May 31, 2016

Activity Report of URSI-F

Reported by Y. Maekawa (Chair)

1. Commission meetings in the period of January – May 2016
(For more detail, please see http://ursi-f.nict.go.jp/)

(1) No. 601 Meeting
Date: January 14-15, 2016 Place: Takushoku University, Hachioji Campus (Tokyo)

This meeting was held under the co-sponsorship of IEICE Technical Committee on AP, and IEEE AP-S Tokyo Chapter. Nine papers relevant to the field of URSI-F were presented:

1. Signal Transfer function for Short Range Wireless Communication with Multiple Reflection between Tx and Rx Antennas
2. Propagation Characteristics in Farm Monitoring System at 928MHz Band
3. Revisit to Friis Transmission Formula
4. Statistical Model Utilizing Ray-Tracing for Indoor Radio Propagation Prediction
5. Advantage of Using the Millimeter-Wave Band Triage Tag in Disaster Phase
6. Water Vapor Estimation Using the Propagation Delay of Digital Terrestrial Broadcasting Waves -- Results Using Reflected Waves --
7. Earth Observation by Fully Polarimetric Radar
8. Applicable Range of Ray Tracing Method and Its Utilizations
9. A Suppression Method of Scattering Waves from Outside of a Search Area in Scatterer Detection Using Compressed Sensing

For more details, please see: http://www.ieice.org/cs/ap/jpn/

(2) No. 602 Meeting
Date: March 4, 2016 Place: NTT Yokosuka R & D Center (Kanagawa)

Four papers were presented:

1. Novel Geometry-based Multipath Clustering and Cluster Tracking for Double Directional Channel Modeling
2. Analysis of Polarization Signature in Target with Periodic Structure on Terahertz Sensing
3. Frequency Characteristics of Change in Received Level by Human Body Shadowing in Indoor Environment
4. Fading Characteristics for the Rain and the Radio Refractive Index from 160MHz to 4GHz Band in Qquasi Loss Environment

(3) No. 603 Meeting
Date: April 19, 2016 Place: Tokyo Institute of Technology, Ookayama Campus (Tokyo)

Three papers were presented:

1. mmWave Scattering Simulation from Rough Surface by Physical Optics
2. Eigenvalues and Channel Capacities Comparisons between Measurement and Reconstruction from SAGE Estimation Result in 11 GHz Band Outdoor Environment
3. Performance Comparison of Space-time Coding on Polarized and Non-Polarized Line-of-Sight Multiple Input Multiple Output (MIMO) Propagation Channels

The commission business meeting of URSI-F was held at the same time on that date, and five commission members attended with one of them connected by Skype, satisfying a quorum of the business meeting. There was a discussion on attendance to future international conferences relevant to the field of URSI-F, such as AP-RASC 2016 (Seoul, Korea) and ISAP 2016 (Okinawa). Also, the plans of yearly activities of URSI-F were discussed, including a West-Japan meeting in this September, and an East-Japan meeting in next April, the latter of which will be newly organized primarily for remote sensing researchers probably in Sendai, Miyagi.

(4) No. 604 Meeting
Date: May 19-20, 2016 Place: Kobe University, Rokkodai Campus (Hyogo)

This meeting was held under the co-sponsorship of IEICE Technical Committee on AP, and IEEE AP-S Kansai Chapter. Five papers relevant to the field of URSI-F were presented in the field of remote sensing:

1. Study on Outdoor-to-Indoor Channel Characteristics at 20 GHz Band
2. Performance Evaluation of Propagation Control Devices for Active Propagation Control
3. Long-term Yearly Variation of Rain Attenuation Statistics in Ku-Band Satellite Communications Links
4. Natural Phenomena Observed through Radio Waves and Some Experiences in the University
5. Introduction of Sparse Signal Representation for Radars and Array Signal Processing

For more details, please see: http://www.ieice.org/cs/ap/jpn/

2. Others

Nothing in particular