

Abstracts

ISBN : 978-4-901404-13-6



**The 23rd CEReS International Symposium
The 18th Symposium on Environment Remote Sensing
The 3rd Symposium on Microsatellites for Remote Sensing**

**December 1-2, 2015
Keyaki Convention Hall, Chiba University**

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ORAL SESSIONS

15:20 - 17:00 General Session Chair : Koji Kajiwara
Tue, December 1 Large hall (1st floor)

G-1	Tiger J.Y. Liu <i>Atmospheric And Ionospheric Remote Sensing By Radio Occultation Of FORMOSAT-3 /COSMIC</i>
G-2	Katsumi Hattori, Peng Han, J.Y. Tiger Liu, Dimitar Ouzounov, Verelio Tramutoli <i>Sensor WEB Approach To Understand Earthquake Preparation Process At Kanto, Japan</i>
G-3	Kazuma Aoki <i>Aerosol Optical Properties Measured By Sky Radiometer Network Skynet</i>
G-4	Daniele Perissin <i>Infrastructure Monitoring Via Multi-Temporal InSAR</i>
G-5	Puspita Triana Dewi, Ghozali Suhariyanto Hadi, Muhammad Ramadhan Kusnaedi, Aris Budiarto, Agus Budiyo <i>Design And Development Of Vertical Takeoff And Landing Unmanned Aerial Vehicle For Border Surveillance</i>

09:00 – 10:40 Session 2A Chair : Josaphat T.S. Sumantyo
Wed, December 2 The Third SOMIRES Reception hall (3rd floor)

2A-1	Indra Riyanto, Ardiansyah, Yuniarto, Nazori AZ, Wendi Usino, Suparmoko <i>Mapping Of Sunda Kelapa Dredging Material Dispersion Pattern</i>
2A-2	Kyeong-Rok Kim, Hae-Won Jung, Tu-Hwan Kim, Heein Yang, and Jae-Hyun Kim <i>Development And Implementation Of The System Parameter Analysis Simulator For L-Band SAR</i>
2A-3	Yuta Izumi, Mohd Zafri Bin Baharuddin, Josaphat Tetuko Sri Smantyo, Ghozali Suhariyanto Hadi, Yudi Isvara, Agus Hendra, Heein Yang <i>Experiment Of L-Band Synthetic Aperture Radar System Using ISAR Method In Anechoic Chamber</i>
2A-4	Mohd Zafri bin Baharuddin, Yuto Osanai, Josaphat Tetuko Sri Sumantyo <i>Suppressed side-lobe beam steered, C-band circularly polarized array antenna for synthetic aperture radar measurements</i>
2A-5	Young-Deuk Kim, Tu-Hwan Kim, Min-Wook Heo, Jinhong An, H. Yang and Jae-Hyun Kim <i>Hardware Implementation and Verification of parallelized direct digital synthesizer (PDDS) using FPGA</i>

09:00 – 10:20 Session 2B Chair : Hitoshi Irie
Wed, December 2 Atmospheric Remote Sensing Conference room (3rd floor)

2B-1	Yoshikazu Iikura, Naohiro Manago, Miho Sekiguchi, Hiroaki Kuze <i>Utilization of Radiative Transfer Code for Satellite Image Processing</i>
2B-2	Masayuki Maki, Masato Iguchi, Takeshi Maesaka, Toshikazu Tanada, Tomofumi Kozono <i>Weather Radar Observations of Sakurajima Volcanic Smoke</i>
2B-3	Kisei Kinoshita, Masayuki Maki, Satoshi Tsuchida, Naoko Iino, Chikara Kanagaki <i>Eruption clouds at volcanoes in Kyushu, Japan observed by web-camera, radar and satellite images</i>
2B-4	Nofel Lagrosas, Hayato Saito, Naohiro Manago and Hiroaki Kuze <i>Modeling of scattering enhancement factor from ground-based instruments in Chiba, Japan</i>

* Each oral presentation (15 minutes presentation and 5 minutes discussion)

