

**Water · UAV (Room A, Nov. 21st (Tue.) 17:00-18:00)**

A1	Time series analysis of vegetation distribution in the alpine zone using UAV.....	3
	○ Y. Shouji, H. Oguma, and Y. Yone	
A2	Monitoring of tea growing status and quality using drone .....	5
	○ K. Sato, K. Matsuura, S. Shimada, and A. Sekiyama	
A3	Semi-automated counting of roosting waterfowl using UAV imagery .....	7
	○ K. Ogawa, A. Matsuda, T. Suzuki, T. Maruyama, M. Mishina, and A. Fujiwaka	
A4	Salinity estimation method for an eutrophic water area using geostationary ocean color observation satellite .....	9
	○ T. Fukuda, H. Higa, K. Miyashita, Y. Nakamura, and T. Suzuki	

**Land (Room A, Nov. 22nd (Wed.) 8:30-10:00)**

A5	A slope failure type classification map for multiple simultaneous slope failure hazard assessment.....	13
	○ I. Uchida, K. Furusho, Y. Sekine, and H. Kojima	
A6	Study on the examination of threshold in the quick method to detect slope failure areas .....	15
	○ T. Eguchi	
A7	Relationship between microwave land surface emissivity and land hydrological variables in the Mongolia semi-arid region .....	19
	○ N. Hirose, K. Taniguti, and I. Kaihotsu	
A8	High spatial and high temporal resolution inundation monitoring of seasonal wetland in tropical region by satellite data fusion .....	21
	○ C. Nishiyama, K. Nasahara, and I. Ridwansyah	
A9	Deep Learning Based Super Resolution for Satellite Imagery .....	23
	○ I. Kawashima and R. Nakamura	
A10	Local climate zone classification using optical and SAR data in Tokyo .....	27
	○ T. Temulun, H. Bagan, Habura, and Y. Yamagata	

**Vegetation (Room B, Nov. 21st (Tue.) 8:30-10:00)**

B1	The variation and factors of plant phenology in Mongolia .....	31
	○ Y. Sofue, I. Kaihotsu, and A. Kondoh	
B2	Identification of Bacterial Leaf Blight disease of rice using remote sensing data.....	33
	○ Y. Takahashi, C. Hongo, E. Tamura, G. Sigit, and B. Barus	
B3	Assessing leaf mass per area (LMA) of deciduous species with hyperspectral reflectance .....	35
	○ R. Sonobe and Q. Wang	
B4	Spatial estimation of accuracy for JAXA land-use land-cover map .....	37
	○ N. Tsutsumida, K. Nasahara, and T. Tadono	
B5	Development of rephotography application for multi-temporal land cover information dataset "SACLAJ" .....	39
	○ J. Katagi, K. Nasahara, M. Doutsu, K. Imamura, T. Yamanokuchi, and T. Tadono	

B6	Optimizing processes of classifying tree species with aerial imageries using CNN .....	41
	○ D. Nojima and T. Imaizumi	

**Calibration (Room B, Nov. 21st (Tue.) 10 : 15-12 : 15)**

B7	Continuous calibration and validation of ALOS-2/PALSAR-2 .....	45
	○ M. Sakashita, O. Isoguchi, T. Motohka, M. Shimada, and T. Tadono	
B8	Evaluation of AMSR-E slow rotation data by using reanalysis data .....	49
	○ K. Imaoka and M. Kachi	
B9	Simulated image generation in pre-launch study for the Advanced Optical Satellite .....	51
	○ T. Tadono, Y. Mizukami, A. Oka, H. Watarai, J. Takaku, and M. Doutsu	
B10	Precision evaluation of SPOT 6/7 using IMAGINE Photogrammetry .....	53
	○ M. Matsushita, Y. Ishioka, A. Kobayashi, H. Kuwajima, and R. Chiba	
B11	R&D on the precise displacement measuring technique by using ground based millimeter wave radar system (Part-II) .....	55
	○ T. Deguchi, T. Sugiyama, M. Kishimoto, T. Yamaguchi, and S. Ikegami	
B12	Calibration and Validation of ATI-K mode in Pi-SAR X2 .....	57
	○ S. Kojima	
B13	Calculation of radiometric calibration coefficients of ALOS-2/CIRC .....	61
	○ H. Tonooka, M. Asaki, M. Sakai, A. Kumeta, and K. Nakau	
B14	Preliminary results of lunar calibration for ASTER based on two lunar observations over 14 years .....	63
	○ T. Kouyama, S. Kato, M. Kikuchi, and F. Sakuma	

