2019 URSI-Japan Radio Science Meeting
(URSI-JRSM 2019)

The University of Electro-Communications, Tokyo, Japan

September 5-6, 2019

Program

Sponsored by:
- The Institute of Electronics, Information and Communication Engineers (IEICE)

Technically supported by:
- International Union of Radio Science (URSI)

In cooperation with:
- Japan Geoscience Union
- Science Council of Japan
- Society of Atmospheric Electricity of Japan
- The Astronomical Society of Japan
- The Institute of Electrical Engineers of Japan
- The Laser Society of Japan
- The Remote Sensing Society of Japan
**Sponsorships**

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(in alphabetical order)

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E-mail: jrsm2019@ssre.uec.ac.jp
Program and Time Table

Thursday, September 5, 2019

9:00  Opening Ceremony

9:15  Invited Lecture 1 (Commission B)
     Chair: Toru Uno (Tokyo University of Agriculture and Technology, Japan)
     Makoto Ando (National Institute of Technology (KOSEN))
     “100 Years History of URSI and Commission B”

9:45  Invited Lecture 2 (Commission G)
     Chair: Mamoru Yamamoto (Kyoto University, Japan)
     Mamoru Ishii (Space Environment Laboratory, National Institute of Information and
     Communications Technology, Japan)
     “Global Streams of Space Weather Research and Operation and the Role of Asia”

10:15 Coffee Break

10:45 Keynote Lecture
     Chair: Yasuhide Hobara (The University of Electro-Communications, Japan)
     Masashi Hayakawa (Hayakawa Institute of Seismo Electromagnetics, The University of
     Electro-Communications, Japan)
     “Study of Radio Noise for 45 Years”

11:30 Invited Lecture 3 (Commission D)
     Chair: Hiroyuki Toda (Doshisha University, Japan)
     Tetsuya Kawanishi (Waseda University, Japan)
     “Wired and Wireless Seamless Networks for Public Transportation Infrastructure”

12:00 Invited Lecture 4 (Commission F)
     Chair: Motoyuki Sato (Tohoku University, Japan)
     Wataru Yamada (Nippon Telegraph and Telephone, Japan)
     “Recent Topics of Standardization on Radiowave Propagation Field”

12:30 Lunch / Exhibition / Technical Tour: UEC Communication Museum / Business Meetings

14:00 Oral Sessions 1 (Commissions A-K Parallel)

15:15 Coffee Break

15:45 Poster Session / Exhibition

18:45 Banquet
Friday, September 6, 2019

9:30  Invited Lecture 5 (Commission K)  
Chair: Jianqing Wan (Nagoya Institute of Technology, Japan)  
Shoogo Ueno (The University of Tokyo, Japan)  
“New Horizons in Electromagnetics in Medicine and Biology”

10:00 Invited Lecture 6 (Commission E)  
Chair: Yasuhide Hobara (The University of Electro-Communications, Japan)  
Tomoo Ushio (Tokyo Metropolitan University, Japan), Mitsuteru Sato (Hokkaido University, Japan), Takeshi Morimoto (Kindai University, Japan)  
“Optical and Radio Observation of Lightning from Space”

10:30 Coffee Break

11:00 SPC (Student Paper Competition) Special Session

12:15 Lunch / Exhibition / Technical Tour: UEC Communication Museum / Business Meetings

14:00 Oral Sessions 2 (Commissions A-K Parallel)

15:15 Coffee Break

15:45 Invited Lecture 7 (Commission A)  
Chair: Masami Yasuda (National Institute of Advanced Industrial Science and Technology, Japan)  
Tetsuya Ido (National Institute of Information and Communications Technology, Japan)  
“Application of Optical Clocks toward Real-Time Generation of a Time Scale”

16:15 Invited Lecture 8 (Commission C)  
Chair: Makoto Taromaru (Fukuoka University, Japan)  
Nobuyoshi Kikuma (Nagoya Institute of Technology, Japan)  
“History of Adaptive Array Antenna”

16:45 Coffee Break

17:00 Invited Lecture 9 (Commission H)  
Chair: Yoshiya Kasahara (Kanazawa University, Japan)  
Yoshizumi Miyoshi (Nagoya University, Japan), Yoshiya Kasahara (Kanazawa University, Japan), Hirotugu Kojima (Kyoto University, Japan), Ayako Matsuoka, Iku Shinohara (Japan Aerospace Exploration Agency, Japan)  
“Multiple Roles of Plasma Waves in Geospace and Radiation Belts: Arase Observations”
17:30 Invited Lecture 10 (Commission J)

Chair: Kenta Fujisawa (Yamaguchi University, Japan)

Yoshinori Uzawa (National Astronomical Observatory of Japan, Japan)

“Superconducting Receiver Technologies Supporting ALMA and Future Prospects”

18:00 SPC Award Ceremony / Closing Ceremony

Conference Room Information:

- Opening Ceremony: Building B, B201
- Keynote Lecture and Invited Lectures: Building B, B201
- Closing Ceremony: Building B, B201
- Oral Sessions: Building A
- Poster Session: Building B, Hall
- Exhibition: Building B, Hall
- Technical Tour: UEC Communication Museum
- Banquet: University Center
- Commission Business Meetings: Building A
List of Oral Papers

Commission A: Electromagnetic metrology

Thursday, September 5, 2019
Oral Session 1: History of Commission A, JNC-URSI

Building A, Room A302
Chair: Masami Yasuda (AIST, Japan)

14:00 A1-1 General Relativity and Its Some Measurable Effects
Mizuhiko Hosokawa (NICT, Japan)

14:30 A1-2 Historical Evolution of URSI Commission A
Yasuhiro Koyama (NICT, Japan)

14:45 A1-3 Frequency standard in THz-region using molecular ions
Masatoshi Kajita (NICT, Japan)

Friday, September 6, 2019
Oral Session 2: Advances and Perspective of Commission A, JNC-URSI

Building A, Room A302
Chair: Masami Yasuda (AIST, Japan)

14:00 A2-1 Arbitrary Manipulation of An Optical Waveform and Its Measurement
Akihiro Tomura, Chiaki Ohae (Univ. of Electro-Communications, Japan), Kaoru Minoshima, Masayuki Katsuragawa (Univ. of Electro-Communications, JST ERATO MINOSHIMA Intelligent Optical Synthesizer Project, Japan)

14:15 A2-2 Ultra-broadband Bidirectional Dual-Comb Fiber Laser
Yoshiaki Nakajima, Yuya Hata, Yugo Kusumi, Kaoru Minoshima (The Univ. of Electro-Communications, JST, ERATO MINOSHIMA Intelligent Optical Synthesizer Project, Japan)

14:30 A2-3 Recent research activities on optical lattice clocks at NMIJ, AIST
Takumi Kobayashi, Daisuke Akamatsu, (NMIJ, AIST, Japan), Yusuke Hisai (Yokohama National Univ., Japan),; Takehiko Tanabe, Hajime Inaba, Tomonari Suzuyama (NMIJ, AIST, Japan), Feng-Lei Hong (Yokohama National Univ. Japan), Kazumoto Hosaka, Masami Yasuda (NMIJ, AIST, Japan)

