# 2015 URSI-Japan Radio Science Meeting (URSI-JRSM 2015)

Tokyo Institute of Technology, Tokyo, Japan, September 3-4, 2015

## **Program**





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#### 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 The Institute of Electrical Engineers of Japan
- Science Council of Japan The Laser Society of Japan
- The Astronomical Society of Japan The Remote Sensing Society of Japan

### **Program and Time Table**

#### Thursday, September 3, 2015

#### 9:00 Opening Ceremony

#### 9:15 Special Lecture 1

Chair: Kazuya Kobayashi (President, Japan National Committee of URSI;

URSI Assistant Secretary-General (AP-RASC); Vice-Chair, URSI Commission B)

Makoto Ando (URSI Vice-President; Tokyo Institute of Technology, Japan)

"International Union of Radio Science (URSI): Its Mission, Structure and Activities"

#### 9:45 Invited Paper 1 (Commission A)

Chair: Mitsuru Musha (Commission A Official Member, Japan National Committee of URSI)

Nozomi Ohtsubo (National Institute of Information and Communications Technology, Japan)

"Present Ion Optical Frequency Standards and New Challenges"

#### 10:15 Coffee Break

#### 10:45 Invited Paper 2 (Commission B)

Chair: Toru Uno (Commission B Official Member, Japan National Committee of URSI)

Toru Sato (Kyoto University, Japan)

"Program of the Antarctic Syowa (PANSY) MST/IS Radar"

#### 11:15 Invited Paper 3 (Commission F)

Chair: Yasuyuki Maekawa (Commission F Official Member, Japan National Committee of URSI)

Yoshio Karasawa (The University of Electro-Communications, Japan)

"On Physical Limit of Wireless Data Transmission from Radiowave Propagation Viewpoint"

#### 11:45 Special Lecture 2

Chair: Makoto Ando (URSI Vice-President)

Kenichi Iga (Professor Emeritus / Former President, Tokyo Institute of Technology, Japan)

"Temperature-Insensitive Quartz Oscillator Enabled Highly Stable Communications and Clocks – Review of Issac Koga's Works –"

#### 12:15 Lunch / Technical Tour / Commission Business Meetings

#### 13:45 Keynote Lecture 1

Chair: Kazuya Kobayashi (President, Japan National Committee of URSI;

URSI Assistant Secretary-General (AP-RASC); Vice-Chair, URSI Commission B)

Alexander I. Nosich (National Academy of Sciences of Ukraine, Ukraine)

"Method of Analytical Regularization in Computational Photonics"

#### 14:30 Invited Paper 4 (Commission K)

Chair: Masao Taki (Past Chair, URSI Commission K)

Koichi Ito (Chiba University, Japan)

"Recent Medical Applications of Electromagnetic Waves"

#### 15:00 Coffee Break / Exhibition

#### 15:30 Poster Session / Exhibition

18:30 Banquet

#### Friday, September 4, 2015

#### 9:00 Invited Paper 5 (Commission D)

 ${\it Chair: Katsutoshi\ Tsukamoto\ (Commission\ D\ Official\ Member,\ Japan\ National\ Committee\ of\ URSI)}$ 

Yuichi Kado (Kyoto Institute of Technology, Japan)

"Multi-port Power Router and Its Impact on Future Smart Grid"

#### 9:30 Invited Paper 6 (Commission G)

Chair: Mamoru Yamamoto (Commission G Official Member, Japan National Committee of URSI)

Toshitaka Tsuda (Kyoto University, Japan)

"Study of Coupling Processes in the Solar-Terrestrial System"

#### 10:00 Invited Paper 7 (Commission H)

Chair: Yoshiya Kasahara (Commission H Official Member, Japan National Committee of URSI) Yohei Miyake (Kobe University, Japan)

"Spacecraft-Plasma Interaction Effects on In-Space Electric Field Measurements"

#### 10:30 Coffee Break

#### 11:00 SPC (Student Paper Competition) Special Session

#### 12:15 Lunch / Technical Tour / Commission Business Meetings

#### 13:45 Keynote Lecture 2

Chair: Jun-ichi Takada (Assistant Secretary, Japan National Committee of URSI)
Ryuji Kohno (Yokohama National University, Japan / University of Oulu, Finland)