**Atmospher (Room B, Nov. 21st (Tue.) 15 : 45-16 : 45)**

B16	Reliability evaluation of ASTER cloud mask using ensemble deep learning .....	69
	○ J. Yamamoto and H. Tonooka	
B17	Cloud Shadow Removal Method Using Optical Properties of Clouds .....	71
	○ M. Nagare, E. Kaneko, M. Toda, H. Aoki, and M. Tsukada	
B18	Examination of Landsat 8 cloud discrimination algorithm for land cover change detection .....	75
	○ Y. Oishi, H. Ishida, S. Kato, A. Oda, and R. Nakamura	

**Ice (Room B, Nov. 21st (Tue.) 17 : 00-18 : 00)**

B19	Study for estimation of snow depth by using DSM made by SfM method .....	81
	○ S. Miyasaka, S. Unome, A. Tamura, Y. Ito, A. Ishizaki, and Y. Sanada	
B20	Automatic delineation of glacial lakes by means of PALSAR-2 .....	85
	○ H. Nagai and T. Tadono	
B21	Analysis of temporal variation of ice shelf and ice sheet on Prinsesse Ragnhild Kyst by SAR and altimeter data .....	87
	○ T. Yamanokuchi, K. Doi, K. Nakamura, and S. Aoki	
B22	Proposal of iceberg detection for Antarctic region using artificial intelligence .....	89
	○ K. Nakamura	

**System (Room B, Nov. 22nd (Wed.) 8 : 30-10 : 00)**

B23	Destriping of satellite images using Deep Learning .....	93
	○ A. Fujita, T. Imaizumi, and S. Hikosaka	
B24	An 8-Channels FPGA-based Reconfigurable Chirp Generator for Airborne/Spaceborne CP-SAR .....	95
	○ M.Y. Chua, J.T.S. Sumantyo, and Y.Q. Ji	
B25	Container of computer environment for satellite image processing .....	99
	○ Y. Iikura, N. Manago, and H. Kuze	
B26	Optimization of observation scheduling algorithm in constellation of Remote-sensing satellites .....	103
	○ Y. Takeo and S. Matsunaga	
B27	Distribution of tiled Himawari-8 images .....	105
	○ T. Nemoto and M. Kitsuregawa	
B28	Satellite attitude determination for pushbroom scanner images based on robust image matching .....	107
	○ R. Sugimoto, T. Kouyama, A. Kanemura, S. Kato, and R. Nakamura	

**SAR1 (Room B, Nov. 22nd (Wed.) 10 : 15-12 : 15)**

B29	A possibility of forest fire site detection by JJ-FAST system .....	113
	○ M. Watanabe, C. Koyama, M. Hayashi, I. Nagatani, T. Tadono, and M. Shimada	
B30	Development of Hybrid Automatic-Clustering and Neural Network for Automatic Deforestation Detection of ALOS-2 PALSAR-2 .....	117
	○ I. E.W. Rachmawan, T. Tadono, and Y. Kiyoki	
B31	Using meteorological forcing data to correct for seasonality-induced low-frequency SAR backscatter variations in African dry tropical forest .....	119
	○ C. Koyama, M. Watanabe, M. Hayashi, I. Nagatani, T. Ogawa, T. Tadono, and M. Shimada	
B32	L-band radar backscatter variation due to the Amazonian deforestation .....	123
	○ T. Hamazaki and M. Shimada	
B33	Identifying transplanting date of rice crop by use of Sentinel-1 data .....	125
	○ T. Tosa, C. Hongo, E. Tamura, G. Sigit, and B. Barus	
B34	Identification study of cultivation/non-cultivation area on paddy rice utilizing time series analysis of ALOS-2/PALSAR-2 L-band SAR radar backscatter .....	127
	○ T. Hirose and M. Shimada	
B35	Sensitivity of ALOS/PALSAR image to vertical structures of natural and plantation forests in Sumatra, Indonesia .....	129
	○ S. Kobayashi	
B36	Comparison of POLSAR data of forest area and volume scattering models .....	131
	○ K. Kurimoto and H. Kimura	