14:45 A2-4 Development of Antenna Gain Calibration System in 300 GHz Frequency Band
Michitaka Ameya, Satoru Kurokawa (AIST, Japan)

Commission B: Fields and waves

Thursday, September 5, 2019
Oral Session 1: Advances and Perspective of Commission B, JNC-URSI (1)

Building A, Room A101

Chair: Toru Uno (Tokyo University of Agriculture and Technology, Japan)

14:00 (Invited) B1-1 The Wiener-Hopf Technique for the Solutions of Canonical Scattering Problems
Takashi Nagasaka, Kazuya Kobayashi (Chuo Univ., Japan)

14:20 (Invited) B1-2 History of Technical Meeting on Electromagnetic Theory in IEEJ and IEICE
Tsuneki Yamasaki (Nihon Univ., Japan)

14:40 (Invited) B1-3 Analysis on Floquet Modes of Groove Gap Waveguide
Jiro Hirokawa, Keisuke Ejiri, Takashi Tomura (Tokyo Institute of Technology, Japan)

15:00 (Invited) B1-4 Study on Transient Scattered Magnetic Field from a Coated Conducting Cylinder with a Thick Dielectric Medium
Keiji Goto (National Defense Academy, Japan)

Friday, September 6, 2019

Oral Session 2: Advances and Perspective of Commission B, JNC-URSI (2)

Building A, Room A101

Chair: Naobumi Michishita (National Defense Academy, Japan)

14:00 (Invited) B2-1 Antenna technology towards 5G and beyond
Keizo Cho (Chiba Institute of Technology, Japan)

14:20 (Invited) B2-2 5G Antenna Development and Measurement
Hiroyuki Arai (Yokohama National Univ., Japan)

14:40 (Invited) B2-3 Feature extraction from radar signatures based on scattering mechanisms and its application to target identification and nondestructive inspection
Masahiko Nishimoto (Kumamoto Univ., Japan)

15:00 (Invited) B2-4 Location estimation technique for in-body devices using RSS
Masaharu Takahashi (Chiba Univ., Japan)

Commission C: Radiocommunication systems and signal processing

Thursday, September 5, 2019

Oral Session 1: History of Signal Processing and Systems Related to Commission C, JNC-URSI

Building A, Room A301

Chair: Makoto Taromaru (Fukuoka Univ., Japan)

14:00 C1-1 History of Radio Communication Systems and Radio Signal Processing in Japan
Makoto Taromaru (Fukuoka Univ., Japan)

14:15 C1-2 Source coding based on appearance probability and importance of packets in
wireless feedback control system
Yuki Negishi, Takahiro Goto, Ryuji Kohno (Yokohama National Univ., Japan)

14:30   C1-3  Performance of Adaptive Sideband Selection in a Periodic Interference Canceller
Satoshi Denno, Yuya Kimura, Yafei Hou (Okayama Univ., Japan)

14:45   C1-4  Capacitive coupling wireless power transfer system for drone charging stations
Satoshi Tsukamoto, Shinji Abe, Takashi Ohira (Toyoohashi Univ. of Technology, Japan), Genyo Ueda, Hiroyuki Nozaki, Hiroshi Hamada (Tokyo Electric Power Company Holdings, Inc.)

Friday, September 6, 2019
Oral Session 2: Advances and Perspectives of Commission C, JNC-URSI
Building A, Room A301
Chair: Makoto Taromaru (Fukuoka Univ., Japan)

14:00   C2-1  Terahertz Electromagnetic Emission in an Asymmetric Dual-Grating-Gate InGaAs Hight-Electron-Mobility Transistor Stimulated by Plasmonic Instability
Takayuki Watanabe, Tomotaka Hosotani, Akira Satou, Taiichi Otsuji (Tohoku Univ., Japan)

14:15   C2-2  Influence of Estimation Error of Characteristic Impedance on Device Characteristics in On-Wafer Multiline TRL
Kyoya Takano, Yohtaro Umeda (Tokyo Univ. of Science, Japan)

Deepak Gautam, Jun-ichi Takada, Kentaro Saito (Tokyo Institute Technology, Japan)

14:45   C2-4  Utilizing Doppler Frequency of Wi-Fi Channel State Information to Trace Trajectory of Hand Gesture
Nopphon Keerativoranan, Kentaro Saito, Jun-ichi Takada (Tokyo Institute of Technology, Japan)

Commission D: Electronics and Photonics

Thursday, September 5, 2019
Oral Session 1: Electronics & Photonics (1)
Building A, Room A303
Chair: Hiroyuki Toda (Doshisha University, Japan)

14:00   (Invited) D1-1  One-Terahertz-wide, 10-Gigaherz-spaced, Mode-locked-diode-laser-induced, Optical-frequency-comb-line Components each of whose line-widths is Inherently Stabilized to that (2 MHz) of Internal Continuous-wave Seed Light
Yoshiyasu Ueno (Univ. of Electro-Communications, Japan)

14:15   (Invited) D1-2  Phase-Reconstruction Schemes for Optical Fiber Communications Using Direct Detection
Masayuki Matsumoto (Wakayama Univ., Wakayama, Japan)

14:30   (Invited) D1-3  Photonic-assisted Millimeter Wave Radar for FOD Detection on Runways
Friday, September 6, 2019
Oral Session 2: Electronics & Photonics (2)

Building A, Room A303
Chair: Naoki Shinohara (Kyoto University, Japan)

14:00 (Invited) D2-1 Photonic Crystal Platform for Terahertz Science and Technology
Masayuki Fujita (Osaka Univ., Japan)

Masayuki Suzuki (Doshisha Univ., Japan)

14:30 D2-3 Recent Trend in Microwave Sources for Microwave Heating Applications
Tomohiko Mitani (Kyoto Univ., Japan)

14:45 D2-4 Highly Isolated Dual-Band WPT System for Concurrent Transfer of Wireless Power and Data to Biomedical Implants
Adel Barakat, Shimaa Alshhawy, Kuniaki Yoshitomi, Ramesh K. Pokharel (Kyushu Univ., Japan)

15:00 D2-5 Recent Progress of Wireless Power Transfer in Japan and in Kyoto University
Naoki Shinohara (Kyoto Univ., Japan)

Commission E: Electromagnetic environment and interference

Thursday, September 5, 2019
Oral Session 1: History, Advances and Perspective of Commission E, JNC-URSI (1)

Building A, Room A401
Chair: Hiroshi Kikuchi (The University of Electro-Communications, Japan)

14:00 (Invited) E1-1 Study of ionosphere modification prior to large earthquake by using satellite data
Koichiro Oyama (National Cheng Kung Univ., Taiwan; Kyushu Univ., Japan; Coltd. Asia Space Environment Research Consortium, Japan)

14:20 (Invited) E1-2 Three-dimensional lightning mapping using low-frequency radio waves
Ting Wu, Daohong Wang, Dongdong Shi, Nobuyuki Takagi (Gifu Univ., Japan)

14:40 E1-3 Lightning Applications to Natural Hazard Mitigation
Friday, September 6, 2019

Oral Session 2: History, Advances and Perspective of Commission E, JNC-URSI (2)

Building A, Room A401

Chair: Yasuhide Hobara (The University of Electro-Communications, Japan)

14:00 (Invited) E2-1  VHF Electromagnetic Observation of Lightning from Space -Summary of Lightning Observations in Maid-1 and JEM-GLIMS Projects-
Takeshi Morimoto (Kindai Univ., Japan), Hiroshi Kikuchi (The Univ. of Electro-Communications), Tomoo Ushio (Tokyo Metropolitan Univ.), Mitsuteru Sato (Hokkaido Univ.)

