**TABLE OF CONTENTS**

**SENSOR AND PLATFORM**

1. MAIZE CROP PHENOTYPING FOR DISEASE RESISTANCE   
   USING UAV MULTISPECTRAL DATA ACRS21\_017

*Onisimo Mutanga and Walter Chivasa*

1. DEVELOPMENT OF INTEGRATED SRA-BASED DATA VISUALIZATION PLATFORM FOR THE PREDICTION AND   
   RESPONSE OF FLOODS AND DROUGHTS ACRS21\_040

*Insun Park, Yeong-Cheol Choi, Yu-Yeon Lee and Yun-Jae Choung*

1. TURNTABLE-BASED AND ARTIFICIAL TEXTURE AIDED PHOTOGRAMMETRIC 3D RECONSTRUCTION AND   
   SPECIFICATION MEASUREMENT OF SHUTTLECOCK ACRS21\_056

*Sih-Han Wang and Jen-Jer Jaw*

1. ASSESSING INTER-SENSOR ALIGNMENT OF DIWATA-2’S   
   HIGH PRECISION TELESCOPE ACRS21\_060

*Kristian R. Monay, Fritz Rhaem M. Olivar, Benjamin Jonah P. Magallon,   
Paul Leonard Atchong C. Hilario and Czar Jakiri S. Sarmiento*

1. HIGHER GEOMETRIC ACCURACY USING GPS DERIVED   
   GROUND CONTROL POINTS FOR LULC ANALYSIS ACRS21\_075

*Muhammad Yazrin Yasin, Jamalunlaili Abdullah, Norzailawati Mohd Noor, Nisfariza Mohd Noor and Mariney Mohd Yusoff*

1. SMAP AND SENTINEL-1 DATA ASSIMILATION TO IMPROVE SUGARCANE GROWTH MONITORING ACRS21\_090

*Apimook Phusiripaiboon and Anuphao Aobpaet*

1. FEATURE SELECTION OF EEG SIGNALS FOR EMOTIONAL STATE CLASSIFICATION IN MACHINE LEARNING ACRS21\_098

*Zin War Oo and Khine Khine Oo*

1. APPLICATION COMPARISON OF 3D TERRESTRIAL LASER SCANNING BETWEEN TERRAIN AND NON - TERRAIN OBJECTS ACRS21\_102

*Hanh Hong Tran, Cuong Sy Ngo and Anh Van Tran*

1. UNMANNED AERIAL SYSTEMS FOR IMPROVING AGRICULTURE PRODUCTIVITY: CASE STUDY OF COFFEE PLANTATION MAPPING AND MONITORING IN VIETNAM ACRS21\_131

*Pham Xuan Hoan, Hoang Van Anh, Pham Thanh An, Le Dai Ngoc,   
Le Thi Kim Dung and Tran Hung*

1. DATA ACQUISITION TECHNIQUES ON EXISTING HISTORICAL BUILDING BASED ON BUILDING INFORMATION MODELING (BIM) USING CLOSE-RANGE METHOD IN BALI ACRS21\_132

*Ketut Tomy Suhari, Asep Yusup Saptari and Hasannudin Z. Abidin*

1. CALIBRATION AND VALIDATION OF AN AIRBORNE HYPERSPECTRAL SCANNING IMAGER FOR AGRICULTURAL MISSIONS ACRS21\_154

*Mara Alain Maestro, Micherene Clauzette Lofamia, Ralph Aaron Aguinaldo, Andrew Rafael Bañas and Maricor Soriano*

1. PAYLOAD CHARACTERIZATION OF AN AIRBORNE PUSH-BROOM HYPERSPECTRAL IMAGER ACRS21\_155

*Micherene Clauzette Lofamia, Mara Alain Maestro, Ralph Aaron Aguinaldo, Andrew Rafael Bañas and Maricor Soriano*

1. INSPECTIONS OF HYDRAULIC AND SLOPE STABILITY STRUCTURES WITH UAV-BASED HIGH DEFINITION THERMAL CAMERA ACRS21\_206

*Yi-Min Huang, Mei-Ling Yeh and Tien-Yin Chou*

1. A SAR ATR METHOD USING WVV DESCRIPTOR OF A SUBSET   
   OF SCATTERING CENTERS ACRS21\_218

*Sumi Lee and Sang-Wan Kim*

1. SEA SURFACE KA-BAND DOPPLER SCATTEROMETRY   
   AT HIGH WIND SPEED: A FIELD EXPERIMENT ACRS21\_226

*Yury Yu. Yurovsky, Vladimir N. Kudryavtsev,   
Semyon A. Grodsky and Bertrand Chapron*