"Harmonization Based on Regulatory Science for Scientific and Commercial Radio Uses"

#### 14:30 Invited Paper 8 (Commission C)

Chair: Nobuyoshi Kikuma (Commission C Official Member, Japan National Committee of URSI)

Hiroyuki Tsuji (National Institute of Information and Communications Technology, Japan)

"R&D of Mobile Communication Systems Using Millimeter Wave"

#### 15:00 Coffee Break

#### 15:30 Invited Paper 9 (Commission E)

Chair: Yasuhide Hobara (Commission E Member, Japan National Committee of URSI) Yuichi Hayashi (Tohoku Gakuin University, Japan)

"EM Information Leakage from Smart Devices"

#### 16:00 Invited Paper 10 (Commission J)

Chair: Kenta Fujisawa (Commission J Official Member, Japan National Committee of URSI) Masatoshi Ohishi (National Astronomical Observatory of Japan, Japan)

"The Universe, Life and the Radio Sciences"

#### 16:30 SPC Award Ceremony / Closing Ceremony

Conference Room Information:
Opening Ceremony
Keynote Lectures, Special Lectures and Invited Papers Multi-Purpose Digital Hall, West Building 9
Closing Ceremony
Poster Session
Exhibition
Technical Tour
BanquetStudent Hall
Commission Business Meetings

### **List of Poster Papers**

#### **Commission A: Electromagnetic Metrology**

A1. Observation of the Magnetic-Insensitive Clock Transition in the  ${}^2S_{1/2}(F=0) - {}^2D_{3/2}(F=2)$  Transitions in Single  ${}^{171}\text{Yb}^+$ 

Yasutaka Imai, Kazuhiko Sugiyama and Masao Kitano (Kyoto University, Japan)

#### **Commission B: Fields and Waves**

- B1. The Physics of Angular Momentum Radio
  - Bo Thidé (Swedish Institute of Space Physics & Acreo Swedish ICT AB, Sweden); Fabrizio Tamburini (Twist Off SRL and University of Padua, Italy)
- B2. Asymptotic-Numerical Analysis for Transient Scattered Field by a Coated Cylinder with a Thin Lossy Medium Excited by a UWB Pulse Wave
  - Keiji Goto, Oki Okawa and Naoki Kishimoto (National Defense Academy, Japan)
- B3. Preliminary Study of Physical Optics for the Prediction of Scattering from Rough Surface in mmWave
  - Rieko Tsuji, Kentaro Saito and Jun-ichi Takada (Tokyo Institute of Technology, Japan)
- B4. Energy Distribution of Air-hole Waveguides with Dielectric Cylinder Outside of the Defect Layer Ryosuke Ozaki and Tsuneki Yamasaki (Nihon University, Japan)
- B5. Wiener-Hopf Analysis of the Plane Wave Diffraction by a Thin Material Strip
  Takashi Nagasaka (Chuo University, Japan)
- B6. Maxwell-Schrödinger Hybrid Simulation for Optically Controlling Quantum States: A Two-Level System Manipulated by a Light Pulse Pair

Takashi Takeuchi, Shinichiro Ohnuki and Tokuei Sako (Nihon University, Japan)

#### Commission C: Radiocommunication Systems and Signal Processing

- C1. Twin is Better than Single: A Hybrid Localization Method Using RSS and Time of Flight Nopphon Keerativoranan (National Electronics and Computer Technology Center, Thailand); Chong-kwon Kim (Seoul National University, Korea)
- C2. Localization of Coherent Targets in a Multiple-Input Multiple-Output Radar Employing Spatial Smoothing Between Virtual Antennas Extrapolated From Real Antennas Ryo Nishikawa and Takehiko Kobayashi (Tokyo Denki University, Japan)
- C3. Human Motion Classification Utilizing Radio Signal Strength in Wireless Body Area Network Sukhumarn Archasantisuk, Takahiro Aoyagi (Tokyo Institute of Technology, Japan); Tero Uusitupa (Aalto University School of Electrical Engineering, Finland); Minseok Kim (Niigata University, Japan); Jun-ichi Takada (Tokyo Institute of Technology, Japan)
- C4. Localization of Illegal Radios Utilizing Phase-Difference as Location Fingerprints

