



W5: Reliable Ubiquitous Navigation in Smart Cities

Sunday 22 September 2019 • 09:00 – 17:30 • Kealohilani Tower Kaimuki 1 (2nd floor)

- 09:00 Welcome
- 09:10 Processed 5G Signals Mathematical Models for Positioning considering a Non-Constant Propagation Channel
Anne-Marie Tobie, TêSA - French National Civil Aviation; Axel Garcia-Pena, Paul Thevenon, French National Civil Aviation
- 09:30 Physical-Layer Abstraction for Hybrid GNSS and 5G Positioning Evaluations
José A. del Peral-Rosado, Universitat Autònoma de Barcelona (UAB); Olivier Renaudin, Universitat Autònoma de Barcelona; Christian Gentner, German Aerospace Center (DLR); Ronald Raulefs, German Aerospace Center; Enrique Dominguez-Tijero, Alejandro Fernández-Cabezas, Fernando Blázquez-Luengo, Gema Cueto-Felgueroso, GMV; Alexander Chassaigne, Telefónica I+D; David Bartlett, u-blox AG; Florin Grec, Lionel Ries, Roberto Prieto-Cerdeira, European Space Agency (ESA); José A. López-Salcedo, Gonzalo Seco-Granados, Universitat Autònoma de Barcelona (UAB)
- 09:50 Evaluation of Feedback and Feedforward Coupling of Synthetic Aperture Navigation with LTE Signals
Zaher Kassas, Ali Abdallah, University of California, Irvine
- 10:10 Data Association among Physical and Virtual Radio Transmitters with Visibility Regions
Markus Ulmschneider, Christian Gentner, Armin Dammann, German Aerospace Center (DLR)
- 10:30 Refreshments break
- 11:00 Keynote: The Quest for Precise Indoor Location
Stan Chesnutt, Google
- 11:45 Multipath-Optimal UAV Trajectory Planning for Urban UAV Navigation with Cellular Signals
Sonya Ragothaman, University of California Riverside; Mahdi Maaref, Zaher Kassas, University of California, Irvine
- 12:05 UAV Trajectory Design for Obstacle Avoidance Based on Cell-varying JPS in Smart Cities
Yixue Feng, Jianjun Hao, Beijing university of posts and telecommunications; Yijun Guo, Beijing University of Posts and Telecommunications; Yi Zhang, Beijing university of posts and telecommunications
- 12:25 Lunch break (on your own)
- 13:45 Keynote: Realizing Ubiquitous Indoor Positioning for First Responders
Jeb Benson, NIST
- 14:30 Enabling High-Integrity Vehicular Satellite Navigation Operations via Automatic Gain Control
Nathan Levigne, Dennis Akos, Charles Puskar, University of Colorado Boulder
- 14:50 On the Trade-off Between Computational Complexity and Collaborative GNSS Hybridization
Alex Minetto, Politecnico di Torino; Gianluca Falco, LINKS Foundation; Fabio Dervis, Politecnico di Torino
- 15:10 A Vehicular GPS Error Prediction Model Based on Data Smoothing Preprocessed LSTM
Sheng Liu, University of Michigan, Dearborn; Vivekanandh Elangovan, Weidong Xiang, University of Michigan-Dearborn
- 15:30 Refreshments break
- 16:00 On the Cooperative Ranging between Android Smartphones Sharing Raw GNSS Measurements
Neil Gogoi, Alex Minetto, Fabio Dervis, Politecnico di Torino
- 16:20 Precise Point Positioning with Kepler
Patrick Henkel, German Aerospace Center (DLR)
- 16:40 Panel discussion with the Workshop Organizers and Keynote Speakers