1. AN APPROACH FOR OPTIMIZING HYDROLOGICAL PARAMETERS   
   AT RIVER BASIN SCALE USING OPEN SENSOR NETWORKS ACRS21\_243

*E.J. Warusavitharana, P.K.S. Mahanama, R. Ratnayake,   
B.H. Sudantha and M. Cannata*

1. RADIOMETRIC CONSISTENCY INTERCOMPARISON OF GF-5,   
   ZY-1-02D AND LANDSAT 8 ACRS21\_248

*Siqi Feng, Tao He, Lizhen Lei and Chao Lin*

1. ESTIMATION OF TREE HEIGHT UNDER TRANSMISSION SYSTEM USING INTERFEROMETRIC SAR (INSAR) ACRS21\_254

*Tamer ElGharbawi, Junichi Susaki, Kamolratn Chureesampant,   
Chomchanok Arunplod, Juthasinee Thanyapraneedkul and Thip Limlahapun*

**ALGORITHM AND IMAGE PROCESSING**

1. EXTRACTING ROCK INFORMATION BASED ON   
   INTEGRATED CONVOLUTIONAL NEURAL NETWORK AND   
   IMAGE PROCESSING TECHNOLOGY ACRS21\_010

*Jiangying Wang, Yun Zhou and Miaofen Huang*

1. GROUND OBJECT CLASSIFICATION ALGORITHM BASED ON ZHUHAI-1 SATELLITE HYPERSPECTRAL IMAGE ACRS21\_011

*Yun Zhou, Jiangying Wang and Miaofen Huang*

1. A NOVEL METHOD FOR MEASUREMENT OF ORIENTATION OF   
   ROCK JOINTS FROM POINT CLOUD BY FACET AMALGAMATION APPROACH ACRS21\_013

*Anthony C.T. So, W.K. Leung and Jeffrey C.F. Wong*

1. AN ANALYSIS ON THE OPTIMAL SEGMENTATION OF VHR SATELLITE RGB IMAGES ACRS21\_015

*Jiyoon Moon and Kwangjae Lee*

1. MODELLING SOIL ORGANIC CARBON STOCKS   
   UNDER COMMERCIAL FORESTRY IN KWAZULU-NATAL   
   SOUTH AFRICA USING TOPO-CLIMATE VARIABLES ACRS21\_018

*Omosalewa Odebiri, John Odindi, Onisimo Mutanga and Kabir Peerbhay*

1. ATMOSPHERIC CORRECTION FOR INLAND WATERS USING ARTIFICIAL NEURAL NETWORKS ACRS21\_022

*Oanh Thi La, Chao-Hung Lin, Ha Nguyen Thi Thu,   
Manh Van Nguyen and Bo-Yi Lin*

1. SPECKLE FILTERING AND PHYSICAL SCATTERING DECOMPOSITION FOR ALOS-2 PALSAR-2 POLARIMETRIC MOSAIC ACRS21\_029

*Ken Yoong LEE, Chen Guang HOU,   
Soo Chin LIEW and Leong Keong KWOH*

1. OBJECT-BASED CLASSIFICATION USING MASK R-CNN AND CNN FROM VERY HIGH-RESOLUTION IMAGERY ACRS21\_043

*Batbold Badamdorj and Bolorchuluun Chogsom*

1. IDENTIFICATION OF PERSISTENT INFRARED EMITTERS IN ASIA   
   WITH VIIRS NIGHTFIRE DATA: 2012-2020 ACRS21\_062

*Christopher D. Elvidge, Mikhail Zhizhin, Feng Chi Hsu,   
Tilottama Ghosh and Tamara Sparks*

1. RELATING THE SPATIAL RESOLUTION AND SENSOR   
   DEGRADATION OF DIWATA-2’S HIGH PRECISION TELESCOPE   
   USING EDGE DETECTION ACRS21\_063

*Fritz Rhaem M. Olivar, Kristian R. Monay,   
Benjamin Jonah P. Magallon and Czar Jakiri S. Sarmiento*