Hiroshi Kikuchi, Yasuhide Hobara (The Univ. of Electro Communications, Japan), Mitsuteru Sato (Hokkaido Univ., Japan); Takeshi Morimoto (Kindai Univ., Japan)

Yoshiaki Ando (The Univ. of Electro-Communications, Japan)

15:00 E2-4  Improving F-layer Critical frequency deduced from Fractional Hop Lightning Whistlers
Shu Hirai, Yasuhide Hobara (The Univ. of Electro-Communications, Japan), Jean-Louis Pincon, Michel Parrot (LPC2E CNRS/ University of Orleans, France)

Commission F: Wave propagation and remote sensing

Thursday, September 5, 2019

Oral Session 1: Past and Future of Remote sensing technology in Commission F, JNC-URSI

Building A, Room A402

Chair: Shinichi Ichitsubo (Kyushu Institute of Technology, Japan)

14:00 F1-1  Radio Wave Propagation in Different Underwater Media for UWSN Deployment
Raynell A. Inojosa, Kentaro Saito, Jun-ichi Takada (Tokyo Institute of Technology, Japan)

14:15 F1-2  Comparison of Ray-Launching Based Simulation Method for Path Loss Prediction
in Sub-Urban Environment on 28GHz Band
Kosuke Murakami, Jun-ichi Takada, Kentaro Saito (Tokyo Institute of Technology, Japan), Akio Ikami, Yoshiaki Amano (KDDI Research, Inc., Japan)

14:30  F1-3  Observation of Volcanic Column Heights Using a Marine Radar
Takehiko Kobori, Masayuki Maki, (Kagoshima Univ., Japan), Hidehiko Tokushima (Field ResearcherS corporation CO., LTD., Japan), Seiji Fukushima (Kagoshima Univ., Japan)

14:45  F1-4  Variation of the Rician K-factor in the Radio Wave Propagation of a Subway Tunnel
Satoshi Nishida (Tokyo Institute of Technology, Japan; Kyosan Electric Manufacturing Co., Ltd. Japan), Jun-ichi Takada (Tokyo Institute of Technology, Japan); Tossaporn Srisooksai (Kyosan Electric Manufacturing Co., Ltd. Japan)

Friday, September 6, 2019
Oral Session 2: Past and Future of EM propagation research in Commission F, JNC-URSI
Building A, Room A402
Chair: Shinichi Ichitsubo (Kyushu Institute of Technology, Japan)

14:00  F2-1  Historical Review of Propagation Research in Japan
Yoshio Karasawa (Univ. Electro-Communications, Japan)

14:30  F2-2  Progress of cloud and precipitation observation by radar
Nobuhiro Takahashi (Nagoya University, Japan)

Commission G: Ionospheric radio and propagation

Thursday, September 5, 2019
Oral Session 1: History of Commission G, JNC-URSI
Building A, Room A102
Chair: Mamoru Yamamoto (Kyoto Univ., Japan)

14:00  G1-1  Hiraiso Observatory -The Japanese root of mobile telecommunications –
Mamoru Ishii, Yuki Kubo, Mitsue Den (NICT, Japan)

14:20  G1-2  History and current status of ionospheric radio observations by UEC
Keisuke Hosokawa (Univ. of Electro-Communications, Japan)

14:40  G1-3  History and Progress of Japanese SuperDARN Project
Natsuo Sato (National Institute of Polar Research, Japan), Tadahiko Ogawa (NICT, Japan), Hisao Yamagishi, Akira Sessai Yukimatu (National Institute of Polar Research, Japan); Nozomu Nishitani, Takahsi Kikuchi (Nagoya Univ., Japan), Kenro Nozaki, Tsutom Nagtsuma (NICT, Japan)

15:00  G1-4  Studies of Ionospheric Disturbances Using Total Electron Content obtained from GNSS receiver networks: Activity in Japan
Yuichi Otsuka (Nagoya Univ., Japan)
Friday, September 6, 2019
Oral Session 2: Advances and Perspective of Commission G, JNC-URSI
Building A, Room A102
Chair: Mamoru Yamamoto (Kyoto Univ., Japan)

14:00  G2-1  A three-year review of HF radio propagation simulator development
Kornyanat Hozumi (National Institute of Information and Communications Technology, Japan);
Hiroyuki Nakata (Chiba University, Japan); Susumu Saito (National Institute of Maritime,
Japan); Takashi Maruyama (National Institute of Information and Communications Technology,
Japan); Ryo Nakao (Chiba University, Japan); Takuya Tsugawa, Mamoru Ishii (National Institute
of Information and Communications Technology, Japan)

14:15  G2-2  Utilizing 4D-var technique to image South African regional ionosphere
Nicholas Ssessanga (Kyoto Univ., Japan), Yong Ha Kim (Chungnam National Univ., Korea),
Mamoru Yamamoto (Kyoto Univ., Japan); John Bosco Habarulema (South African National
Space Agency, South Africa; Rhodes University, South Africa)

14:30  G2-3  Sounding Rocket Observation of the Mid-Latitude Ionosphere in Japan
Takumi Abe (Institute of Space and Astronautical Science, Japan Aerospace Exploration Agency,
Japan)

14:45  G2-4  Characteristics of temporal and spatial evolutions of storm-time ionospheric
disturbances using global total electron content obtained from GNSS receiver network
Atsuki Shinbori (Nagoya Univ., Japan)

15:00  G2-5  Solar flare effects of the D-region ionosphere using daytime tweek atmospherics
Hiroyo Ohya, Kodai Yamanobe (Chiba Univ., Japan), Kazuo Shiokawa, Yoshizumi Miyoshi
(Nagoya Univ., Japan), Fuminori Tsuchiya (Tohoku Univ., Japan), Kozo Yamashita
(Ashikaga Univ., Japan), Yukihiro Takahashi (Hokkaido Univ., Japan)

Commission H: Waves in plasmas

Thursday, September 5, 2019
Oral Session 1: History, advances and perspectives in theory and computer simulations
on plasma and radio waves
Building A, Room A202
Chair: Yoshiya Kasahara (Kanazawa Univ., Japan)

14:00  (Invited) H1-1  Particle Simulation on Spacecraft-Plasma Interaction and its Application
to Airless Bodies in Space
Hideyuki Usui (Graduate School of System Informatics, Kobe Univ., Japan),
Yohei Miyake (Education Center on Computational Science and Engineering, Kobe
Univ., Japan)
14:15  (Invited) H1-2  Theory and computer simulations on whistler-mode chorus emissions and related wave-particle interactions in planetary magnetospheres
Yuto Katoh (Tohoku Univ., Japan)