Azril Haniz, Gia Khanh Tran, Kei Sakaguchi and Jun-ichi Takada (Tokyo Institute of Technology, Japan); Daisuke Hayashi, Toshihiro Yamaguchi and Shintaro Arata (Koden Electronics Co., Ltd., Japan)

#### **Commission D: Electronics and Photonics**

- D1. Resonant Tunneling Diode Receivers for 300-GHz-band Wireless Communications Kousuke Nishio (Osaka University, Japan); Sebastian Diebold (Karlsruhe Institute of Technology, Germany); Shunsuke Nakai (Osaka University, Japan); Kazuisao Tsuruda, Toshikazu Mukai and Jaeyoung Kim (Rohm Co, Ltd., Japan); Masayuki Fujita and Tadao Nagatsuma (Osaka University, Japan)
- D2. Study on Hybrid RAN Using RoF and RoR for Distributed Small Cell Configurations
  Katsutoshi Tsukamoto and Kazuo Kumamoto (Osaka Institute of Technology, Japan)
- D3. Terahertz Wireless Transmission Enabled by Photonics Using Binary Phase-shift Keying at 300 GHz Yu Yasuda, Yusuke Fujita and Shintaro Hisatake (Osaka University, Japan); Shigeru Kuwano, Jun Terada and Akihiro Otaka (NTT Corporation, Japan); Tadao Nagatsuma (Osaka University, Japan)

#### **Commission E: Electromagnetic Environment and Interference**

- E1. Electromagnetic Imaging and Monitoring of Active Volcanoes: a Case Study and Future EM Monitoring Plan for Mt. Kusatsu-Shirane Volcano, Japan
  - Yasuo Ogawa and Mineo Kumazawa (Tokyo Institute of Technology, Japan)
- E2. Development of an Upgraded BOLT System to Improve Location Accuracy
  Yasuhiro Akiyama, Hiroshi Kikuchi, Ting Wu and Michael Stock (Osaka University, Japan);
  Yoshitaka Nakamura (Kobe City College of Technology, Japan); Satoru Yoshida
  (Meteorological Research Institute, Japan); Tomoo Ushio (Osaka University, Japan)
- E3. Atmosphere and Ionosphere Connection as Revealed by the Network Observation of Very Low Frequency Radio Signals
  - Sujay Pal and Yasuhide Hobara (The University of Electro-Communications, Japan)
- E4. A Statistical Study of Sub-ionospheric VLF Signal Anomaly Due to Geomagnetic Storms

  Kenshin Tatsuta and Yasuhide Hobara (The University of Electro-Communications, Japan)
- E5. Statistical Spatial Distributions of Lightning with Charge Moment Changes Over Northern Area of Japan by ELF and LLS Observations
  - Junpei Yamashita and Yasuhide Hobara (The University of Electro-Communications, Japan)
- E6. Modeling and Possible Determination of D-region Ionospheric Perturbation during Annular Solar Eclipse on May 21, 2012, From VLF Signal Simulation and Multi-Propagation Path Observation From UEC-VLF Network: Preliminary Results
  - Tamal Basak and Yasuhide Hobara (The University of Electro-Communications, Japan)
- E7. Bulk Current Injection Simulation Using Integrated Circuit Immunity Macro Model

Yosuke Kondo, Shinichiro Ueyama and Masato Izumichi (DENSO Corporation, Japan); Osami Wada (Kyoto University, Japan)

E8. Estimation of Packet Error Rate Considering Pulse Duration of Burst Disturbance
Kazuhiro Takaya (NTT Corporation, Japan); Daisuke Tomita, Kouki Umeda, Tohlu
Matsushima, Takashi Hisakado and Osami Wada (Kyoto University, Japan)

E9. Wideband Characterization of Multilayer Wave Absorber Using FDTD Method

Kosorl Thourn, Takahiro Aoyagi and Jun-ichi Takada (Tokyo Institute of Technology, Japan)

E10. A Novel Prediction for Very Low Frequency Transmitter Signal Amplitude Using NARX Neural Network