1. BI-TEMPORAL RADIOMETRIC NORMALIZATION OF LANDSAT 8 IMAGES USING PSEUDO-INVARIANT FEATURES ACRS21\_065

*Gabriel Yedaya Immanuel Ryadi and Chao Hung Lin*

1. A REVIEW OF LAND CHANGE MODELLING TECHNIQUES   
   USING REMOTE SENSING AND GIS ACRS21\_072

*Basam Dahy, Salem Issa and Nazmi Saleous*

1. MODEL-BASED POINT CLOUD RECONSTRUCTION OF   
   EXCAVATION SITE FOR BURIED PIPE MANAGEMENT ACRS21\_078

*Kouki Kurita and Masafumi Nakagawa*

1. POINT CLOUD RECONSTRUCTION OF TEXTURE LESS REGIONS WITH TOPOLOGY CONSTRAINTS BETWEEN CORRESPONDING POINTS ACRS21\_079

*Yuichiro Yamaguchi and Masafumi Nakagawa*

1. VEHICLE DETECTION FROM UAV REMOTE SENSING IMAGES   
   USING DEEP LEARNING ACRS21\_087

*Luwen Tan and Hasi Bagan*

1. DEEP LEARNING FOR SEMANTIC SEGMENTATION OF CORAL   
   IMAGES IN UNDERWATER PHOTOGRAMMETRY ACRS21\_097

*Ming Li, Armin Gruen and Hanqi Zhang*

1. A CONVNET-BASED MARINE ANIMALS AUTOMATIC DETECTION   
   AND REMOVAL SYSTEM IN UNDERWATER PHOTOGRAMMETRY

ACRS21\_104

*Jiageng Zhong, Ming Li, Jiangying Qin and Yuxin Cui*

1. STUDY OF TERRESTRIAL LASER SCANNING INTENSITY DATA   
   FOR THE BOSSCHA OBSERVATORY BUILDING'S MATERIAL CLASSIFICATION ACRS21\_106

*Gusti Ayu Jessy Kartini, Sepki Utomo and Hary Nugroho*

1. DETECTION METHOD OF CONVALLARIA KEISKEI USING CNN   
   AND FUZZY C-MEANS ACRS21\_108

*Hikaru Shirai, Yoichi Kageyama, Daisuke Nagamoto, Yuki Kanamori,   
Naoki Tokunaga, Teruo Kojima and Masae Akisawa*

1. EVALUATION OF ATMOSPHERIC CORRECTION METHODS FOR SENTINEL-2 IMAGERY IN THE SPECTRAL IDENTIFICATION OF   
   POPLAR (*POPULUS DELTOIDES* BARTR.) SPECIES ACRS21\_121

*Taskin Kavzoglu, Hasan Tonbul and Ismail Colkesen*

1. EXTRACTION OF VERY-HIGH RESOLUTION TOPOGRAPHY FROM   
   TRI-STEREO KOMPSAT-3 IMAGERY THROUGH REFINED   
   GEOMETRIC MODELING ACRS21\_123

*Nash Frederic M. Prado, Joshua Frankie B. Rayo, Julius M. Judan,   
Harold Bryan S. Paler, Katrina T. Mina and Alvin E. Retamar*

1. LIDAR SCAN MATCHING WITH PPP-RTK FOR 3D FARM MAPPING ACRS21\_125

*Masafumi Nakagawa, Sayaka Yokoyama, Tomohiro Ozeki, Nobuaki Kubo, Hiromune Namie, Masashi Yoshida and Yoshihiro Iwaki*

1. PIXEL BASED LAND COVER CHANGE DETECTION ANALYSIS AND PREDICTION USING REMOTE SENSING AND GIS TECHNIQUES   
   A CASE STUDY OF MANDALAY CITY, MYANMAR ACRS21\_137

*Aye Mya Thein, Zin Mar Lwin and Myint Myint Sein*

1. APPLICABLE MEAN-SHIFT FILTERING PARAMETERS FOR MAPPING   
   OF WEED IN CASSAVA FIELDS BASED ON UAV IMAGES ACRS21\_146

