ION GNSS+ 2013 Best Presentation Awards

A1: Remote Sensing with GNSS and Integrated Systems
Distributed Array of GPS Receivers for 3D Wind Profile Determination in Wind Farms: D. Chen, L. Heng, D. Jia, G.X. Gao, University of Illinois at Urbana-Champaign

B1: Receiver/Antenna Technology
Collaborative GNSS Signal Processing: A. Soloviev, Qunav; J. Dickman, Northrop Grumman

C1: Aviation Applications
Can Current DME Support PBN Operations with Integrity?: G.E. Berz, V. Vitan, I. Skyrda, Eurocontrol, Belgium; P.B. Ober, Integricom, The Netherlands

D1: Emerging GNSS (Galileo, COMPASS, QZSS, IRNSS)
The Comparison on the Positioning Performance Between BeiDou and GPS: Y. Xu, S. Ji, W. Chen, D. Weng, Y.Xu, W. Chen, D. Weng, The Hong Kong Polytechnic University, Hong Kong; S. Ji, China University of Petroleum, China

E1: Indoor Navigation and Timing 1

F1: Alternatives and Backups to GNSS 1

A2: Marine and Land Based Applications
Demonstrating the Benefits of Resilient PNT: A. Grant, P. Williams, C. Hargreaves, M. Bransby, The General Lighthouse Authorities of the United Kingdom and Ireland

B2: Alternatives and Backups to GNSS 2

C2: GNSS Space Based Augmentation Systems (SBAS)
The Arctic Testbed – Providing GNSS Services in the Arctic Region: P.E. Kvam, Kongsberg Seatex, Norway; M. Jeannot, European Space Agency

D2: GPS and GLONASS Modernization
GPS Inter-Signal Corrections (ISCs) Study: W. Fees, J. Cox, E. Howard, K. Kovach, The Aerospace Corporation

E2: Indoor Navigation and Timing 2
SmartSLAM - An Efficient Smartphone Indoor Positioning System Exploiting Machine Learning and Opportunistic Sensing: R.M. Faragher, R.K. Harle, University of Cambridge, UK

F2: GNSS-MEMS Integration
An Algorithm for Automatic Inertial Sensors Calibration: S. Guerrier, R. Molinari, University of Geneva, Switzerland; J. Skaloud, École Polytechnique Fédérale de Lausanne, Switzerland; M-P. Victoria-Feser, University of Geneva, Switzerland

A3: Precise Point Positioning
Towards the Inclusion of Galileo and BeiDou/Compass Satellites in Trimble CenterPoint RTX: H. Landau, M. Brandl, X.
Chen, R. Drescher, M. Glocke r, A. Nardo, M. Nitschke, D. Salazar, U. Weinbach, F. Zhang, Trimble TerraSat GmbH, Germany

**B3: Multi-Sensor and Integrated Navigation in GNSS-Challenged Environments 1**
Probabilistic Integration of 3D Building Models and GNSS for Reliable Vehicle Localization in Urban Areas—the GAIN Approach: S. Bauer, M. Obst, G. Wanielik, Chemnitz University of Technology, Germany

**C3: GNSS Ground Based Augmentation Systems (GBAS)**
An Empirical Model for Computing GPS SPS Pseudorange Natural Biases Based on High Fidelity Measurements from a Software Receiver: S. Gunawardena, F. van Graas, Ohio University

**D3: GNSS Compatibility, Interoperability, and Services**
On the Design of a GNSS Acquisition Aiding Signal: M. Paonni, M. Bavaro, Institute for the Protection and Security of the Citizen (IPSC), Joint Research Centre (JRC) European Commission, Italy

**E3: Software Receivers**
A Universal GNSS Software Receiver MATLAB® Toolbox for Education and Research: S. Gunawardena, Ohio University

**F3: Urban Navigation Technology**

**A4: GNSS and the Atmosphere 1**

**B4: GNSS Simulation and Testing**

**C4: Algorithms and Methods**
Effects of Non-Gaussian and Non-White Noise Processes on Image-Based Targeting for Mission-Critical Applications: M.J. Veth, Veth Research Associates, LLC

**D4: Multi-Sensor and Integrated Navigation in GNSS-Challenged Environments 2**
Autonomous Snowplow Design: S. Craig, A. Naab-Levy, K. Li, R. Kollar, P. Duan, W. Pelgrum, F. van Graas, M. Uijt de Haag, Ohio University

**E4: Advanced Inertial Sensing and Applications**

**F4: New Products and Commercial Services**
ARGUS: Assisting Personal Guidance System for People with Visual Impairment: O. Otaegui, Vicomtech-IK4, Spain; J. Seybold, TeleConsult Austria, Austria; J. Spiller, The 425 Company, UK; A. Marconi, CEIT Alanova, Austria; R. Olmedo, OK-Systems, Spain; M. Dubielzig, Siemens AG, Germany
A5: GNSS and the Atmosphere 2
Improved Troposphere Blind Models Based on Numerical Weather Data: G. Möller, R. Weber, J. Böhm, Vienna University of Technology, Austria

B5: Advances in Military GNSS Systems and Applications
On-the-Fly Estimation of Antenna Induced Biases in SFAP Based GNSS Antenna Arrays: Y.C. Chuang, I.J. Gupta, The Ohio State University

C5: Next Generation GNSS Integrity
RAIM with non-Gaussian Errors: P. Misra, J. Rife, Tufts University

D5: GNSS Algorithms and Methods 1
Integrity Risk and Continuity Risk for Fault Detection and Exclusion Using Solution Separation RAIM: M. Joerger, S. Stevanovic, F-C. Chan, S. Langel, B. Pervan, Illinois Institute of Technology

E5: Multi-Constellation/Portable Navigation Devices
Precision Limits of Low-Energy GNSS Receivers: K.M. Pesyna, Jr., R.W. Heath, Jr., T.E. Humphreys, The University of Texas at Austin

F5: Interference and Spectrum Issues 1

A6: Geodesy, Surveying and RTK for Civil Applications
GNSS Synthetic Aperture Processing with Artificial Antenna Motion: T. Pany, N. Falk, B. Riedl, C. Stöber, J. Winkel, IFEN GmbH, Germany; H.-P. Ranner, Austrian Academy of Sciences

B6: Standalone GNSS Services in Challenging Environments
Integration of Vector Tracking Loop and Multipath Mitigation Technique and its Assessment: L-T. Hsu, National Cheng Kung University, Taiwan

C6: Space Applications
Navigating Above the GPS Constellation – Preliminary Results from the SGR-GEO on GIOVE-A: M. Unwin, R. De Vos Van Steenwijk, P. Blunt, Y. Hashida, Surrey Satellite Technology Ltd., UK; S. Kowaltschek, L. Nowak, European Space Agency

D6: Interference and Spectrum Issues 2
Analysis of DME/TACAN Interference on the Lower L-Band: A. Steingass, German Aerospace Center (DLR), Germany

E6: Clock/Timing and Scientific Applications

F6: GNSS Algorithms and Methods 2
A Robust Technique for Unambiguous BOC Tracking: J. Wendel, F.M. Schubert, Astrium GmbH, Germany; S. Hager, Technical University Munich, Germany