of the Spreading Coding Families for the current and future GNSSs</b> <i>S.Francis, EADS Astrium GmbH, Germany</i>
17:10 - 18:50	<b>Session 4: Interference &amp; Compatibility</b>
17:10	<b>Proposition for a Simple and Representative Radio Frequency Compatibility Criterion for Spreading Code Acquisition</b> <i>S.Francis, EADS Astrium GmbH, Germany</i>
17:30	<b>Interference Measurements and Analysis for High Quality GNSS Signal Verification</b> <i>Steffen Thöbert, Stefan Erker, Johann Furthner, Michael Meurer, German Aerospace Center (DLR), Germany</i>
17:50	<b>Interference assessment using up to date public information of operating and under development RNSS systems</b> <i>J.V. Perelló Gisbert, European Space Agency, The Netherlands</i>
18:10	<b>Meaconing and Spoofing Detection based on Correlation Properties</b> <i>J.Wendel, EADS Astrium GmbH, Germany</i>
18:30	<b>Airborne measurements of DME interferers at the European hotspot</b> <i>A.Steingass, A.Hornbostel, H.Denks, German Aerospace Center (DLR), Germany</i>
19:00	<b>Reception: Galileo Control Center Oberpfaffenhofen</b>



Day 2 - Friday 11th December 2009

08:00	Registration
09:00 - 10:40	<b>Session 5: GNSS Evolution and Modernization I</b>
09:00	<b>A candidate PRN code design for Indian regional navigation satellite system</b> A.Skukla, Space Applications Centre, Indian Space Research Organisation, India
09:20	<b>Estimating the Time-To-First-Fix for GNSS Signals. Theory and Simulation Results</b> M.Anghileri, M.Paonni, J.A.Ávila Rodríguez, S.Wallner, B.Eissfeller, University FAF Munich, Germany
09:40	<b>Constant-Envelope Modulation applied to GNSS Signal-in-Space Design</b> A.Emmanuele, University of Pisa, Italy; F.Zanier, European Space Agency, The Netherlands, M.Luise, University of Pisa, Italy, M.Crisci, European Space Agency, The Netherlands
10:00	<b>On the methodologies for GNSS signal design</b> F.Antreich, German Aerospace Center (DLR), Germany; J.A. Nossek, Munich University of Technology (TUM), Germany; J.-L.Issler, Centre National d'Etudes Spatiales (CNES), France; M. Meurer, German Aerospace Center (DLR), Germany
10:20	<b>Contribution to the worldwide multimodal SBAS standard proposal</b> J.-L.Issler, Centre National d'Etudes Spatiales (CNES), France
10:40 - 11:00	Coffee Break
11:00 - 12:30	<b>Session 6: GNSS Evolution and Modernization II</b>
11:00	<b>Turbo and LDPC Channel Coding for GNSS Data Broadcasting</b> S.Fantinato, G.López-Risueño, R.De Gaudenzi, J.-L.Gerner, European Space Agency, The Netherlands
11:20	<b>Design, Architecture and Validation of a New GNSS Multi Constellation Simulator : NAVYS</b> A.de Latour, Centre National d'Etudes Spatiales (CNES), France
11:40	<b>Fundamental issues in time-delay estimation of multicarrier signals with applications to next-generation GNSS</b> F. Zanier, European Space Agency, The Netherlands A.Emmanuele, M.Luise, University of Pisa, Italy; M.Crisci, European Space Agency, The Netherlands
12:00	<b>Generation and Analysis of Secondary Short Synchronization Codes for Indian Regional Navigation Satellite System</b> D.Mehta, Space Applications Centre, Indian Space Research Organisation, India
12:20 - 14:00	Lunch
14:00 - 15:40	<b>Session 7: GNSS Verification</b>
14:00	<b>GNSS Signal Quality Monitoring and Evaluating System</b> Wangxue, L.Xiaochun, W.Haitao, H.Chengyan, Liufeng, Key Laboratory of Precision Navigation and Timing Technology, National Time Server Center, Chinese Academy of Sciences, China
14:20	<b>Selected Beidou-2A Measurements and Analysis</b> J.V.Perelló Gisbert, M.Malik, European Space Agency, The Netherlands; E.Rooney, SSTL, UK; J.Eastment, STFC, UK
14:40	<b>Navigation Payload vs. Receivers: Sampling Frequency Effect</b> R.Weiler, S.Kakarlapudi, SSTL Ltd., UK
15:00	<b>GPS SVN49 - L1 Anomaly analysis based on measurements with high gain antenna</b> S.Thörlert, S.Erker, M.Meurer, German Aerospace Center (DLR), Germany
15:20	<b>Blind demodulation and Code recovery for accurate signal quality assessment</b> W.Kogler, EADS Astrium GmbH, Germany
15:40 - 16:00	<b>Closing Session</b> Jean-Luc Gerner, European Space Agency (ESA), The Netherlands; Jean-Luc Issler, Centre Nationale d'Etude Spatiales (CNES), France; Michael Meurer, German Aerospace Centre (DLR), Germany; Bernd Eissfeller, University of Federal Armed Forces (UniBW), Germany