*Apinya Boonrang, Tanakorn Sritarapipat and Pantip Piyatadsananon*

1. SURFACE REFLECTANCE CORRECTION USING CONSTRAINED HARMONIZATION FOR OPTICAL SATELLITE IMAGERY ACRS21\_172

*Lino Garda Denaro and Chao-Hung Lin*

1. EMBEDDING WATERMARK ON DIGITAL AERIAL PHOTO   
   IN GEOTIFF FORMAT USING DISCRETE WAVELET TRANSFORM   
   AND DISCRETE COSINE TRANSFORM ACRS21\_174

*Dadan Ramdani and Florence Elfriede Sinthauli Silalahi*

1. WEED IDENTIFICATION USING VEGETATION INDICES AND MULTISPECTRAL UAV IMAGING ACRS21\_181

*Noor Asim, Muhammad Shahzad Sarfraz, Muhammad Ahmad,   
Numan Shafi and Muhammad Husnain*

1. 3D OBJECT DETECTION FROM MOBILE LIDAR POINT CLOUD   
   WITH DEEP LEARNING ACRS21\_183

*Muhammed Enes Atik and Zaide Duran*

1. CLASSIFICATION FOR URBAN SPRAWL ANALYSIS OF MUMBAI METROPOLITAN REGION (MMR) ACRS21\_194

*Varsha Bhosale and Archana Patankar*

1. IMAGE MOSAICING FOR UAV-BASED PUSHBROOM   
   HYPERSPECTRAL IMAGING ACRS21\_201

*Ralph Aaron Aguinaldo, Mara Alain Maestro, Micherene Clauzette Lofamia, Andrew Rafael Bañas and Maricor Soriano*

1. A WEB-BASED APPLICATION UTILIZING CONVOLUTIONAL   
   NEURAL NETWORK (CNN) METHOD FOR DETECTING RICE PLANT DISEASES IN BUTUAN CITY, PHILIPPINES ACRS21\_223

*Monalaine M. Bermoy, Idem Coquilla1 and Michelle V. Japitana*

1. DEEP LEARNING-BASED UAV AERIAL TRIANGULATION   
   WITHOUT IMAGE CONTROL POINTS ACRS21\_240

*Jiageng Zhong, Ming Li, Jiangying Qin and Hanqi Zhang*

1. ESTIMATING FIRE TEMPERATURE WITH SHORT-WAVE   
   INFRARED BANDS OF HIGH RESOLUTION SATELLITES ACRS21\_245

*Soo Chin Liew*

1. AN ALGORITHM FOR THE DIRECT ESTIMATION OF NDVI   
   WITH LANDSAT TOA REFLECTANCE ACRS21\_250

*Qingwei Wu and Tao He*

1. ESTIMATION OF HOT MUDFLOW CURRENT USING LONG TERM DINSAR ACRS21\_252

*Josaphat Tetuko Sri Sumantyo*

**GEOGRAPHIC INFORMATION SYSTEMS (GIS) AND WEB GIS**

1. GIS BASED ACCESSIBILITY RESEARCH OF THE COMMUNITY PHARMACY SERVICES IN DISTRICTS WITH HIGH NUMBER OF   
   COVID-19 CASES DURING PANDEMIC IN ISTANBUL ACRS21\_006

*A. Ozgur Dogru and Dursun Zafer Seker*

1. EXPLORING URBAN LAND USE CHANGE USING GIS   
   INTEGRATED GEOSTATISTICAL ANALYSIS REFERENCE   
   TO COLOMBO URBAN FRINGE, SRILANKA ACRS21\_020

*P.R.K.C. Bandara and K.G.P.K. Weerakoon*

1. DEMONSTRATIONAL EXPERIMENT FOR THE EARLY DETECTION METHOD OF WANDERING DEMENTIA PATIENTS BY USING GNSS ACRS21\_030

*Yoshiyuki Takumi, Masaaki Shikada, Riwa Nakamoto and Hidenobu Kanda*

1. COVID-19 GEO-SPATIAL BIG DATA ANALYSIS OF POPULATION MORTALITY FOR COUNTRIES SITUATED AT LATITUDES   
   BETWEEN 64°N AND 35°S ACRS21\_034