**SAR2 (Room B, Nov. 22nd (Wed.) 14 : 30-16 : 30)**

B37	An experiment of SAR tomography using time-series SAR data stacks with the staring spotlight mode of TerraSAR-X .....	135
	○ S. Kusano, S. Shimizu, D. Sango, and Y. Ishioka	

B38	Analysis of multipass airborne POLSAR data .....	137
	○ Y. Isobe and H. Kimura	
B39	Reliability Evaluation of Persistent Scatterers for Urban Monitoring by PS-InSAR .....	139
	○ H. Toriya, K. Senzaki, and M. Tsukada	
B40	Change detection of the land surface in city areas from the data observed by PALSAR-2 .....	143
	○ T. Kanda and H. Kimura	
B41	Surface deformation measurement for the Kumamoto Earthquake 2016 using the 3 DinSAR images observed by the ALOS-2/PALSAR-2 .....	145
	○ M. Shimada, S. Yasuda, and K. Ishikawa	
B42	Distinction and inspection of the landslide area by the natural disaster using the airborne Polarimetric synthetic aperture radar .....	149
	○ K. Tonagi and M. Shimada	
B43	Earthquake/Tsunami Damage Level Mapping of Urban Areas Using Full Polarimetric SAR Data .....	153
	○ Y.Q. Ji, J.T.S. Sumantyo, M.Y. Chua, and M.M. Waqar	
B44	Flood detection for the 2016 Omoto River disaster using high-resolution ALOS-2 PALSAR-2 data .....	157
	○ Y. Kwak	

**Special Session (Ice) (Room A, Nov. 21st (Tue.) 8 : 30-10 : 00)**

S1	Sea ice monitoring by polarimetric SAR .....	161
	○ H. Wakabayashi and K. Cho	
S2	Satellite remote sensing of tropical glaciers and its application to water resources evaluation .....	163
	○ Y. Asaoka	
S3	Feasibility study of the Northern Sea Route by satellite monitoring .....	165
	○ N. Otsuka	
S4	Development of VISHOP (VIualization Service of Horizontal scale Observations Polar region) .....	167
	○ H. Yabuki, T. Sugimura, T. Terui, and H. Enomoto	
S5	Possibility of snow/ice remote sensing using thermal infrared spectral characteristics .....	169
	○ H. Tonooka	
S6	Satellite data fusion for sea ice monitoring .....	171
	○ K. Cho and K. Naoki	

**Special Session (Terrestrial Ecosystem) (Room A, Nov. 21st (Tue.) 10 : 15-12 : 15)**

S7	Measurement and modeling of directional vertical SIF emission from multiple canopy layers in a cool temperate deciduous forest .....	175
	○ T. Kato, Y. Sakai, K. Tsujimoto, H. Kobayashi, K.N. Nasahara, T. Akitsu, and H. Muraoka	
S8	Prediction of forest GPP using hyper-spectral images .....	177
	○ K. Yoshikawa, K. Takagi, T. Yazaki, T. Hirano, R. Ide, H. Oguma, Y. Hirose, and J. Kurihara	
S9	Forest biomass map development using ALOS-2/PALSAR-2 time-series data .....	179
	○ M. Hayashi, T. Motohka, and Y. Sawada	

S10	Decadal forest biomass change estimated by repeated airborne LiDAR observation in northern Japan .....	181
	○ K. Takagi, K. Hirayama, N. Saigusa, K. Okada, R. Sameshima, and H. Oguma	
S11	Methane dynamics in river lowland, north eastern Siberia : short term influence of extreme flooding on river water dissolved methane in 2017 summer .....	183
	○ T. Morozumi, R. Shingubara, S. Tei, R. Fan, S. Takano, H. Kobayashi, R. Suzuki, T.C. Maximov, and A. Sugimoto	
S12	Usability, problems, and outlook of remote-sensing observations for the sake of evaluation of ecosystem services and biodiversity in a wide area .....	185
	○ S. Nagai, H. Muraoka, T.M. Saitoh, and K. Nasahara	
S13	Terrestrial carbon cycle studies using AsiaFlux and remote sensing data .....	187
	○ K. Ichii, M. Ueyama, Y. Yanagi, and H. Kobayashi	
S14	Climate projection by Earth system model and terrestrial remote sensing .....	189
	○ T. Hajima, K. Tachiiri, M. Abe, K. Ichii, and M. Noguchi	

