

# ICSANE 2014

International Conference on Space, Aeronautical and Navigational Electronics 2014  
Ramada Hotel Melaka, Melaka, Malaysia / October 22-24, 2014

## PROGRAM

For ICSANE 2014, Version – October 15<sup>th</sup>, 2014

See bulletin board for more information on events and additional revisions.

### Wednesday, October 22nd 2014 (09:00 - 17:40)

#### 22 Oct. 2014 9:00-9:20 Opening Ceremony

Opening Remarks:

Heng Swee Huay (Vice President R&D Division of MMU, Malaysia)

Hirobumi Saito (Co-Chair of ICSANE 2014 Steering Committee, JAXA, Japan)

#### 22 Oct. 2014 9:20-10:20 Space Mission and Satellite

Co-chair: Prof. Hirofumi Saito (JAXA, JAPAN) and Prof. Koo Voon Chet (MMU, Malaysia)

(1) 09:20 - 09:40

G/T Measurement Technique using ANGKASA S-band Antenna System

Terence Jerome Daim, Maszlan Ismail, Hamid Salim (ANGKASA)

(2) 09:40 - 10:00

BepiColombo/MMO Development Status

Hironori Maejima, Hajime Hayakawa, BepiColombo Project Team (JAXA)

(3) 10:00 - 10:20

High Speed Down Link Experiment from Small Satellite Hodoyoshi 4

Hirobumi Saito (JAXA), Tomoya Fukami, Hiromi Watanabe (Univ. of Tokyo), Takahide Mizuno, Atsushi Tomiki (JAXA), Naohiko Iwakiri (NICT)

----- Break ( 20 min. ) -----

#### 22 Oct. 2014 10:40-12:00 Satellite

Co-chair: Prof. Hirofumi Saito (JAXA, JAPAN) and Prof. Koo Voon Chet (MMU, Malaysia)

(4) 10:40 - 11:00

Preliminary Design of Small Satellite in ANGKASA for Demonstration Purpose

Syahrim Azhan Ibrahim, Sharizal Fadlie Sabri, Mohd Khairul Hisham Ismail, Maszlan Ismail (ANGKASA)

(5) 11:00 - 11:20

Overview of Small Satellites in Japan and Their Future Prospect

-- observation and communication --

Korehiro Maeda (UTokyo)



(6) 11:20 - 11:40

Compact X Band Synthetic Aperture Radar Compatible with 100kg Small Satellite  
Hirobumi Saito (JAXA)

(7) 11:40 - 12:00

Managing Building Construction and Equipment Installation in AITC Malaysia – a Lesson Learned  
Elena Woo Lai Leng (ANGKASA)

----- Lunch ( 100 min. ) -----

**22 Oct. 13:40-15:20 Special Tutorial Session on Air Traffic Control 1**

Co-chair: Dr. Nguyen Quy Son (VASA, Vietnam) and Dr. Sonosuke Fukushima(ENRI,JAPAN)

(8) 13:40 - 14:00

Radio and Space Navigation Technologies for Air and Ship for International Freedom Traffics on the Asia Pacific Sea

-- The Air and Maritime Traffic on the International Routes Need using the Newest Radio and Spaces Technologies. The Cooperation and Coordination on International and Regional Regulations must be Followed. --

Nguyen Quy Son (VASA)

(9) 14:00 - 14:40

[Tutorial Lecture]

Outline and Future Research Vision of ENRI

Naoki Fujii (ENRI)

(10) 14:40 - 15:20

[Tutorial Lecture]

Future Aeronautical Communication and Information Technologies

Shigeru Ozeki (ENRI)

----- Break ( 20 min. ) -----

**22 Oct. 15:40-17:40 Special Tutorial Session on Air Traffic Control 2**

Co-chair: Dr. Nguyen Quy Son (VASA, Vietnam) and Dr. Sonosuke Fukushima(ENRI,JAPAN)

(11) 15:40 - 16:20

[Tutorial Lecture]

GNSS Landing System in the Low Magnetic Latitude Region

Takayuki Yoshihara (ENRI)

(12) 16:20 - 17:00

[Tutorial Lecture]

Next Generation Aeronautical Surveillance Systems

Tadashi Koga (ENRI)

(13) 17:00 - 17:40

[Tutorial Lecture]

Safety and Human Factors in Aviation

Daisuke Karikawa (ENRI)

**Thursday, October 23rd (09:00 - 17:20)**



**23 Oct. 2014 9:00-10:40 Tracking and UWB Radar**

Co-chair: Prof. Chan Yee Kit (MMU, Malaysia) and Prof. Shouhei Kidera(UEC, JAPAN)

(14) 09:00 - 09:20

An Aircraft Target Detection by Passive Bistatic Radar with Multi-frequency Coherent Integration of Broadcast Satellite Signals

Tadashi Oshima, Toshihiro Ito, Nobuhiro Suzuki, Teruyuki Hara, Kazufumi Hirata, Toshio Wakayama, Atsushi Okamura, Kazunari Kihira, Takayuki Nakanishi, Yusuke Kitsukawa, Toru Takahashi (Mitsubishi Electric Corp.)