*Ms. Aditi Verma, Ms. Aosenla Pongen and Dr. Arun Kumar Verma*

1. GEO-SPATIAL BIG DATA ANALYSIS OF COVID-19 FOR SOUTHEAST ASIAN COUNTRIES SITUATED AT LATITUTE BELOW 38°N ACRS21\_037

*Ms. Aosenla Pongen and Dr. Arun Kumar Verma*

1. ANALYSIS OF KEYHOLE TOMB-LIKE TOPOGRAPHY OF ORONO-SHIMA ISLAND－ORIGINS OF THE ANCIENT TOMB SYSTEM IN JAPAN? ACRS21\_038

*Yamaguchi Tetsuya and Susumu Ogawa, Moriyama Toshiyuki,   
Taniguchi Yukiya and Shiraishi Haruhiro*

1. LAND SUITABILITY ASSESSMENT FOR POULTRY FARMS IN   
   DAVAO CITY USING GEOGRAPHIC INFORMATION SYSTEM (GIS)   
   AND FUZZY ANALYTIC HIERARCHY PROCESS (FAHP) ACRS21\_048

*Ken Neth Marie Labra, Joseph Acosta,   
Leo Manuel Estaña and Maynard Usares*

1. SPATIAL ANALYSIS FOR FREE-RANGE DUCKS: A STUDY AREA   
   OF PATHUM THANI PROVINCE, THAILAND ACRS21\_070

*Anisara Pensuk Tibkaew, Nutpiputh Kongsompoj, Anchalee Suksri,   
Sittipat Marayart and Kulapramote Prathumchai*

1. REMOTE SENSING AND GIS WEB-BASED SYSTEM FOR   
   PROTECTION AND RESTORATION OF MANGROVE (E-PESISIR)   
   IN MALAYSIAN’S COASTLINE ACRS21\_086

*Siti Nor Afzan Abdul Habib, Mohd Fairuz Fuazi,   
Ruzaini Abdul Rasid and Jamal Shuhaily bin Shahar*

1. MYMARHALAH: A SMART NAVIGATION MOBILE APPLICATION   
   FOR MUSAFIR IN MALAYSIA USING GIS AND RELATED TECHNOLOGIES ACRS21\_111

*Adnan Ismail, Mohamad Faisal Mohamed Yusof,   
Norafiza Saleha Sahlan, Samsuddin Omar, Siti Nordiana Mohd Rabai, Syahidah Fariza Moh Esa, Abdul Ghaffar Surip, Khairul Anuar Yazid,   
Nur Amie Ismail and Ridzuan Awang*

1. THIN PLATE SPLINE IN DETERMINING 500 YEARS MORPHOLOGY EVOLUTION OF HISTORICAL CITY OF MELAKA ACRS21\_114

*Marina Mohd Nor, Norzailawati Mohd Noor and Sadayuki Shimoda*

1. COMPARATIVE ASSESSMENT OF RURAL DEVELOPMENT PROGRAMMES IN PANCHAYATS OF HIMACHAL PRADESH   
   USING GEO-INFORMATICS ACRS21\_115

*Meher Kaushal, Sunil Sharma and Brijesh Saklani*

1. SITE SUITABILITY ANALYSIS FOR A NUCLEAR POWER PLANT   
   USING GIS AND AHP TECHNIQUE - SRI LANKA ACRS21\_126

*Dharmapala D.B.A.U., Rupasinghe A.R. and Gunawardena G.M.W.L.*

1. APPLICATION OF WEB-BASED MODEL IN LAND POOLING:   
   A CASE STUDY OF SYANGJA, GUTHIM ACRS21\_133

*Bikash Sapkota and Krishna Prasad Bhandari*

1. SPATIAL ANALYSIS ON THE URBAN CHANGES OF   
   TANINTHARYI TOWN IN MYANMAR ACRS21\_136

*Khin Mar Yee, Maung Maung Than, Mu Mu Than,   
Than Soe Win and Aye Mya Thein*

1. GIS-BASED ASSESSMENT OF COASTAL TOURISM VULNERABILITY   
   TO CLIMATE CHANGE – CASE STUDY IN DANANG CITY, VIETNAM ACRS21\_139

*Tran Thi An, Le Ngoc Hanh, Saizen Izuru, Truong Phuoc Minh,   
Vo Van Minh, Nguyen Thi Kim Thoa and Nguyen Vinh Long*