14:30  H1-3  Electron acceleration associated with waves in collisionless shocks
Takanobu Amano (Univ. of Tokyo, Japan), Yosuke Matsumoto (Chiba Univ., Japan), Masahiro Hoshino (Univ. of Tokyo, Japan)

14:45  H1-4  Direct detection of nonlinear generation process of electromagnetic ion cyclotron emissions observed by the Arase spacecraft
Masafumi Shoji (Nagoya Univ., Japan)

15:00  H1-5  Extremely Low Frequency Whistler Mode Wave above the Polar Region of the Moon Detected by Kaguya
Tomoko Nakagawa (Tohoku Institute of Technology, Japan), Futoshi Takahashi (Kyushu Univ., Japan), Hisayoshi Shimizu (Univ. of Tokyo, Japan), Yoshifumi Saito (Institute of Space and Astronautical Science, JAXA, Japan)

Friday, September 6, 2019
Oral Session 2: History, advances and perspectives in space observation and experiment of plasma and radio waves
Building A, Room A202
Chair: Yoshiya Kasahara (Kanazawa Univ., Japan)

14:00  (Invited) H2-1  Electromagnetic Radio Wave Receiver onboard Japanese Sounding Rocket
Keigo Ishisaka (Toyama Prefectural Univ., Japan)

14:15  (Invited) H2-2  History and foresight of plasma wave observation systems in Japanese space missions
Hirotsugu Kojima (Kyoto Univ., Japan)

14:30  H2-3  The phase velocity of m-size plasma waves in the ionospheric E region.
Jean-Pierre St-Maurice (Nagoya Univ., Japan)

14:45  H2-4  Severely Eroded Plasmasphere During a Moderate Space Weather Storm
Yuki Obana (Osaka Electro-Communication Univ., Japan), Naomi Maruyama, Mariangel Fedrizzi (Univ. of Colorado Boulder / NOAA Space Weather Prediction Center, USA), Atsuki Shinbori, Masahito Nose, Yuichi Otsuka, Nozomu Nishitani, Tomoaki Hori, Yoshizumi Miyoshi (Nagoya Univ., Japan), Kumiko K Hashimoto (Kibi International Univ., Japan), Atsushi Kumamoto (Tohoku Univ., Japan), Fuminori Tsuchiya (PPARC, Tohoku Univ., Japan), Shoya Matsuda, Ayako Matsuoka, Iku Shinohara (Institute of Space and Astronautical Science, JAXA, Japan), Yoshiya Kasahara (Kanazawa Univ., Japan), Akimasa Yoshikawa (Kyushu Univ., Japan)

15:00  H2-5  Study on the propagation characteristics of lightning whistlers simultaneously observed by the Arase and Van Allen Probes
Y. Kasahara, Y. Ogawa, S. Ikarashi, Y. Hayashi (Kanazawa Univ., Japan), S. Matsuda (ISAS/JAXA, Japan), Y. Miyoshi (Nagoya Univ., Japan), F. Tsuchiya, A. Kumamoto (Tohoku Univ., Japan), M. Hikishima, A. Matsuoka (ISAS/JAXA, Japan), O. Santolik (The Czech Academy of Sciences / Charles University, Czechia), I. Kolmasova The Czech Academy of Sciences, Czechia), G. Hospodarsky, C. Kletzing (Univ. of Iowa, USA), C. Colpitts, J. Wygant (Univ. of Minnesota, USA)

Commission K: Electromagnetics in biology and medicine

Thursday, September 5, 2019
Oral Session 1: Recent Research Trends in Bioelectromagnetics (1)
Building A, Room A403
Chair: Masaki Sekino (The University of Tokyo, Japan)

14:00 (Invited) K1-1  Introduction to Trends of ETSI SmartBAN
Daisuke Anzai (Nagoya Institute of Technology, Japan)

14:15 (Invited) K1-2  Single-coil Dual-band Antenna for Wireless Capsule Endoscopic Communication
Yunxiao Peng (Graduate School of Science and Engineering Chiba Univ., Japan), Kazuyuki Saito, Koichi Ito (Center for Frontier Medical Engineering Chiba Univ., Japan)

14:30 (Invited) K1-3  Advanced Techniques for Electric Field Measurements of Multi-Antenna Transmitters in Compliance Tests
Dinh Thanh Le, Soichi Watanabe, Kun Li (NICT, Japan)

14:45 (Invited) K1-4  An Assessment of Incident Power Density Using Near-Field Reconstruction Algorithm at Millimeter-Wave Frequencies
Kensuke Sasaki, Kun Li, Soichi Watanabe, Kanako Wake (NICT, Japan)

Friday, September 6, 2019
Oral Session 2: Recent Research Trends in Bioelectromagnetics (2)
Building A, Room A403
Chair: Satoshi Nakasono (Central Research Institute of Electric Power Industry, Japan)

14:00 (Invited) K2-1  Stimulation of cultured neuron cells by electric field or extremely low frequency magnetic field exposure observed by real-time detection system
Masateru Ikehata, (Railway Technical Research Institute, Japan), Yukihsa Suzuki, Kei Makino, Keiji Wada (Tokyo Metropolitan Univ., Japan), Atsushi Saito (Central Research Institute of Electric Power Industry), Sachiko Yoshie (Railway Technical Research Institute), Satoshi Nakasono (Central Research Institute of Electric Power Industry)

14:15 (Invited) K2-2  Standardized methods for the evaluation of human exposure to extremely low- and intermediate-frequency electric and magnetic fields
Kenichi Yamazaki (Central Research Institute of Electric Power Industry, Japan)
14:30  (Invited) K2-3  Magnetic Field Measurement of Electronic Article Surveillance
Ken Sato (National Institute of Technology, Hachinohe College, Japan), Yoshitsugu Kamimura
(Utsunomiya Univ., Japan)

14:45  (Invited) K2-4  Recent Advances in Computational Human Model for EMF Simulations
Tomoaki Nagaoka (NICT, Japan)

15:00  (Invited) K2-5  Investigation of the thresholds for ocular damage caused by MMW
exposure from 30GHz to 160GHz by experimental and numerical approach
Yukihisa Suzuki  (Tokyo Metropolitan Univ., Japan), Masami Kojima, Takafumi Tasaki
(Kanazawa Medical Univ., Japan), Yoshinori Tatematsu, Masafumi Fukunari, (Univ. of Fukui,
Japan), Maya Mizuno, Kensuke Sasaki, Soichi Watanabe, (NICT, Japan), Masao Taki (Tokyo
Metropolitan Univ., Japan), Masahiko Tani (Univ. of Fukui, Japan), Hiroshi Sasaki (Kanazawa
Medical Univ., Japan)
List of Poster Papers

Thursday, September 5, 2019
15:45 – 18:30

Chairs: Shinichiro Ohnuki (Nihon Univ., Japan)
Keigo Ishisaka (Toyama Prefectural Univ., Japan)