(15) 09:20 - 09:40

Track Extraction Method of Low Observable Target for Airborne HPRF Radar

Yasushi Obata, Hiroshi Kameda (Mitsubishi Electric Corp.)

(16) 09:40 - 10:00

A Measure of Estimated Accuracy Using Singular Values for TOA Location System

Yoshio Kosuge, Tadashi Koga, Hiromi Miyazaki (ENRI), Manabu Akita, Takayuki Inaba (UEC)

(17) 10:00 - 10:20

Numerical and Experimental Evaluation of Localization Methods in a UWB MIMO Radar

Shohei Seki, Idrin Pasya, Takehiko Kobayashi (Tokyo Denki Univ.)

(18) 10:20 - 10:40

UWB Through-wall Tracking

Lee Loong Wei, Koo Voon Chet, Chan Yee Kit (MMU)

----- Break ( 20 min. ) -----

**23 Oct. 2014 11:00-12:20 UWB and Short Range Radar**

Co-chair: Prof. Chan Yee Kit (MMU, Malaysia) and Prof. Shouhei Kidera(UEC, JAPAN)

(19) 11:00 - 11:20

3-Dimensional Imaging Method Exploiting Full Polarimetric Data for UWB Short Range Radar

Ayumi Yamaryo, Shouhei Kidera, Tetsuo Kirimoto (UEC)

(20) 11:20 - 11:40

Accurate Two-Dimensional Imaging of a Human Body in Motion using Multiple Ultra-Wideband Doppler Radar Systems in a Multipath Environment

Hiroki Yamazaki, Takuya Sakamoto, Toru Sato (Kyoto Univ.)

(21) 11:40 - 12:00

Fundamental Experiments on Super Resolution Range/Angle Estimation by Millimeter Wave Radar using Stepped Multiple Frequency Complementary Phase Code Modulation

Manabu Akita, Ryo Yamashita, Masato Watanabe, Takayuki Inaba (UEC)

(22) 12:00 - 12:20

Contactless Heart beat Measurement Using Webcam

Liew Qing Yin, Koo Voon Chet, Lim Chot Hun (MMU), Voon Wei Feng, Lau Ting En (Myreka Technologies)

----- Lunch ( 80 min. ) -----

## 23 Oct. 2014 13:40-15:20 Image Analysis and Processing

Co-chair: Prof. Chan-Su Yang (KIOST, Korea) and Prof. Kazuo Ouchi (KIOST, Korea)

(23) 13:40 - 14:00

The Effect of NDVI and Band Characteristics on Building Line Detection Using High Resolution Satellite Imagery

Junho Yeom, Minyoung Jung, Yongil Kim (Seoul National Univ.)

(24) 14:00 - 14:20

3D Information Extraction with a Modified Least Square Matching Technique for Urban Area

Yeji Kim, Yongil Kim (Seoul National Univ.)

(25) 14:20 - 14:40

Asphalt Pavement Performance Model of Airport and Highway By PALSAR on board ALOS Satellite Suanpaga Weerakaset (KU, Thailand), Yoshikazu Kamiya (JAXA)

(26) 14:40 - 15:00

Extraction of Urban Roads Based on Edge Information from High Resolution Satellite Imagery

Minyoung Jung, Junho Yeom, Yongil Kim (Seoul Natl. Univ.)

(27) 15:00 - 15:20

Characterization of Agricultural Land Abandonment Based on ALOS PALSAR and LANDSAT Multitemporal Measurement

Farrah Melissa Muharam (University Putra Malaysia), Wataru Takeuchi, Soni Darmawan (University of Tokyo), Muhamad Hafiz Abd Razak (Federal Land Consolidation and Rehabilitation Authority (FELCRA))

----- Break ( 20 min. ) -----

## 23 Oct. 2014 15:40-17:00 POLSAR Image Analysis and Processing

Co-chair: Prof. Chan-Su Yang (KIOST, Korea) and Prof. Kazuo Ouchi (KIOST, Korea)

(28) 15:40 - 16:00

Experimental Study on Graph-based Image Segmentation for the Feature Extraction of High-resolution Satellite Image

Hyejin Kim (Seoul Nat'l Univ.), Byungkil Lee (Kyonggi Univ.), Yongil Kim (Seoul Nat'l Univ.)