1. SPATIAL ANALYSIS ON THE PATTERNS AND REASONS OF MIGRATION IN A SATELLITE TOWN, YANGON REGION ACRS21\_151

*Mu Mu Than, Khin Mar Yee, Tin Tin Mya and Thida Win*

1. HOTEL LOCATIONS IN A TOURISM DESTINATION: A SPATIAL ANALYSIS APPROACH ACRS21\_156

*Idham Riandhika Amanda and Dyah Lestari Widaningrum*

1. ANALYSIS OF TOURIST BEHAVIOR AND INTEREST BY   
   GEOTAGGED PHOTOS ACRS21\_162

*Tetsuya Ebata and Yusuke Kimura*

1. SYSTEMATIC REVIEW ON DIGITAL TOOL APPROACHES FOR COMPREHENSIVE URBAN WASTE MONITORING ACRS21\_188

*Norzailawati Mohd Noor, Helmi Zulhaidi Mohd Shafri, Khairul Nizam Maulud, M.Zainora Asmawi, Hirose Kazuyo and Lyes Makroui*

1. MORAN’S I SPATIAL AUTOCORRELATION OF COVID-19 INFECTION RATES: IS THERE SUCH IN BUTUAN CITY? ACRS21\_200

*Cheryl T. Gallor, Jerome T. Remetar and Kendel P. Bolanio*

1. GEO-SPATIAL BIG DATA ANALYSIS OF COVID-19 SPECTRUM ENVELOPE OF FIRST AND SECOND WAVE OF THE OUTBREAK   
   IN THE SOUTHEAST ASIAN REGION ACRS21\_203

*Wapangsenla Imchen, Aditi Verma, Dr. Resenmenla Longchar,   
Aosenla Pongen and Dr. Arun Kumar Verma*

1. MInDSEt: A GEOSPATIALLY ENABLED INTEGRATED DATA   
   SHARING ENVIRONMENT FOR MINDANAO, PHILIPPINES ACRS21\_217

*Meriam Makinano-Santillan, Jojene R. Santillan,   
Edsel Matt O. Morales and Elbert S. Moyon*

1. USING MAXENT IN FINDING SUITABLE LOCATIONS FOR ESTABLISHING FALCATA TREE PLANTATIONS IN CARAGA   
   REGION, MINDANAO, PHILIPPINES ACRS21\_219

*Jojene R. Santillan, Arnaldo C. Gagula and Meriam Makinano-Santillan*

1. EXPLORING THE SPATIAL LINKAGES BETWEEN TOURIST ATTRACTION LOCATION WITH SURROUNDING FACILITIES   
   IN BANDUNG CITY, INDONESIA ACRS21\_220

*Felix Malvian and Dyah Lestari Widaningrum*

1. THE SPATIAL AND SOCIAL PATTERNING OF HEALTH CARE FACILITIES IN GREATER JAKARTA, INDONESIA ACRS21\_221

*Patricia Wijaya and Dyah Lestari Widaningrum*

1. DETERMINATION OF HIGH-RISK MUNICIPALITY OF COVID-19   
   CASE IN AGUSAN DEL SUR, MINDANAO, PHILIPPINES   
   USING GIS APPROACH ACRS21\_229

*Arnaldo C. Gagula, Lorie Cris S. Asube and Douglas O. Dumaplin Jr.*

1. DETERMINATION OF THE POTENTIAL HEADS FOR HYDROPOWER PLANTS USING GEO-SPATIAL TECHNOLOGY: A CASE STUDY OF   
   THE 8 MAJOR RIVER BASINS OF MINDANAO, PHILIPPINES ACRS21\_236

*Augustini Ave O. Paduganan, Jefferson R. Vallente Jr.,   
Nico Miguel C. Tabanas, Rogelio C. Golez Jr. and Julemer Ann G. Aying*

1. UTILIZING GIS TECHNIQUES FOR STUDYING SPATIAL DISTRIBUTION PATTERNS OF GREEN LOGISTICS ACTIVITIES UNDER PANDEMIC SITUATION: A CASE STUDY IN THAILAND ACRS21\_241

*Yaowaret Jantakat, Pradeep Kumar Shrestha, Pongpun Juntakut,  
Champhak Jantakat and Porntip Ueathammataworn*

1. GUIDELINES FOR CREATING WEB GIS APPLICATION FOR   
   TREES’ MAP ON ARCGIS SERVER AND OPEN SOURCE GIS SOLUTION: THE CASE OF NONGRAWEING AREA, THAILAND