Student Paper Competition

SPC-1 Performance Improvement of Resonator-Coupled type Wireless Power Transfer System using Dual-Spiral Resonator with Angular Misalignments
Nur Syafiera Azreen Binti Norodin, Masashi Hotta (Yamaguchi Univ., Japan)

SPC-2 Point Cloud Generation from User Camera Data for Radio Propagation Simulation
Zhihang CHEN, Kentaro Saito (Tokyo Institute of Technology, Japan), Wataru Okamura, Yukiko Kishiki (Kozo Keikaku Engineering Inc., Japan), Jun-ichi Takada (Tokyo Institute of Technology, Japan)

SPC-3 Calculation of the ray paths and propagation times of HF radio waves using the simulator of HF-START project.
Ryo Nakao, Hiroyuki Nakata, Hiroyo Ohya, Toshiaki Takano (Chiba Univ., Japan); Kornyanat Hozumi, Takuya Tsugawa (NICT, Japan); Susumu Saito (Electronic Navigation Research Institute, Japan); Mamoru Ishii (NICT, Japan)

SPC-4 Variations in the D-region ionosphere associated with volcanic eruptions observed by VLF/LF standard radio waves
Kei Maruyama (Chiba Univ., Japan)

SPC-5 ULF Modulation of Energetic Electron Precipitations Observed by VLF/LF Standard Radio Waves
Takuya Miyashita, Hiroyo Ohya (Chiba Univ., Japan), Fuminori Tsuchiya (Tohoku Univ.), Hiroyuki Nakata, Toshiaki Takano (Chiba Univ., Japan), Kazuo Shiokawa, Yoshizumi Miyoshi, Nozomu Nishitani (Nagoya Univ., Japan), Martin Connors (Athabasca Univ., Canada), Simon G Shepherd (Dartmouth College, USA)

SPC-6 Improvement of Radiation and Temperature Tolerance on ASIC Waveform Receiver for Probing Space Plasma Waves
Yuya Tokunaga, Mitsunori Ozaki, Satoshi Yagitani, Daisuke Yonetoku (Kanazawa Univ., Japan), Takahiro Zushi (National Institute of Technology, Nara College, Japan), Hirotugu Kojima (Kyoto Univ., Japan)

SPC-7  **Automatic Detection and Statistical Analysis of Lightning Whistlers Observed by the Plasma Wave Experiment (PWE) onboard the Arase Satellite**
Umar Ali Ahmad, Yoshiya Kasahara (Kanazawa Univ., Japan), Shoya Matsuda (Institute of Space and Astronautical Science, JAXA, Japan), Mitsunori Ozaki, Yoshitaka Goto (Kanazawa Univ., Japan)

**Commission A: Electromagnetic metrology**

AP-1  **Odd-isotope-selective photoionization loading and laser cooling of single $^{137}$Ba$^+$ ions**
Hiroto Fujisaki, Keisuke Nishida, Yasutaka Imai, Takashi Moriya, Kazuhiko Sugiyama (Kyoto Univ., Japan)

**Commission B: Fields and waves**

BP-1  **Cylindrical Cloak by Controlling Arrangement Density of Multi Layer Ceramic Capacitors**
Thanh Binh Nguyen, Naobumi Michishita, Hisashi Morishita (National Defense Academy, Japan); Teruki Miyazaki, Masato Tadokoro (The Yokohama Rubber Co., Ltd., Japan)

BP-2  **Plane Wave Diffraction by a Strip with Fractional Boundary Conditions**
Takashi Nagasaka, Kazuya Kobayashi, (Chuo Univ., Japan)

BP-3  **FDTD Modeling Method of a Dipole Antenna above Metasurface Using Surface Impedance Boundary Condition**
Akihide Kurahara, Toru Uno, Takuji Arima (Tokyo Univ. of Agriculture and Technology, Japan)

BP-4  **Radiation Pattern of On-glass Antenna Located on Ground Surface**
Ryoya Ishihara, Toru Uno, Takuji Arima, Yuiiro Kushiyma (Tokyo Univ. of Agriculture and Technology, Japan), Osamu Kagaya (AGC Inc., Japan)

BP-5  **Reconstruction of Electromagnetic Fields Using Finite Element Method**
Yohei Yamashita, Toru Uno, Takuji Arima (Tokyo Univ. of Agriculture and Technology, Japan)

BP-6  **PML Absorbing Boundary Condition for Magnetized Plasma**
BP-7 Development of Permittivity and Permeability Measurement System for Periodic Metamaterial
Shotaro Oka, Toru Uno, Takuji Arima (Tokyo Univ. of Agriculture and Technology, Japan)

BP-8 Study on Radiation Efficiency Measurement of an Antenna with Improved Wheeler Cap Method
Koji Yokoo, Toru Uno, Takuji Arima, Yujiro Kushiyama (Tokyo Univ. of Agriculture and Technology, Japan)

BP-9 Doppler Spectrum Analyzing of Sea Surface Using MR-FDTD Method
Hiroki Kobayashi, Toru Uno (Tokyo Univ. of Agriculture and Technology, Japan), Satoshi Fujii (Univ. of the Ryukyus, Japan), Takuji Arima (Tokyo Univ. of Agriculture and Technology, Japan)

BP-10 Study on Miniaturization of Bowtie Antenna with Folded Structure and Slit for Ground Penetrating Radar
Hikaru Takizawa, Kazuya Matsubayashi, Naobumi Michishita, Hisashi Morishita (National Defense Academy, Japan); Kenji Kawabata (Fujitsu Limited, Japan)

BP-11 A Study of Antenna with Robustness to Metal for Installation on Metal Walls
Yuta Nakagawa, Naobumi Michishita, Hisashi Morishita (National Defense Academy, Japan)

BP-12 Analysis of Near-Field Electromagnetic Fields and Poynting Vector Scattered by Metasurface Absorber
Fajri Darwis, Satoshi Yagitani, Mitsunori Ozaki, Tomohiko Imachi (Kanazawa Univ., Japan)

BP-13 Electrostatic Field Analysis of Airplane in Flight Near Thundercloud for Lightning Prediction
Kento Onuki, Toru Uno, Takuji Arima (Tokyo Univ. of Agriculture and Technology, Japan)

BP-14 A Broadband Printed Antenna Having Radiation Patterns of A Dipole Antenna
Itsuki Sasaki (National Defense Academy, Japan), Tuan Hung Nguyen (Le Quy Don Technical Univ., Vietnam), Yuta Nakagawa, Hisashi Morishita (National Defense Academy, Japan)

BP-15 A Folded Monopole Antenna Having Variable Impedance Characteristic by Using Switching Element
Cong Oai Nguyen, Yuta Nakagawa, Naobumi Michishita, Hisashi Morishita (National Defense Academy, Japan)

**BP-16 Multiscale Modeling for Electromagnetic Field and Magnetization Dynamics Analysis**
Takumi Yasuda, Kazuyuki Tanaka, Seiya Kishimoto, Shinichiro Ohnuki (Nihon Univ., Japan)