Hendy Santosa (The University of Electro-Communications, Japan & University of Bengkulu, Indonesia); Yasuhide Hobara (The University of Electro-Communications, Japan)

#### **Commission F: Wave Propagation and Remote Sensing**

F1. Detections of Electromagnetic Pulses During and Prior to Earthquakes
Minoru Tsutsui (Kyoto Sangyo University, Japan)

F2. A Study on Rain Area Motion along the Propagation Path and Ground Wind Velocity Around the Earth Station in Ku-Band Satellite Communications Links

Yasuyuki Maekawa and Yoshiaki Shibagaki (Osaka Electro-Communication University, Japan);

F3. Effects of Rain Area Motion on the Ku-Band Satellite Communications Links in Tropical Wet Season

Akihiro Tama, Yoshiaki Shibagaki and Yasuyuki Maekawa (Osaka Electro-Communication University, Japan)

F4. Effects of Rain Area and Rain Front Velocities on Rain Attenuation Characteristics in Ku-Band Satellite Communications Links

Naoki Kubota, Yoshiaki Shibagaki and Yasuyuki Maekawa (Osaka Electro-Communication University, Japan)

F5. Effects of Rain Area Motion on the Ku-Band Satellite Communications Links in Tropical Dry Season

Keigo Takemoto, Yoshiaki Shibagaki and Yasuyuki Maekawa (Osaka Electro-Communication University, Japan)

F6. Channel Sounding in 2GHz and 60GHz Band for Multi-band Wireless LAN System

Tianyang Min, Kentaro Saito and Jun-ichi Takada (Tokyo Institute of Technology, Japan)

F7. Application of Adaptive Digital Beam Forming for Polarimetric Phased Array Weather Radar Hiroshi Kikuchi, Takuro Tashima, Ting Wu, Gwan Kim and Tomoo Ushio (Osaka University, Japan); Hideto Goto and Fumihiko Mizutani (Toshiba Corporation, Japan)

F8. Large Scale Subsurface Velocity Estimation with Array GPR System YAKUMO
Li Yi, Kazunori Takahashi and Motoyuki Sato (Tohoku University, Japan)

F9. Enhanced Clustering of Multipath Components Utilizing Geometrical Parameters for Dynamic Indoor Double-Directional Propagation Channel

Panawit Hanpinitsak, Kentaro Saito and Jun-ichi Takada (Tokyo Institute of Technology, Japan); Minseok Kim (Niigata University, Japan)

F10. Fundamental Study of GB-SAR Imaging by Compressive Sensing
Lilong Zou and Motoyuki Sato (Tohoku University, Japan)

F11. Leaf Shape Effects on the Scattering From Simplified Deciduous Leaf Structures Using Spherical Wave Harmonics

Paul Jason Co and Jun-ichi Takada (Tokyo Institute of Technology, Japan)

F12. Experimental Evaluation of UWB Propagation in a Closed Box for Replacing Wired Interface Buses in Spacecrafts

Miyuki Hirose and Takehiko Kobayashi (Tokyo Denki University, Japan)

#### Commission G: Ionospheric Radio and Propagation

G1. Measurement of Ionosphere over the Western Pacific Ocean Mamoru Ishii, Hidekatsu Jin, Tatsuhiro Yokoyama, Takuya Tsugawa, Michi Nishioka and Takashi Maruyama (National Institute of Information and Communications Technology, Japan)

- G2. Ionospheric Scintillation Observations by a Digital Beacon Receiver in Tromsø

  Yasunobu Ogawa (National Institute of Polar Research, Japan); Yuichi Otsuka (Nagoya
  University, Japan); Mamoru Yamamoto (Kyoto University, Japan)
- G3. Development of Digital Receiver for LF/MF Band Radio Wave Onboard Sounding Rocket
  Takafumi Mizuno (Toyama Prefectural University, Japan); Yuki Ashihara (Nara National
  College of Technology, Japan); Keigo Ishisaka (Toyama Prefectural University, Japan)
- G4. Electron Density Estimation by Using Simultaneous Observations of Lightning Optical Emissions and Whistlers from ISS GLIMS Mission