ACRS21\_256

*Rawipa Banklang and Yaowaret Jantakat*

1. GIS MODELLING FOR CHECKING BOUNDARY OF LAND PARCEL   
   IN THAILAND ACRS21\_258

*Phakphum Soobkampang, Yaowaret Jantakat and Surachart Chaikampha*

**CLOUD COMPUTING, BIG DATA AND AI IN REMOTE SENSING**

1. CENTROID-UNET: DETECTING CENTROIDS IN AERIAL IMAGES

ACRS21\_027

*N. Lakmal Deshapriya, Dan Tran, Sriram Reddy and Kavinda Gunasekara*

1. RESULTS OF APPLYING STANDARDIZED METHODS OF HYDROGRAPHIC DATA FOR STATIONS 74162 -   
   SON TAY - VIET NAM ACRS21\_068

*Hoang Quy Nhan, Do Thi Lan and Nguyen Xuan Hoai*

1. MOTION DETECTION AND TRACKING IN CONSTRUCTION   
   SPACE USING TEMPORAL POINT CLOUDS ACRS21\_073

*Gai Ozaki and Masafumi Nakagawa*

1. SHIP DETECTION AND CLASSIFICATION FOR KOMPSAT   
   OPTICAL IMAGES USING DEEP LEARNING ACRS21\_085

*Jae Young Chang, Kwang Jae Lee and Sun-Gu Lee*

1. APPLIED ARTIFICIAL NEURAL NETWORK IN THE SPATIAL PREDICTION OF LANDSLIDE HAZARDS CASE STUDY IN   
   THE RED RIVER BASIN, VIETNAM ACRS21\_089

*Xuan Quang Truong, Thi Hang Do, Xuan Luan Truong,   
Ngoc Hoan Nguyen, Chi Cong Nguyen, Anh Duong Quan,   
Thi Thanh Thuy Pham, Thi Thu Ha Le and Thi Hong Minh Tran*

1. URBAN LAND COVER CLASSIFICATION WITH VERY HIGH RESOLUTION SATELLITE IMAGERY BY MACHINE LEARNING

ACRS21\_105

*Chenghua Shi, Xiaojiing Huang, Chenguang Hou and Soo Chin Liew*

1. AGRICULTURAL LAND MONITORING ON AMAZON   
   WEB SERVICE ACRS21\_134

*Soravis Supavetch and Tranid Prasertsri*

1. BUILDING SEGMENTATION FROM VHR AERIAL IMAGERY   
   USING DEEPLABV3+ ARCHITECTURE ACRS21\_143

*Nuran Aslantaş, Bülent Bayram and Tolga Bakırman*

1. QUANTITATIVE ANALYSIS OF RELATIONSHIPS AMONG   
   BUILDING DENSITY, HEIGHT, LAND SURFACE TEMPERATURE,   
   AND POPULATION DENSITY IN TOKYO ACRS21\_192

*Xi Chen, Chaomin Chen, Hasi Bagan and Takahiro Yoshida*

1. INSTANTANEOUS ERYTHEMAL UV-B RETRIEVAL WITH   
   MODERATE RESOLUTION IMAGING SPECTRORADIOMETER (MODIS) BASED ON MACHINE LEARNING METHODS ACRS21\_260

*Ruixue Zhao and He Tao*

**DISASTER MONITORING AND PREVENTION**

1. IMPORTANCE OF SPACE TECHNOLOGY FOR MONITORING   
   AND MANAGEMENT FOREST FIRES (CASE STUDY:   
   SYRIAN COASTAL FORESTS) ACRS21\_005

*Mohamad Rukieh*

1. DEVELOPMENT OF A METHOD FOR EXTRACTING DISASTER   
   AREAS AROUND INFRASTRUCTURES USING MULTI-TEMPORAL   
   SAR IMAGES ACRS21\_032

*Tomoya Kusunose and Junichi Susaki*

1. GROUND DISPLACEMENT AFTER MW6.7 EARTHQUAKE   
   IN LAKE KHÖVSGÖL OF MONGOLIA DETERMINED   
   SENTINEL-1B SATELLITE DATA ACRS21\_051

*Zolzaya Lkhamsuren, Liu Da Wei, Ochirkhuyag Lkhamjav   
and Bayartungalag Batsaikhan*