**BP-17 Time-Domain Reference Solutions of Electromagnetic Responses for Dielectric Spheres**
Soichiro Masuda, Seiya Kishimoto, Shinichiro Ohnuki (Nihon Univ., Japan)

**BP-18 Characteristic Analysis of Metal Case with Two Slots and Inner Folded Dipole Antenna**
Kunihisa Gamo, Kazuya Matsubayashi, Naobumi Michishita (National Defense Academy, Japan), Kazuhiro Matsumoto, Tetsuya Hishikawa (Panasonic Corporation, Life Solutions Company, Japan), Hisashi Morishita (National Defense Academy, Japan)

**BP-19 A study of Decoupling for Two Planar Inverted F Antennas**
Quang Quan Phung, Naobumi Michishita (National Defense Academy, Japan), Hiroshi Sato, Yoshio Koyanagi (Panasonic Corporation, Japan); Hisashi Morishita (National Defense Academy, Japan)

**BP-20 Distribution of Electromagnetic Fields by Dispersion Medium with Periodically Conducting Strips**
Tomohiro Kagawa, Ryosuke Ozaki, Tsuneki Yamasaki (Nihon Univ., Japan)

**BP-21 Analysis of Surface Plasmons in Kretschmann Configuration - Influence of Structure and Composition Ratio -**
Tomohiro Tamaru, Seiya Kishimoto, Yoshito Ashizawa, Katsuji Nakagawa, Shinichiro Ohnuki (Nihon Univ., Japan)

**BP-22 A Novel Dual-Band Fabry-Pérot Cavity Antenna**
Jia-Ming Kang, Fu-Chiarnng Chen (National Chiao Tung Univ., Taiwan)

**BP-23 Study of Open Stopband Suppression in Leaky-Wave Antennas**
Yujiro Kushiyama, Takuji Arima, Toru Uno (Tokyo Univ. of Agriculture and Technology, Japan)

**BP-24 Heat Conduction Analysis Using Fast Inverse Laplace Transform Method**
Shohei Nishino, Soichiro Masuda, Seiya Kishimoto, Shinichiro Ohnuki (Nihon Univ., Japan)

**BP-25 Fundamental Study of Surface Plasmon Modes Using Grating Structure**
Kou Hamashima, Di Wu, Seiya Kishimoto, Shuichiro Inoue, Shinichiro Ohnuki (Nihon Univ., Japan)

BP-26  Propagation analysis of electromagnetic field through nano-size metal array
Yuki Ando, Di Wu (Nihon Univ. Japan), Takashi Yamaguchi (Tokyo Metropolitan Industrial Technology Research Institute, Japan); Shinichiro Ohnuki (Nihon Univ. Japan)

BP-27  Metallic Quarter-Wave Plate Composed of Periodic Crossed Slots With the Same Length
Ryota Nakada, Junji Yamauchi, Hisamatsu Nakano (Hosei Univ., Japan)

BP-28  Design of the Surface Plasmon Resonance Waveguide Sensor in the Terahertz Regime
Jun Shibayama, Hiroki Tanaka, Junji Yamauchi, Hisamatsu Nakano (Hosei University, Tokyo, Japan)

BP-29  Analysis of an Optical Waveguide Grating Using the Leapfrog LOD-FDTD Method
Jun Shibayama, Teruaki Ohshiro, Junji Yamauchi, Hisamatsu Nakano (Hosei University, Japan)

BP-30  THz Radar Imaging using MUSIC and Array Interpolated Virtual Array
Kazuki Watakabe, Keizo Cho, Hiroaki Nakabayashi (Chiba Institute of Technology Univ., Japan)

BP-31  Coherency in Multiple Transmission Type of Micro Wave Wireless Power Transmission
Shota Mizuguchi, Takumi Kobayashi, Ryuji Kohno (Yokohama National Univ., Japan)

BP-32  An Analysis of Characteristics of a Polarization Splitter with Circular Cores and Hollow Pits
Keisuke Tanaka (Nihon Univ., Japan), Kazunori Kameda (Sano Nihon University College Japan), Shinichi Furukawa (Nihon Univ., Japan)

BP-33  An analysis of Optical Waveguides consisted of Circular Core with Arbitrarily Refractive Index Profiles by Point Matching Method
Hiroki Matsumaru, Shin Tazawa, Taiki Arakawa (Nihon Univ., Japan), Kazunori Kameda (Sano Nihon University College, Japan), Shinichi Fufukawa (Nihon Univ., Japan)

Commission C: Radiocommunication systems and signal processing

CP-1  Low-Complexity Detection for Massive MIMO System with Low-Resolution ADCs
Peng Gao, Yukitoshi Sanada (Keio Univ., Japan)
CP-2  **Study of Adaptive Terminal Selection for Terminal Collaborated MIMO Reception**  
Du Fengning, Masahiro Arai, Hidekazu Murata (Kyoto Univ., Japan)

CP-3  **A Game-theoretic Approach for Clustered WSNs Nodes Compliance against DoS Attack**  
Mohamed S. Abdalzaher, (Kyushu Univ., Japan, National Research Institute of Astronomy and Geophysics, Egypt); Osamu Muta (Kyushu Univ., Japan)

CP-4  **Miniatured Impedance Matched Planar Antenna Integrated High Efficient Push-Pull PA for 5-GHz Wireless Communication**  
Takeshi Kuboki, Kazutoshi Kato, Haruichi Kanaya (Kyushu Univ., Japan)

CP-5  **Influence of magnetic constant of solenoid core on transmission efficiency used for near field communication**  
Yoshihiro Nakamura, Keizo Cho, Hiroaki Nakabayashi (Chiba Institute of Technology, Japan)

**Commission D: Electronics and Photonics**

DP-1  **Numerical versus Analytical Integration of Neumanns formula**  
Shunsuke Hoya, Tsugumichi Shibata (Tokyo City Univ., Japan)

DP-2  **Random Search for Beam Squint Reduction Using Equivalent Circuit of CRLH Transmission Line**  
Kazuki Terada, Keizo Cho (Chiba Institute of Technology), Naobumi Michishita (National Defense Academy), Ichiro Oshima (Denki Kogyo Co., Ltd), Hiroaki Nakabayashi (Chiba Institute of Technology)

**Commission E: Electromagnetic environment and interference**

EP-1  **Development of Electromagnetic Wave Visualization System using Metasurface Radio Wave Absorber**  
Atsuya Sakano, Takuya Tsubota, Hirofumi Segawa, Satoshi Yagitani, Mitsunori Ozaki, Tomohiko Imachi (Kanazawa Univ., Japan)

EP-2  **Formulation of Circular $TE_{0n}$ Mode Reflection at Waveguide Open End for the Nondestructive Material Measurement**  
Atsuhiro Nishikata, (Tokyo Institute of Technology, Japan)
EP-3 Influence of Static Approximation of Magnetic Dipole Field in Impulsive Noise Source Localization by Dual Loop Measurement
Yumiko Tomizuka, Atsuhiro Nishikata (Tokyo Institute of Technology, Japan)