**Special Session (Lake) (Room A, Nov. 21st (Tue.) 15:45-16:45)**

S15	GCOM-C/SGLI Ocean product and its validation plan .....	193
	○ M. Toratani, H. Murakami, J. Ishizaka, T. Hirawake, T. Hirata, K. Suzuki, H. Kobayashi, H. Higa, T. Isada, Y. Sakuno, K. Ogata, A. Tanaka, A. Fujiwara, H. Fukushima, and S. Saitoh	
S16	A Novel Chlorophyll-a Retrieval Technique in Highly Turbid Water Using Multi-Algorithm Indices with Look-Up Table.....	195
	○ S.I. Salem, H. Higa, K. Komatsu, and K. Oki	
S17	The possibility of GCOM-C/SGLI for eutrophic water areas monitoring .....	199
	○ H. Higa, Y. Sakuno, and M. Toratani	
S18	Expectation for environmental monitoring of brackish lake group by SGLI .....	201
	○ Y. Sakuno	

**Application (Room A, Nov. 22nd (Wed.) 10:15-12:15)**

U1	Hyperspectral image classification based on boosted domain adaptation extreme learning machines...	205
	○ J. Xia and A. Iwasaki	
U2	Vegetation classification using UAV-based hyperspectral imaging.....	207
	○ T. Ishida, J. Kurihara, and Y. Takahashi	
U3	Road Detection From Satellite Images by Improving U-Net with Difference of Features .....	209
	○ R. Kamiya, K. Hotta, K. Oda, and S. Kakuta	
U4	Study on relationship between snow cover distribution of satellite images and dam inflow during snowmelt season .....	213
	○ T. Nishihara and A. Tanise	
U5	Discriminating landslides triggered by the Kumamoto earthquake using ALOS-2 .....	217
	○ K. Hikichi, J. Minagawa, N. Asada, K. Honda, H. Tsutsumi, and S. Mitsumasu	
U6	Semantic Segmentation in Red Relief Image Map by UX-Net .....	219
	○ T. Komiyama, K. Hotta, K. Oda, S. Kakuta, and M. Sano	

U7 Validation system for aerosol characteristics from GCOM-C/SGLI ..... 221  
○ R. Kudo, S. Iwasaki, S. Mukai, and B. Holben

U8 Reconnaissance Observations for Plum Pox Virus Detection using Remote Sensing ..... 223  
○ S. Odagawa and T. Okumura

**Application (Poster) (Room P, Nov. 21st (Tue.), 22nd (Wed.) 13:00-14:20)**

U9 Evaluation of Thin Cloud Removal Method Using Ship Detection ..... 227  
○ T. Toizumi, M. Nagare, E. Kaneko, and Y. Senda

U10 Tangible visualization of the regional environment information by spatial observation/analysis data  
to assist recovery from disaster ..... 231  
K. Gomi and ○ Y. Hirano

U11 Automatic detection for geologic circular features from digital terrain model and  
spectrometric images using Rotational Pixel Swapping Method ..... 233  
○ S. Yamamoto, T. Matsunaga, R. Nakamura, Y. Sekine, N. Hirata, and Y. Yamaguchi

U12 Detection of the landslides for The 2016 Kumamoto Earthquake ..... 235  
○ A. Ito, S. Matsumoto, J. Miyamoto, and M. Kinoshita

**Poster Session (1) (Room P, Nov. 21st (Tue.) 13:00-14:20 (P1)-(P36))  
(Core Time : Odd numbers 13:00-13:40/Even numbers 13:40-14:20)**

P1 Urban Thermal Environment by Himawari-8 in the Day and Night Time ..... 239  
○ S. Suzuki, Y. Uchida, T. Asaka, T. Nonaka, and T. Sugimura