11:00-12:40 Wed, December 2	Session 3A Disaster and Anomaly	Chair : Hiroaki Kuze Reception hall (3rd floor)
3A-1	Ilham Alimuddin, A.R. Rasyid, Purwanto, N.P. Bhandary, Ryuichi Yatabe, J.T.S. Sumantyo and H. Kuze <i>Landslide susceptibility mapping using DInSAR and statistic model in Bawakaraeng mountain, Sulawesi, Indonesia</i>	
3A-2	Daijiro Kneko <i>Global Effects of SST Anomalies on Downwind Continental Crop Yields Using Satellite-Based Photosynthesis Models</i>	
3A-3	Hideomi Gokon, Wen Liu, Mariko Naruke, Fumio Yamazaki, Shunichi Koshimura, Kimiro Meguro <i>Toward an estimation of damage caused by a natural disaster using remote sensing technology</i>	
3A-4	Youngjoo Kwak, Yoichi Iwami, Akihiko Kondoh <i>Verification of Flood Damaged Rice Fields using Small UAV (Unmanned aerial vehicle)</i>	
3A-5	Kithsiri Pereraa, Ryutaro Tateishib, and Srikantha Herath <i>Assisting Mitigation Of Bushfire Threat In Regional Australia Through Modis Imagery Based Media Gis</i>	
10:50-12:30 Wed, December 2	Session 3B Food security and Agricultural Insurance	Chair : Chiharu Hongo Conference room (3rd floor)
3B-1	Gunardi Sigit <i>Current situation of agricultural insurance in Indonesia: Issues and future way forward</i>	
3B-2	Baba Barus, K Munibah, LS Iman, F Tonny, N Widiana, Setyardy, F <i>Development of Method for Agricultural Rice Field Protection in Indonesia</i>	
3B-3	Kazuhisa Tokui <i>The outline of Japan's agricultural insurance scheme</i>	
3B-4	Koki Homma <i>Estimation Of Rice Yield By A Simulation Model For Agricultural Insurance</i>	
3B-5	Chiharu Hongo <i>Application of satellite data for agricultural insurance as adaptation to climate change to contribute the food stability</i>	
13:30-14:50 Wed, December 2	Session 4A Atmosphere and SAR	Chair : Atsushi Higuchi Reception hall (3rd floor)
4A-1	Kenji Tanaka <i>TBD</i>	
4A-2	T. Nakajima, T. Watanabe, T. Funayama, Y. Yamamoto, H. Takenaka, T. Nakajima, H. Irie, and A. Higuchi <i>Satellite remote sensing and energy management</i>	
4A-3	Kotaro Iizuka <i>Usage of SAR techniques for discriminating land cover classes</i>	
4A-4	Uyanga Khudulmur, Josaphat Tetuko Sri Sumantyo <i>Study on land subsidence in Tokyo using PS-InSAR technique</i>	

* Each oral presentation (15 minutes presentation and 5 minutes discussion)

13:30-15:50 Wed, December 2	Session 4B Satellite Remote Sensing / RS Technology	Chair : Akihiko Kondo Conference room (3rd floor)
4B-1	Alkebaier Maitiniyazi, Ryutaro Tateishi, Alimujiang Kasimu <i>Glacier changes in the source region of Kaidu river and its impacts on Basin Hydrology in Bosten lake area, China</i>	
4B-2	Wei Yang, Hideki Kobayashi and Kenlo Nishida Nasahara <i>Estimation of overstory and understory leaf area index in forests by multi-angular and multi-spectral satellite observations</i>	
4B-3	Brian A. Johnson, Kotaro Iizuka, Isao Endo, Damasa B. Magcale-Macandog, Milben Bragais <i>Using Openstreetmap (OSM) crowdsourced data and Landsat imagery for land cover mapping in the Laguna de Bay area of the Philippines</i>	
4B-4	Husnul Kausarian, J. T. Sri Sumantyo, Hiroaki Kuze <i>Silica sand identification using ALOS/Palsar Full Polarimetry at Northern Coastline of Rupert Island, Indonesia</i>	
4B-5	Idris Mandang and Muhammad A. Fachrudiy <i>The spatial analysis of water masses movement in the Halmahera and Banda sea using empirical orthogonal function (EOF) methods</i>	
4B-6	K. Sakai, R. Yamamoto, K. Hasegawa, T. Izumi, H. Matsuyama <i>Generation of DSMs of forest crown using areal images taken by small-sized UAV - Comparison of DSMs generated by vertical images and by vertical +oblique images-</i>	
4B-7	Heein Yang, Josaphat Tetuko Sri Sumantyo, Good Fried Panggabean, Agus Hendra, Babag Purbantoro, Cahya Edi Santosa, Kaihei Nakamura, and Kyeong-Rok Kim <i>Conceptual design of unmanned aerial vehicle (UAV) on-board X-band synthetic aperture radar (SAR)</i>	