Katsunori Suzuki, Yasuhide Hobara and Kanata Kakinuma (The University of Electro-Communications, Japan); Ivan Linscott (Stanford University, USA); Umran Inan (Koc University, Turkey); Mitsuteru Sato and Yukihiro Takahashi (Hokkaido University, Japan); Tomoo Ushio and Zen Kawasaki (Osaka University, Osaka, Japan); Takeshi Morimoto (Kinki University, Japan); Atsushi Yamazaki and Makoto Suzuki (Japan Aerospace Exploration Agency, Japan)

- G5. VHF Lightning Observations and DOA Estimation From ISS / JEM-GLIMS

  Takeshi Morimoto (Kinki University, Japan); Hiroshi Kikuchi and Tomoo Ushio (Osaka University, Japan); Mitsuteru Sato (Hokkaido University, Japan); Atsushi Yamazaki and Makoto Suzuki (Japan Aerospace Exploration Agency, Japan); Yasuhide Hobara (The University of Electro-Communications, Japan)
- G6. Beacon Experiment of Low-latitude Ionosphere from Southeast Asia Mamoru Yamamoto (Kyoto University, Japan)

G7. GNSS Scintillations and Ambient Ionization near the Northern EIA Crest Under Superstorm Event of March, 2015

Debasis Jana and Shyamal Chakraborty (Raja Peary Mohan College, India)

G8. Estimation of Electron Density Using the Propagation Characteristics of Radio Waves by S-520-29 Sounding Rocket

Keita Itaya and Keigo Ishisaka (Toyama Prefectural University, Japan); Yuki Ashihara (Nara National College of Technology, Japan); Junichi Kurihara (Hokkaido University, Japan); Takumi Abe (Japan Aerospace Exploration Agency, Japan)

#### **Commission H: Waves in Plasmas**

H1. A Simple Kinetic-Fluid Model for Ion-Scale Waves in Collisionless Plasmas Yasuhiro Nariyuki (University of Toyama, Japan); Shinji Saito and Takayuki Umeda (Nagoya University, Japan); Takuma Nakamura (Space Research Institute, Austrian Academy of Sciences, Austria)

H2. Collective Thomson Scattering Diagnostics in Non-Equilibrium Plasma: Application to High Power Laser Experiment

Shuichi Matsukiyo (Kyushu University, Japan); Youichi Sakawa (Osaka University, Japan); Kentaro Tomita (Kyushu University, Japan); Yasuhiro Kuramitsu (National Central University, Taiwan); Hideaki Takabe (Osaka University, Japan)

H3. Dependencies of the Generation Process of Whistler-Mode Emissions on Temperature Anisotropy of Energetic Electrons in the Earth's Inner Magnetosphere

Yuto Katoh (Tohoku University, Japan); Yoshiharu Omura (Kyoto University, Japan); Yohei Miyake and Hideyuki Usui (Kobe University, Japan); Hiroshi Nakashima (Kyoto University, Japan)

H4. Study on Improvement of Direction Finding Method for VLF Waves
 Mamoru Ota, Yoshiya Kasahara and Yoshitaka Goto (Kanazawa University, Japan)

H5. Effect of Electron Core-Halo Drift Speed on the Strahl Formation in the Solar Wind: Particle-in-cell Simulations

Jungjoon Seough and Yasuhiro Nariyuki (University of Toyama, Japan); Peter Yoon (University of Maryland, USA); Shinji Saito (Nagoya University, Japan)

H6. Low Frequency Characteristics of a Wire Antenna aboard a Scientific Spacecraft Tomohiko Imachi (Kanazawa University, Japan); Ryoichi Higashi (Ishiakwa National College of Technology, Japan); Mitsunori Ozaki and Satoshi Yagitani (Kanazawa University, Japan)

H7. Effect of Lunar Surface Reflection on Polarizations of Auroral Kilometric Radiation Observed by

Yoshitaka Goto, Ryota Kimura and Yoshiya Kasahara (Kanazawa University, Japan); Atsushi Kumamoto (Tohoku University, Japan)

H8. Development of Automatic Detection of Omega Signals Captured by PFX Onboard Akebono

I Made Agus Dwi Suarjaya, Yoshiya Kasahara and Yoshitaka Goto (Kanazawa University, Japan)