P2 Daily change of earth surface temperature in autumn using Himawari-8/AHI data ..... 241  
○ Y. Uchida, S. Aoyama, T. Nonaka, K. Iwashita, and T. Sugimura

P3 Understanding the actual condition of urban thermal environment by airborne remote sensing and  
mobile observation – Regarding the effect of the sun shade of a high-rise building – ..... 243  
○ K. Chen, T. Asawa, and H. Oshio

P4 Emissivity measurement test of three-band radiation thermometer in Alkali Lake, NV, USA ..... 245  
○ T. Murofushi and H. Tonooka

P5 Applicability of Social Media Data to the Analysis of the Air Temperature Reduction Caused  
by Previous Surface Distributions ..... 247  
○ K. Higashinaka, H. Uematsu, and K. Kumagai

P6 Inverse estimation of air temperature distribution in urban and built spaces using  
an infrared spectroradiometer ..... 249  
○ T. Asawa, R. Tsurumi, and H. Oshio

P7 Validation of hotspot detection and temperature retrieval by nighttime Landsat 8 OLI data ..... 251  
○ S. Kato, T. Kouyama, and R. Nakamura

P8 Daytime and nighttime land surface temperature distribution in central Tokyo  
by ground observation and LANDSAT thermal infrared data ..... 253  
○ Y. Nakayama

P9 Increase in hazard risk and its adaptation of agriculture in Myanmar ..... 255  
○ T. Sakai, K. Kawamura, S. Uchida, and T. Matsunaga

P10	Combining and visualizing lithological indices derived from ASTER data and topography from DEM .....	257
	○ K. Kurata, R. Hirai, S. Kodama, and Y. Yamaguchi	
P11	Discrimination of minerals with absorption features at around $2.35\text{ }\mu\text{m}$ by using the ASTER VNIR and SWIR data .....	259
	○ R. Hirai, K. Kurata, S. Kodama, and Y. Yamaguchi	
P12	Mineral identification by combining multispectral imagery and surrounding hyperspectral imagery .....	261
	○ A. Hirai and H. Tonooka	
P13	Difference analysis of land cover in Sumatra tsunami disaster area by high resolution satellite remote sensing at the two different time period .....	263
	○ K. Yoshihara and H. Hashiba	
P14	Examination for extraction of damaged buildings for the Kumamoto Earthquake in 2016 using high resolution satellite image .....	265
	○ M. Sonobe, H. Hashiba, and K. Marumoto	
P15	Reliability prediction of building height estimation by shadow analysis of a high-resolution satellite image and 3D modeling.....	267
	○ Y. Kurebayashi and H. Tonooka	
P16	Evaluating the Relative Importance of Climate Variation and Livestock Grazing on Grassland Degradation in Mongolia .....	269
	○ X. Zhou and Y. Yamaguchi	
P17	Canopy conductance index for estimating gross primary production.....	273
	○ K. Muramatsu	
P18	Monitoring of Japanese Oak wilt .....	275
	○ K. Muramatsu, Y. Sakai, and K. Matsui	
P19	Utility validation of a stem volume estimation model using airborne LiDAR data .....	277
	○ Y. Awaya	
P20	Validating a Global Satellite Product of Forest Canopy Height in Boreal Forests by Literature Survey .....	279
	○ Y. Wei and H. Kobayashi	
P21	Determination of bamboo forest distribution in Keihanna area using multi-temporal Sentinel-2 satellite imageries-1 .....	281
	○ F. Ochiai, N. Soyama, K. Muramatsu, and M. Daigo	
P22	Long-term monitoring of tundra lake ice using SAR data.....	283
	○ N. Maezawa, K. Nakamura, and H. Wakabayashi	
P23	Study on deep learning applied to coniferous tree classification using PALSAR data .....	285
	○ T. Yoshimura, K. Nakamura, M. Watanabe, K. Ouchi, and H. Wakabayashi	
P24	Trade-off analysis between classification accuracy and training data selection on SAR ATR using CNN .....	287
	○ K. Sagi, K. Senzaki, and T. Toizumi	
P25	Autofocus with Phase-Based Area Selection for Airborne SAR Imaging .....	291
	○ D. Ikefuji and O. Hoshuyama	