EP-4 Detecting Ionospheric Anomalies before Earthquakes by Machine Learning Technique
Kakeru Matsuki, Yasuhide Hobara (The Univ. of Electro-Communications, Japan), Hendy Santosa (Univ. of Bengkulu, Indonesia)

Commission G: Ionospheric radio and propagation

GP-1 High-Resolution Simulation Studies of Equatorial Plasma Bubbles
Tatsuhiro Yokoyama (Kyoto Univ., Japan)

GP-2 The MLT dependence on the emission height of pulsating aurora
Yuki Kawamura, Keisuke Hosokawa, (Univ. of Electro-Communications, Japan), Satonori Nozawa (Nagoya Univ., Japan), Yasunobu Ogawa, (National Institute of Polar Research, Japan), Tetsuya Kawabata (Nagoya Univ., Japan), Ryoichi Fujii (Research Organization of Information and systems, Japan)

GP-3 Visualization of two-dimensional structure of Sporadic-E in a wide area by using air-band VHF radio observations and GPS-ROTI
Kotaku Kimura, Keisuke Hosokawa, Jun Sakai (Univ. of Electro-Communications, Japan); Susumu Saito (Electronic Navigation Research Institute, Japan); Takuya Tsugawa, Michi Nishioaka, Mamoru Ishii (NICT, Japan); Ichiro Tomizawa (Univ. of Electro-Communications, Japan)

GP-4 Development of a whole atmosphere-ionosphere coupled model towards radio propagation prediction
Hidekatsu Jin (NICT, Japan); Yasunobu Miyoshi (Kyushu Univ., Japan); Chihiro Tao, Hiroyuki Shinagawa (NICT, Japan); Hitoshi Fujiwara (Seikei Univ., Japan)

GP-5 Real-time 3-D ionospheric tomography over Japan with GNSS observations
Susumu Saito (National Institute of Maritime, Port, and Aviation Technology, Japan), Mamoru Yamamoto, Akinori Saito (Kyoto Univ., Japan); Chia-Hung Chen (National Cheng Kung Univ., Taiwan)

GP-6 The MU radar, Equatorial Atmosphere Radar, and future project EMU!!
Mamoru Yamamoto, Hiroyuki Hashiguchi, Toshitaka Tsuda (Kyoto Univ., Japan)
GP-7  Analysis of VLF Band Waves near the Sq Current System Observed by S-310-44 Sounding Rocket
Ryuichiro Nakamura, Taketoshi Miyake, Keigo Ishisaka (Toyama Prefectural Univ., Japan),
Takumi Abe (JAXA/ISAS, Japan); Atsushi Kumamoto (Tohoku University, Japan); Makoto
Tanaka (Tokai University, Japan)

GP-8  Analysis of DC Electric Field near the Sq Current Focus Observed by S-310-44 Sounding Rocket
Toshiki Mori, Keigo Ishisaka (Toyama Prefectural University, Japan), Takumi Abe
(JAXA/ISAS, Japan), Atsushi Kumamoto (Tohoku Univ., Japan), Makoto Tanaka (Tokai
Univ., Japan)

GP-9  Review of the Mid-latitude SuperDARN
Nozomu Nishitani (Nagoya Univ., Japan)

GP-10  SENSU SuperDARN Antarctic Syowa radars - past achievements and future perspective
Akira Sessai Yukimatu (National Institute of Polar Research /The Graduate University for
Advanced Studies [SOKENDAI], Japan), Natsuo Sato (National Institute of Polar Research,
Japan)

Junji Shimizu, Hiroyuki Nakata, Hiroyo Ohya, Toshiaki Takano (Chiba Univ., Japan)

Commission II: Waves in plasmas

HP-1  Mapping of Digital Camera Images from the International Space Station: Application for
Pulsating Aurora Studies
Sota Nanjo, Yuta Hozumi, Keisuke Hosokawa (Univ. of Electro-Communications, Japan),
Ryuto Kataoka (National Institute of Polar Research), Yoshizumi Miyoshi (Nagoya Univ.),
Shin-ichiro Oyama (National Institute of Polar Research / Nagoya Univ., Japan / Univ. of
Oulu, Finland), Mitsunori Ozaki (Kanazawa Univ., Japan); Kazuo Shiokawa, Satishi Kurita
(Nagoya Univ.)

HP-2  Large-scale characteristics of chorus waves as inferred from high-speed optical
observations of pulsating aurora
Satoshi Ebukuro, Keisuke Hosokawa (Univ. of Electro-Communications, Japan). Yoshizumi
Miyoshi (Nagoya Univ.), Shin-ichiro Oyama (Nagoya Univ. / National Institute of Polar
Research, Japan / University of Oulu, Finland), Yasunobu Ogawa (National Institute of Polar
Research, Japan), Satoshi Kurita (Nagoya Univ., Japan), Yuki Kawamura (Univ. of
Electro-Communications, Japan), Vania Jordanova (Los Alamos National Laboratory, USA),
Ryoichi Fuji (Research Organization of Information and systems, Japan)

HP-3 Continuous and global observations of isolated proton aurora from low-altitude satellite
during magnetic storm
Haruki Kawai, Keisuke Hosokawa, Hozumi Yuta (Univ. of Electro-Communications, Japan),
Kazuo Shiokawa, Satoshi Kurita (Nagoya Univ., Japan), Mistumori Ozaki (Kanazawa Univ.,
Japan), Takeshi Sakanoi (Tohoku Univ., Japan), Boris Shevtsov, Igor Poddelsky (Institute of
Cosmophysical Researches and Radio Wave Propagation, Russia), Tero Raita (SGO, Finland)

HP-4 Evaluation of the calibration method of waveform data measured by the PWE/WFC on
board the Arase satellite
Masahiro Kitahara (Tohoku Univ., Japan), Shoya Matsuda (Institute of Space and Astronautical
Science/Japan Aerospace Exploration Agency, Japan), Yuto Katoh (Tohoku Univ., Japan),
Yoshiya Kasahara (Kanazawa Univ., Japan), Hirotugu Kojima (Kyoto Univ., Japan), Mitsuru
Hikishima (Institute of Space and Astronautical Science/Japan Aerospace Exploration Agency,
Japan)

HP-5 Particle Simulation of VLF Triggered Falling-tone Emissions in the Inner Magnetosphere
Takeshi Nogi, Yoshiharu Omura (Kyoto Univ., Japan)

HP-6 Propagation characteristics of whistler mode chorus waves deduced from the observations
by PWE/OFA onboard the Arase satellite
Satoshi Kurita, Yoshizumi Miyoshi (Nagoya Univ., Japan), Yoshiya Kasahara (Kanazawa Univ.,
Japan); Hirotugu Kojima (Kyoto Univ., Japan), Shoya Matsuda, Ayako Matsuoka, Iku
Shinohara (Institute of Space and Astronautical Science, JAXA, Japan)

HP-7 Basic design of software department of Kanazawa University satellite
Rei Takeshita, Tomohiko Imachi, Tatsuya Sawano, Makoto Arimoto, Yoshiya Kasahara, Daisuke
Yonetoku, Satoshi Yagitani, Yuta Ogawa, Koga Miyao, Kaichi Ota, Sunyong Kim, Yuki Yasuda
(Kanazawa Univ., Japan)