#### **Commission J: Radio Astronomy**

- J1. Feasible Spectral Indices Measurement by Broad-band VLBI in VGOS Era Kazuhiro Takefuji (National Institute of Information and Communications Technology, Japan)
- J2. Development of Wide-Band Bandwidth Synthesis Software for Geodetic VLBI Tetsuro Kondo and Kazuhiro Takefuji (National Institute of Information and Communications Technology, Japan); Yoshihiro Fukuzaki (Geospatial Information Authority of Japan, Japan)
- J3. Development of Wideband Feed

Hideki Ujihara (National Institute of Information and Communications Technology, Japan)

J4. New X-band Receiver System of Usuda 64m Antenna

Yasuhiro Murata, Masato Tsuboi, Kentaro Yamaguchi, Kenta Uehara, Hiroshi Takeuchi, Kiyoshi Nakajima, Zen'ichi Yamamoto and Nanako Mochizuki (Japan Aerospace Exploration Agency, Japan); Yusuke Kono, Masahiro Kanaguchi, Syunsaku Suzuki and Tomoaki Oyama (National Astronomical Observatory of Japan, Japan)

J5. Source Frequency Phase Referencing or 22 GHz H2O Masers and 43 and 86 GHz SiO Masers of the Red Supergiant, S Per

Yoshiharu Asaki (National Astronomical Observatory of Japan, Japan)

J6. Hours Timescale Radio Transients Detected by the Nasu Radio Telescope Array Takahiro Aoki (Waseda University, Japan)

#### **Commission K: Electromagnetics in Biology and Medicine**

(Nagoya University & RIKEN, Japan)

K1. Microwave Induced Oxidative Stress Mediated Toxicity on Male Fertility Pattern and Possible Protective Measures

Kavindra Kesari (University of Eastern Finland, Finland)

- K2. Temperature and Frequency Dependent on Electrical Properties of Swine Liver Shohei Kon, Kazuyuki Saito and Koichi Ito (Chiba University, Japan)
- K3. Development of Biological Tissue Coagulating and Cutting Device Combining Microwave and Radio Frequency Current

Sho Suzuki, Yuta Endo, Kazuyuki Saito and Koichi Ito (Chiba University, Japan)

K4. Study on Cytotoxicity of 0.07-0.30 THz Wave Exposure at Cultured Cells Noriko Yaekashiwa (RIKEN, Japan); Shin'ichiro Hayashi (RIKEN, Japan); Kodo Kawase

### **Conference Events**

#### **Opening Ceremony**

9:00-9:15 (September 3, 2015) Multi-Purpose Digital Hall, West Building 9

MC: Satoshi Yagitani (Chair, URSI-JRSM 2015 Technical Program Committee)

#### **Opening Address:**

Kazuya Kobayashi (URSI-JRSM 2015 General Chair; President, Japan National Committee of URSI; URSI Assistant Secretary-General (AP-RASC); Vice-Chair, URSI Commission B)

Makoto Ando (URSI Vice-President; Executive Vice President for Research, Tokyo Institute of Technology, Japan)

#### **Poster Session**

15:30-18:00 (September 3, 2015) Media Hall / Collaboration Room West Building 9

#### **Instructions for Poster Presentation:**

The board size for the poster presentation is 1700 mm (height) and 1150 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.

Please keep in mind that the poster message should be clear and understandable without oral explanation. Please use an appropriate font size allowing posters to be readable by participants from 2 m away.

Posters can be put up from 12:15 on September 3, 2015. After the poster session is over, all the posters should be removed immediately.

#### **Exhibition**

15:00-18:00 (September 3, 2015) Media Hall, West Building 9

#### **List of Exhibitors:**

- AET, INC.
- MITSUBISHI ELECTRIC CORPORATION

#### **Technical Tour**

10:30-16:30 (September 3, 2015) 10:30-16:30 (September 4, 2015) Tokyo Tech Museum, Centennial Hall

Participants are free to explore Tokyo Tech Museum in Centennial Hall on their own any time during USRI-JRSM 2015. An exhibition room on the 2nd floor highlights the evolution of electronics and the development of photonics at Tokyo Tech (Tokyo Institute of Technology), including the invention of the high-stability quartz oscillator by Prof. Issac Koga. During URSI-JRSM 2015, Issac Koga Gold Medal, which is presented to an outstanding young scientist under the age of 35 by the Japan National Committee of URSI on the occasion of the "URSI General Assembly and Scientific Symposium" (URSI GASS), will also be displayed.