P26	Comparison between urbanization index and ALOS-2/PALSAR-2 Data at the cities affected by earthquake.....	295
	○ K. Fukushima, Y. Uchida, S. Aoyama, K. Iwashita, and T. Sugimura	
P27	Estimation of tsunami damage caused by the Great East Japan Earthquake using ALOS/PALSAR data.....	297
	○ M. Masumoto, A. Nonomura, and T. Tadono	
P28	Tundra lake ice monitoring by Sentinel-1 C-band SAR data.....	301
	○ K. Motohashi, K. Nakamura, and H. Wakabayashi	
P29	Estimating snow line of a tropical glacier by C-band SAR data .....	303
	○ S. Funaki, Y. Asaoka, and H. Wakabayashi	
P30	Estimating the three-dimensional surface structures of Hakone Volcano (Owakudani) from the multiple-view images of an airborne sensor (ARTS-SE) .....	305
	○ T. Jitsufuchi	
P31	Measurement of a building vibration and small displacement by dual VirA.....	307
	○ H. Nohmi	
P32	Development of Object-based Land Category Change Detection Methodology .....	309
	○ L. Zhu and T. Furuichi	
P33	Geolocation accuracy evaluation of high accuracy ortho products from SPOT 6/7 .....	311
	○ R. Chiba, D. Sango, S. Kusano, H. Kuwajima, T. Hayakawa, Y. Kimura, and Y. Ishioka	
P34	Analysis of PALSAR-2 full polarimetric data acquired over agricultural area on paddy rice earing stage in the Sendai Plain .....	313
	○ C. Yonezawa	
P35	Multi-Temporal Change Detection using Interferometry SAR in Kelok Sembilan West Sumatra.....	315
	○ P. Razi, J.T.S. Sumantyo, D. Perissin, and K.N. Urata	
P36	Feature analysis of the coherence of TerraSAR-X imageries using the fixed ground objects .....	317
	○ T. Nonaka, T. Asaka, and K. Iwashita	
<b>Poster Session (2) (Room P, Nov. 22nd (Wed.) 13 : 00-14 : 20 (P37)-(P72))</b>		
<b>(Core Time : Odd numbers 13 : 00-13 : 40/Even numbers 13 : 40-14 : 20)</b>		
P37	Comparison of the radargrammetric and interferometric SAR height measurements using the identical dataset .....	321
	○ J. Uemoto, S. Hishinuma, K. Ito, T. Aoki, and S. Uratsuka	
P38	Mapping of talc deposits using ASTER data .....	323
	○ S. Kodama and Y. Yamaguchi	
P39	Application of group work for introduction education to remote sensing learner .....	325
	○ T. Yamada	
P40	Plant growth monitoring in vineyard based on proximal remote sensing .....	327
	○ Y. Iijima, H. Saito, and M. Nemoto	