15:10-17:10 Wed, December 2	Session 5A Forest and Vegetation	Chair : Yoshiaki Honda, Akira Kato Reception hall (3rd floor)
5A-1	Kazuo Mabuchi, Masao Moriyama, Yoshiaki Honda, Koji Kajiwara <i>Validation of satellite product estimation algorithm using climate model simulation data</i>	
5A-2	Shin Nagai, Taku M Saitoh, Tomoharu Inoue, Rikie Suzuki, Yoshiaki Honda <i>Usability of phenological information published on web sites for ground-truthing of satellite remote-sensing observations</i>	
5A-3	Akira Kato, Andrew T. Hudak, L. Monika Moskal, Christopher Gomez, Hiroyuki Obanawa, Yuichi Hayakawa, Kazuhiro Aruga <i>Beyond point clouds in forest application using Airborne Laser, Terrestrial Laser, and Structure from Motion</i>	
5A-4	Andrew T. Hudak, Carlos A. Silva, Benjamin C. Bright, E. Louise Loudermilk, Akira Kato <i>Lidar tools and techniques for 3D vegetation structure characterization at multiple scales</i>	
5A-5	Yuichi S. Hayakawa, Akira Kato, Hiroyuki Obanawa <i>Analysis on geomorphological conditions for vegetation growth using TLS and UAS</i>	
5A-6	Tatsuro Nakaji, Tomoko Akitsu, Hideki Kobayashi, Masato Hayashi, Nobuko Saigusa, Koji Kajiwara, Yoshiaki Honda, Kenlo Nasahara, Masahiro Nakamura, Toshiya Yoshida, Hideaki Shibata, Tsutomu Hiura <i>Development of large-scale ecological monitoring sites for satellite validation in natural forests in Hokkaido, Japan</i>	

* Each oral presentation (15 minutes presentation and 5 minutes discussion)

ASSISTING MITIGATION OF BUSHFIRE THREAT IN REGIONAL AUSTRALIA THROUGH MODIS IMAGERY BASED MEDIA GIS

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Bushfires have been part of the Australian environment since before human settlement of the continent. Some Australian flora and fauna has evolved to coexist with bushfires, and in the case of eucalypt forest, fire forms an integral part of its regeneration cycle. Today, bushfires have become the dominant phenomenon in Australian natural hazards. According to the Australian bureau of meteorology, the whole southern half of Australia is at fire risk in summer and autumn months. Australian bureau of Criminology published a bushfire damage recorded from 1967 to 1999, and estimated the cost as about \$2.5 billion excluding forestry losses. The public attention to bushfire disasters reached to a new peak, after the disastrous Black Saturday bushfire in Victoria. The Black Saturday bushfires in 2009 killed 173 injured 500 more and cause over \$2.5 billion in damages. Annually, fire authorities respond to an average 54,000 bushfires in Australia where up to 50% of these fires are deliberately lit or start in suspicious circumstances. This grave situation of bushfire damage encourages researches to explore various bushfire mitigation scenarios. The present study focuses on educating the rural communities by awakening their participation in fire mitigation efforts using semi-real time fire information. In Australia, fire prevention related agencies work extensively to make available various data sources for public and schools. However, the flow of information to rural communities is not smooth due to various technical and social reasons, though their participation is vital. "I could see the real value of us educating the locals," said Glenn O'Rourke, Deputy Captain and Community Safety Officer at the Wollombi Rural Fire Brigade. This study discusses an approach to educate rural communities through Media GIS contents based on daily MODIS imagery. These bushfire contents can be uploaded daily to local newspapers, TV, and to mobile subscribers to establish a participatory user cohort. Google functions such as placemarks will be used in KML environment to deliver media GIS contents as spot/image information. Collected Participatory GIS inputs will be used to enrich the GIS database to further enhancements of the communication process on bushfire developments.