#### URSI-Japan Commission Business Meetings (open to all participants)

#### 13:00-13:45 (September 3, 2015):

Commission B: Room W935, West Building 9 Commission E: Room W936, West Building 9

#### 12:15-13:25 (September 4, 2015):

Commission A: Room W321, West Building 3
Commission C: Room W934, West Building 9
Commission D: Room W935, West Building 9
Commission F: Room W936, West Building 9
Commission G: Room W932, West Building 9
Commission H: Room W933, West Building 9
Commission J: Room W322, West Building 3

#### **Banquet**

18:30-20:30 (September 3, 2015) Student Hall

MC: Jun-ichi Takada (Assistant Secretary, Japan National Committee of URSI)

#### Welcome Address:

Satoshi Yagitani (Chair, URSI-JRSM 2015 Technical Program Committee) Alexander I. Nosich (Professor / Principal Scientist, National Academy of Sciences of Ukraine, Ukraine)

#### **Toast:**

Yasuhiro Koyama (Chair, URSI Commission A)

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

#### **Closing Ceremony**

16:30-17:00 (September 4, 2015) Multi-Purpose Digital Hall, West Building 9

MC: Jun-ichi Takada (Assistant Secretary, Japan National Committee of URSI)

#### **SPC Award Ceremony:**

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

#### **Closing Address:**

Kazuya Kobayashi (URSI-JRSM 2015 General Chair; President, Japan National Committee of URSI; URSI Assistant Secretary-General (AP-RASC); Vice-Chair, URSI Commission B)

### **URSI-JRSM 2015 Steering Committee Meeting (members only)**

12:15-13:15 (September 3, 2015) Room W931, West Building 9

#### **SPC Committee Meetings (members only)**

#### **SPC Committee Meeting 1:**

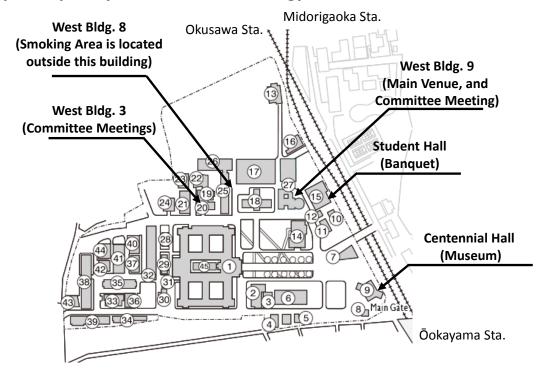
17:25-18:10 (September 3, 2015) Room W931, West Building 9

#### **SPC Committee Meeting 2:**

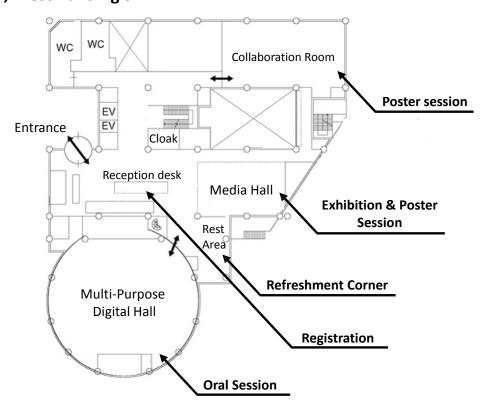
13:25-13:45 (September 4, 2015) Room W931, West Building 9

### Floor Guide

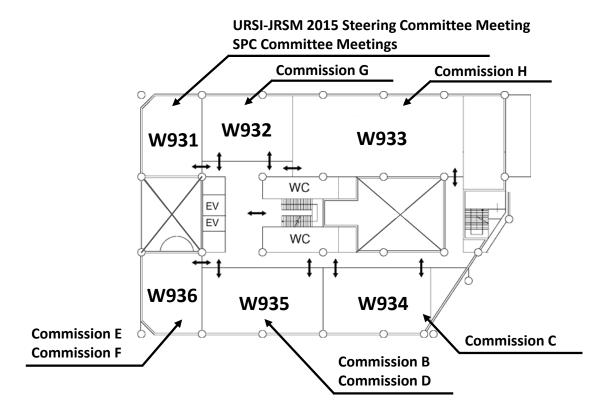
#### **Campus map, Tokyo Institute of Technology**