(29) 16:00 - 16:20

Impact of Topography and Tidal Height on ALOS PALSAR Polarimetric Measurements to Estimate Above Ground Biomass of Mangrove Forest in Indonesia

Soni Darmawan, Wataru Takeuchi (University of Tokyo), Yenni Vetrira (LAPAN), Ketut Wikantika (Institut Teknologi Bandung), Dewi Kania Sari (Institut Teknologi Nasional)

(30) 16:20 - 16:40

Combination of Entropy and Coherence of HH/VV-Polarimetric SAR Data for Improvement of Target Detection in the Sea

Kazuo Ouchi, Chan-Su Yang (KIOST)

(31) 16:40 - 17:00

Novel Feature Extraction Method of Full Polarimetric SAR imagery for Automatic Target Recognition Shouhei Ohno, Shouhei Kidera, Tetsuo Kirimoto (UEC)

## 23 Oct. 2014 18:00- Welcoming Event and Award Ceremony

### **Friday, October 24th (08:40 - 12:00)**

**24 Oct. 8:40-10:20 Remote Sensing, Algorithm and Scattering Analysis**

Co-chair: Dr. Masanobu Tsuji (JAXA, JAPAN), Mr. Mohammad Redzuan B.Tahar (ANGKASA)  
Ms. Elena Woo Lai Leng (ANGKASA)

(32) 08:40 - 09:00

SAR Image Modulation by Ocean Current Variations Induced by Internal Waves: Interpretation Using SPM Scattering Model

Dan-Bee Hong (UST), Chan-Su Yang, Kazuo Ouchi (KIOST)

(33) 09:00 - 09:20

Mapping Langkawi Island Sky Brightness 2013

Redzuan Tahar, Farahana Kamardin (ANGKASA)

(34) 09:20 - 09:40

Accurate Wind Velocity Estimation Method with Single Doppler LIDAR Model

Takayuki Masuo, Shouhei Kidera, Tetsuo Kirimoto (UEC), Hiroshi Sakamaki, Nobuhiro Suzuki (MELCO)

(35) 09:40 - 10:00

Analysis of the Radar Backscatter from the Sea Surface Perturbed by Varying Surface Current Induced by Bottom Topography in Shallow Waters: Comparison of Numerical Simulation with SAR Data

Tae-Ho Kim, Dan-Bee Hong (UST), Chan-Su Yang, Kazuo Ouchi (KIOST)

(36) 10:00 - 10:20

Reverberation Acoustic Chamber Simulation Characteristic Analysis

Adhwa Amir Tan, Nurliza Salim, Syahrim Azhan, Noor Hidayah Tauhid Ahmad, Maszlan Ismail (ANGKASA)

----- Break ( 20 min. ) -----

**24 Oct. 10:40-12:00 Remote Sensing, System and Development**

Co-chair: Dr. Masanobu Tsuji (JAXA, JAPAN), Mr. Mohammad Redzuan B.Tahar (ANGKASA)  
Ms. Elena Woo Lai Leng (ANGKASA)

(37) 10:40 - 11:00

An UAV SAR Footprint Generator using GPS-Aided INS

Chot Hun LIM, Chee Siong LIM, Tien Sze LIM, Voon Chet KOO (MMU)



(38) 11:00 - 11:20

Flight Model Development of L-band Active Phased Array Antenna for ALOS-2

Takehito Iguchi, Masakazu Taniguchi, Araki Ono, Takeshi Sakura, Kenichi Hariu (Mitsubishi Electric), Yukihiro Kankaku, Shinichi Suzuki (JAXA)

(39) 11:20 - 11:40

Development and Functional Evaluation of Passive Secondary Surveillance Radar System

Kakuichi Shiomi (ENRI), Shuji Aoyama (IRT), Akihiko Noda, Yuki Matsui (MSS)

(40) 11:40 - 12:00

The Design and Development of Synthetic Aperture Radar (SAR) Imaging Field Programmable Gate Array (FPGA)-based Processor

Lee Yung Chong, Koo Voon Chet, Chan Yee Kit (MMU, Malaysia)

24 Oct. 2014 13:30-17:45 Cultural Tour

Instead of having a technical tour, we now change to a cultural tour to Melaka Heritage Site. The tour and transport will be provided for **FREE** but not inclusive of entrance fees, food, etc, if applicable.

***Tentative programme:***

**24 Oct 2014**

13:30 -- Depart from Ramada Hotel

14:00 - 14:30 -- Visit Well of Hang Li Po and [San Poh Teng Temple at Bukit Cina](#)

14:45 - 15:45 -- Visit [Maritime Museum of Malacca](#)

16:00 - 17:30 -- Visit [A Famosa Porte De Santiago Fort](#), [St. John Fort](#)  
and [Queen Victoria's Fountain](#)

17:45 -- back to Ramada Hotel

OR continue to take dinner and sightseeing at [Jonker Street \(optional\)](#)



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The Institute of Electronics, Information and Communication Engineer

<http://www.ieice.org/cs/sane/eng/>  
<http://www.ieice.org/eng/index.html>

October 20<sup>th</sup>, 2014