

March 20, 2017

Activity Report of URSI-F

Reported by Y. Maekawa (Chair)

1. Commission meetings in the period of November 2016 – March 2017(For more detail, please see <http://ursi-f.nict.go.jp/>)

(1) No. 609 Meeting

Date: November 24-25, 2016

Place: Kyoto International Community House (Kyoto)

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

1. Development and Perspective of Path Shadowing Model
2. Evaluation of Propagation-Path Identification Combining FDTD Method and Compressive Sensing
3. A Study on Compressive Sensing Data Transfer for Network Operation of Phased Array Weather Radar
4. Path Loss Characteristics in Outdoor Crowded Areas at 4.7 and 26.4 GHz
5. MU-MIMO Model and the Channel Properties – Correlation between Users/Eigenvalues and Channel Capacity –
6. Evaluation of Transmission Rate on Massive MIMO in an Outdoor Environment
7. Performance Evaluation on Massive MIMO considering Delay Waves

(2) No. 610 Meeting

Date: December 7, 2016

Place: National Institute of Information and Communications Technology (Tokyo)

Three papers were presented:

1. Experimental Study to Measure Radio Path Loss between Wireless LAN (WLAN) Access Points (APs) and between an AP and a WLAN Client Terminal (CL) Deployed in Indoor Offices with Different Building Structure. – Deriving Empirical Formulas of the Radio Path Loss between APs and between the AP and the CL from Data Measured by Using WLAN AP Cisco CAP3702I for Supplementing Recommendation ITU-R P.1238 –
2. A Preliminary Experimental Investigation of BLE-based Fingerprinting using Raspberry Pi
3. Radio Wave Propagation Measurements and Path Loss Modeling in Outdoor Agriculture Environment for Wireless Sensor Network Tossaporn SRISOOKSAI

(3) No. 611 Meeting

Date: January 19-20, 2017

Place: Hiroshima Institute of Technology, Hiroshima Campus (Hiroshima)

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

1. Characteristic Evaluations of TV-wave Human Detection Systems around Vehicles under Actual Environments
2. Localization of Radio Terminals based on Leaky Coaxial Cable-MIMO Propagation
3. Estimation of Changes in Cross-Polarization Discrimination of Ka-band Satellite Communication Signals due to Lightning Discharges
4. Size Reduction of Scale Model for Propagation Loss in Microcell
5. Path Loss Frequency Dependency of 2-26 GHz in an Urban Macro Cell Environment
6. Propagation Measurements by Using Directional Vehicle Antenna
7. Analysis of Car-Cabin Propagation Characteristics by FDTD Method using a Vehicle 3D Model
8. Channel Capacity in Doubly-Selective Fading Environments
9. DOA Measurement of Modulation Wave Using Synthetic Aperture Method
10. Performance on Multi-Beam Massive MIMO with User Selection Scheme
11. A Study on Countermeasure Technique for Overreach Propagation in Terrestrial Digital TV Broadcastings
12. Path loss estimation of human bodies blockage in an outdoor crowded area

13. Effects of Building Shapes at an Intersection on Path Loss Characteristics for Millimeter Wave Band in Street Microcell Environments

(4) No. 612 Meeting

Date: March 10, 2017

Place: NTT Yokosuka R & D Center (Kanagawa)

Four papers were presented:

1. SHF Band Path Loss Characteristics Considering Human Body Shadowing in a Crowded Area
2. On Capacity of Multipath Fading Channels
3. Non Destructive Inspection of Periodic Structure Target Using Broadband Polarimetry for Terahertz Radiation
4. Mapping Atmospheric Water Vapor by SAR Interferometry: from Measurement to Assimilation into a Numerical Weather Model

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

2. Others

For URSI GASS (General Assembly and Science Symposium) which will be held in August 2017 in Montreal, Canada, Professor Motoyuki Sato (Tohoku University) and Dr. Motoharu Sasaki (NTT) were recommended as Japanese candidates of URSI-F Vice Chair and ECR (Early Career Representative), respectively.