HP-8 Microsatellite Development at Kanazawa University for Education of Space Science and
Technology
Tomohiko Imachi, Satoshi Yagitani, Daisuke Yonetoku, Yoshiya Kasahara, Tatsuya Sawano,
Makoto Arimoto, Yoshitaka Goto, Mitsunori Ozaki, Ryuichi Fujimoto (Kanazawa Univ., Japan)
Commission J: Radio astronomy

JP-1 The Galactic center lobe filled with thermal plasma
Kenta Fujisawa (Yamaguchi Univ., Japan)

JP-2 Development of Wideband Antenna
Hideki Ujihara (NICT, Japan)

Commission K: Electromagnetics in biology and medicine

KP-1 A Preliminary Study on Assessment of Absorbed Power Density inside a Human Body Based on Measurement of Reflection of Electromagnetic Wave
Ryo Matsumoto (Aoyama Gakuin Univ. / NICT, Japan), Kun Li, Kensuke Sasaki, Soichi Watanabe, Kanako Wake, (NICT, Japan), Ryosuke Suga (Aoyama Gakuin Univ., Japan)

KP-2 A Study of SAR Evaluation in a Radiative WPT System with an Array Antenna
Naoki Fujita (Aoyama Gakuin Univ. / NICT, Japan), Andrey S. Andrenko, Yuto Shimizu, Kanako Wake, Soichi Watanabe (NICT, Japan), Ryosuke Suga (Aoyama Gakuin Univ., Japan)

KP-3 A Study on Simultaneous Estimation of Implant and Wearable Devices
Fumiya Nagao, Daisuke Anzai, Jianqing Wang (Nagoya Institute of Technology)

KP-4 Study of Non-contact Heartbeat Sensing Method during Body Movement using EM Wave Passing through Human Body
So Yo, Jianqing Wang, Daisuke Anzai (Nagoya Institute of Technology, Japan), Takashi Saito, Shunsuke Shibata, Hiroyuki Mori (SOKEN, INC., Japan); Kouichi Yamada (DENSO CORPORATION, Japan)

KP-5 Comparison of Dielectric Property Measurements Using Various Types of Coaxial Probes
Yuto Shimizu, Kensuke Sasaki, Soichi Watanabe, Kanako Wake (NICT, Japan)
Conference Events

Opening Ceremony

9:00-9:15 (September 5, 2019)
Building B, B201

MC: Shinichiro Ohnuki (Chair, URSI-JRSM 2019 Technical Program Committee)

Opening Address:
Satoshi Yagitani (URSI-JRSM 2019 General Chair; President, Japan National Committee of URSI)
Tsugumichi Shibata (President, IEICE Electronics Society)
Makoto Ando (President, URSI)
Takashi Fukuda (President, UEC)

Oral Sessions

14:00 - (September 5, 2019)
14:00 - (September 6, 2019)
Building A

Instructions for Oral Presentation:
Please bring and attach your own computer to the LCD projector in the session room. Both HDMI and VGA connectors are available. The session rooms are as follows:
Commission A: Room A302
Commission B: Room A101
Commission C: Room A301
Commission D: Room A303
Commission E: Room A401
Commission F: Room A402
Commission G: Room A102
Commission H: Room A202
Commission K: Room A403

Poster Session

15:45-18:45 (September 5, 2019)
Building B Hall

Instructions for Poster Presentation:
The poster layout is portrait. The dimensions of the poster presentation should not exceed 1800 mm (height) and 900 mm (width). The poster size should be less than A0 size (1189 mm height and 841 mm width). Authors are required to use only the boards corresponding to their posters. Each poster board is marked with a poster ID-number, which can be found in the poster program. Posters can be put up from 12:30 on September 5, 2019. After the poster session is over (18:30 on September 5), all the posters should be removed immediately.

Exhibition

12:30-18:30 (September 5, 2019)
10:00-14:00 (September 6, 2019)
Building B Hall

List of Exhibitors:
- NOISE LABORATORY CO., LTD.
- Advanced Research Center for Space Science and Technology, Kanazawa University
- Center for Space Science and Radio Engineering, The University of Electro-Communications
- College of Science and Technology, Nihon University
- Research Center for Future Vehicle City, Toyohashi University of Technology

Technical Tour

12:30-14:00 (September 5, 2019)
12:15-14:00 (September 6, 2019)
UCEC Communication Museum

Participants are free to explore UEC Communication Museum on their own any time during USRI-JRSM 2019.
URSI-Japan
Commission Business Meetings
(open to all participants)

13:15-14:00 (September 5, 2019):
  Commission A: Building A, A302
  Commission C: Building A, A301
  Commission H: Building A, A202
  Commission G: Building A, A102

12:30-13:15 (September 6, 2019):
  Commission B: Building A, A101
  Commission F: Building A, A402
  Commission K: Building A, A403

Banquet

18:45-20:45 (September 5, 2019)
  University Center

MC: Yasuhide Hobara (Assistant Secretary, Japan National Committee of URSI)

Welcome Address:
Kazuya Kobayashi (Chair, Commission B, URSI; Assistant Secretary-General (AP-RASC), URSI)
Kazushi Nakano (Member of the Board of Directors (Research and International Strategy), The University of Electro-Communications)

Toast:
Masashi Hayakawa (Past Chair, URSI Commission E)

During the Banquet, three finalists for Student Paper Competition (SPC) will be announced.

Closing Ceremony

18:00-18:30 (September 6, 2019)
  Building B, B201

MC: Yasuhide Hobara (Assistant Secretary, Japan National Committee of URSI)

SPC Award Ceremony:
Winners of SPC will be awarded the 1st, 2nd and 3rd prizes.

Closing Address:
Satoshi Yagitani (URSI-JRSM 2019 General Chair; President, Japan National Committee of URSI)

URSI-JRSM 2019 Steering Committee Meeting (members only)

12:30-13:15 (September 5, 2019)
  Building B, B102

SPC Committee Meetings (members only)

SPC Committee Meeting 1:
17:30-18:00 (September 5, 2019)
  Building B, B102

SPC Committee Meeting 2:
13:15-14:00 (September 6, 2019)
  Building B, B102
Floor Guide

Building B

1st Floor

- Poster Session Exhibition
- Hall
- B102

2nd Floor

- Keynote and Invited Lectures Opening and Closing Ceremonies
- Registration Desk
- Coffee Corner

Steering Committee
SPC Committee
Building A

1st Floor

Entrance

Entrance

Commission B

Commission G

2nd Floor

Commission H

A202

3rd Floor

Commission A

Commission C

Commission D

4th Floor

Commission F

Commission E

Commission K
List of Exhibitors

- NOISE LABORATORY CO., LTD.
- Advanced Research Center for Space Science and Technology,
  Kanazawa University
- Center for Space Science and Radio Engineering,
  The University of Electro-Communications
- College of Science and Technology, Nihon University
- Research Center for Future Vehicle City,
  Toyohashi University of Technology