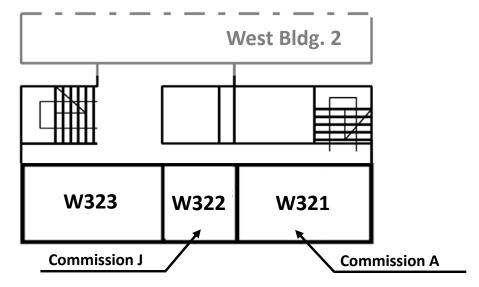
#### 2nd Floor, West Building 9



#### 3rd Floor, West Building 9



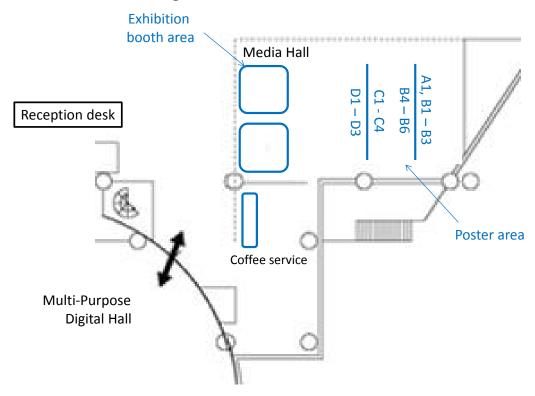
#### 3rd Floor, West Building 3



The front entrance of the building is located on the  $3^{rd}$  floor. Please go down to the  $2^{nd}$  floor to find these meeting rooms.

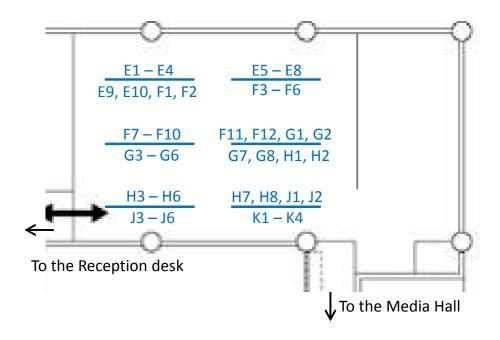
#### **Posters and Exhibition**

#### Media Hall, West Building 9



#### **Collaboration Room, West Building 9**

**Collaboration Room** 



### **Lunch Map**

#### **Cafeterias and Restaurants around Tokyo Tech**

No.	Cafeteria and Restaurant	Business hours	Location
1	First Cafeteria	11:00~14:00	1st floor, Student Hall
2	Seven-Eleven	7:30~16:00	1st floor, South Bldg. 4
3	University Co-op Shop	11:00~18:00	B1, Main Bldg. (B57)
4	Excelsior Caffé	7:30~21:00	1st floor, Tokyo Tech Front
5	ROYAL BLUE Seiyoken (French cuisine)	11:00~21:00	2nd floor, Tokyo Tech Front
6	Shisenyatai (Chinese cuisine)	11:30~14:50 17:00~23:30	3-28-13, Kitasenzoku, Ota-ku, Tokyo
7	McDonald's	24 hours	3-28-13, Kitasenzoku, Ota-ku, Tokyo
8	Ramenryouga (Ramen)	11:00~23:00	3-29-11, Kitasenzoku, Ota-ku, Tokyo
9	Kokoro (Ramen)	11:30~15:00 18:00~22:00	3-6-9, Minamisenzoku, Ota-ku, Tokyo
10	Tsukasa (Japanese cuisine)	11:30~14:00 17:00~22:30	1-49-3, Kitasenzoku, Ota-ku, Tokyo

<sup>\*</sup> Second cafeteria next to university co-op shop is closed during the period.



<sup>\*</sup> Box lunch is sold in first cafeteria 1 and university co-op shop 3.

#### Map around the Campus