P41	Study of Tie Points to use for UAV image processing for measuring unevenness in agricultural fields .....	329
	○ N. Ishitsuka, T. Sakamoto, and N. Iwasaki	
P42	Paddy-rice monitoring using Phantom 4 Pro -investigation of photographing time and camera settings- .....	331
	○ T. Sakamoto	
P43	Estimating phenological information of U.S. crops using Shape Model Fitting method .....	333
	○ T. Sakamoto	
P44	Study on a long-range coastal erosion in Gulf of Thailand.....	335
	○ T. Nakamura and S. Rokugawa	
P45	Estimation of rice growth and yield by assimilating drone image into crop model .....	337
	○ M. Maki, K. Homma, and C. Hongo	
P46	Intercalibration of NDVIs for reduction of the wavelength effect based on soil isolines.....	339
	○ K. Taniguchi, Y. Adachi, K. Obata, and H. Yoshioka	
P47	Development of a simple method for tea leaf growth monitoring by using drone attached camera modification .....	341
	○ K. Matsuura, K. Sato, S. Shimada, A. Sekiyama, and N. Hori	
P48	The Study of the Influence of the Amount of Plant Foliage on Rice Plant Height Estimation using Laser Scanner Measurement Data .....	343
	○ S. Goya and K. Takahashi	
P49	Evaluation of global vegetation structure datasets to be introduced to a global land process model ..	345
	○ H. Kamiya, K. Oki, H. Kim, and H. Kobayashi	
P50	A study on measurement error of topography using cross-track interference SAR .....	347
	○ A. Nadai, J. Uemoto, S. Kojima, T. Umehara, T. Kobayashi, and T. Matsuoka	
P51	Stereo vision-based radargrammetry using airborne SAR images .....	351
	○ S. Hishinuma, K. Ito, T. Aoki, J. Uemoto, and S. Uratsuka	
P52	Interpretation of flooded areas of Tokorogawa River by PALSAR-2 data.....	353
	○ S. Aoyama and Y. Uchida	
P53	Radiometric evaluation of visible and near-infrared camera system mounting on small UAV .....	355
	○ R. Kakubari, K. Nakamura, and H. Wakabayashi	
P54	Optimization Study of Gimbal-Mounted Drone System for Hyperspectral Imaging .....	357
	○ Y. Takeuchi, T. Ito, S. Satori, T. Yoshida, T. Otsuka, H. Inou, and R. Mitsuhashi	
P55	Time-series evaluation of ASTER/TIR calibration accuracy in a low temperature range.....	359
	○ M. Asaki, H. Tonooka, and F. Sakuma	
P56	Radiometric Cross-Calibration for Synergistic Application of Multiple Sensors - A Case Study Using ASTER, MODIS, and ETM + - .....	361
	○ K. Obata and S. Tsuchida	
P57	Positional deviation of satellite images due to atmospheric refraction of light and its influence on accuracy of geometric correction .....	363
	H. Saito, S. Yamagata, and ○ F. Akimoto	

P58	ALOS-2 observation results and future plan .....	365
	○ S. Sobue, T. Fukuda, T. Miyashita, H. Kamimura, O. Ochiai, and A. Noda	
P59	Precision validation of long-term sea surface temperature of in Seto Inland Sea using MODIS data .....	369
	○ K. Ono and Y. Sakuno	
P60	Sea surface salinity estimation in the center of Seto Inland Sea using Bio-Optical model with SGII wavebands .....	371
	○ Z. Wang and Y. Sakuno	
P61	Estimation of seagrass bed distribution off Takehara using Landsat-8 data .....	373
	○ Y. Sakamoto and Y. Sakuno	
P62	Study of estimation and classification methods of suspended solids using in-situ observation data in brackish waters .....	375
	○ Y. Nakayama and T. Shimomai	
P63	A trial of current velocity estimation in the coast using Himawari-8 SST Data .....	377
	○ N. Kurokawa and Y. Sakuno	
P64	Comparison and Utilization of Old and New Geospatial Information in Shonan Wetland .....	379
	○ K. Isobe, T. Sugimura, and M. Sano	
P65	Horizontal distribution of primary production in the seas adjacent to Japan estimated by remote sensing data .....	381
	○ T. Kameda	
P66	A trial of water quality observation at three lakes in Tottori Prefecture using disaster prevention helicopter – September, 2017 .....	383
	○ Y. Sakuno, A. Maeda, A. Mori, M. Okamoto, M. Masukawa, C. Nakada, S. Ono, and A. Ito	
P67	Validation of extraction methods of marine debris using high special resolution satellite images .....	385
	○ T. Aoyama	
P68	Simultaneous retrieval of surface temperature and surface emissivity from GOSAT/TANSO-FTS TIR spectra .....	389
	○ T. Itatsu, N. Saitoh, K. Shiomi, A. Kuze, and R. Imasu	
P69	Aerosol Extinction near the Ground Level Investigated by the Plan-Position Indicator Lidar, Slant Path Lidar and Visibility Meter .....	391
	○ P.M. Ong, N. Lagrosas, T. Shiina, and H. Kuze	
P70	Removing cloud noise from MODIS NDVI using time-series data .....	393
	○ F. Mahmood and A. Kimura	
P71	Seasonal variation of aerosols over the Asia .....	395
	○ M. Nakata and S. Mukai	
P72	Hourly trends of nighttime cloud cover observations in Chiba using a ground-based digital camera .....	397
	○ N. Lagrosas and H. Kuze	