1. GIS-AIDED PERFORMANCE SIMULATION OF GIGAQUIT DAM:   
   A COMPARATIVE ANALYSIS OF HYPOTHETICAL FLOODING

ACRS21\_054

*Lorie Cris S. Asube and Ian James P. Palulay*

1. POLLUTION FORM IN NUCLEAR DISASTERS DEPENDING ON METEOROLOGICAL CONDITIONS ACRS21\_057

*Susumu Ogawa*

1. SPATIAL ANALYSIS OF THE DROUGHT BY USING SATELLITE REMOTE SENSING AND GIS- A CASE STUDY AT MONARAGALA DISTRICT SRI LANKA ACRS21\_064

*Sandamali K.U.J., Chathuranga K.A.M., Ranaweera D.K.D.A.   
and Kumara B.A.S.C.*

1. INFLUENCE OF PROPORTION BETWEEN LANDSLIDE   
   AND NONE LANDSLIDE SAMPLE TO LANDSLIDE   
   SUSCEPTIBILITY MODELING ACRS21\_092

*Van-Trung Chu, Shou-Hao Chiang and Tang-Huang Lin*

1. AGRICULTURAL DROUGHT DETECTION USING   
   THE NORMALIZED DIFFERENCE VEGETATION INDEX   
   AND LAND SURFACE TEMPERATURE DATA ACRS21\_095

*Ton Binh Minh and Shou-Hao Chiang*

1. DINSAR ANALYSIS FOR TOPOGRAPHIC MODEL   
   INTERPRETATION OF FAULT ACRS21\_099

*Bolorchuluun Chogsom, Adiya-Ochir Gurdorj,   
Bilguuntugs Tovuusuren and Anudari Bayarkhangai*

1. ASSESSING THE AFFECTED AREA OF TYPHOON-INDUCED LANDSLIDES AND DEBRIS FLOWS ACRS21\_112

*Hsiao Hsuan, Chen and Shou Hao, Chiang*

1. CLIMATE CHANGE, LAND USE COVER CHANGE AND ITS IMPACT ON COASTAL AREA ACRS21\_118

*Dewayany Sutrisno, Mulyanto Darmawan and Muhammad Helmi*

1. APPLICATION OF CNN ON LANDSLIDE SUSCEPTIBILITY   
   ANALYSIS: CASE STUDY ON 2018 HOKKAIDO EASTERN   
   IBURI EARTHQUAKE ACRS21\_148

*Karl Malcolm N. Cordova, Tanakorn Sritarapipat   
and Pantip Piyatadsananon*

1. APPLYING GOOGLE EARTH ENGINE TO ASSESS THE IMPACT OF URBAN FLOODING IN NINH KIEU DISTRICT IN THE PERIOD   
   FROM 2018 TO 2021 ACRS21\_166

*Nguyen Thanh Ngan and Nguyen Hieu Trung*

1. COMBINED SATELLITE OBSERVATION AND MODELING   
   THE WAVES IN TROPICAL CYCLONES ACRS21\_176

*Maria Yurovskaya, Alexis Mouche, Alexey Mironov, Fabrice Collard,   
Betrand Chapron and Vladimir Kudryavtsev*

1. REMOTE SENSING OF THE IMPACT OF FLASH DROUGHT   
   ON VEGETATION DYNAMICS OVER EAST ASIA ACRS21\_180

*Won-Ho Nam, Min-Gi Jeon, Dong-Hyun Yoon, Mi-Hye Yang,   
Hee-Jin Lee and Young-Sik Mun*

1. EVALUATING THE EFFECTS OF SALINITY INTRUSION   
   ON THE AGRICULTURAL LAND USE IN THANH PHU DISTRICT,   
   BEN TRE PROVINCE, VIETNAM ACRS21\_189

*Phan Kieu Diem, Nguyen Kieu Diem and Le Van Tri*

1. FLOOD RISK MAPPING USING GIS-BASED MULTI-CRITERIA ANALYSIS: SONGINOKHAIRKHAN DISTRICT CASE STUDY

ACRS21\_198

*Batbold Badamdorj and Bolorchuluun Chogsom*

1. EXTRACTION AND QUANTIFICATION OF BURN MARKS   
   OF WAR-DAMAGED TREES USING THE REFLECTANCE FROM TERRESTRIAL LASER SCANNER ACRS21\_207

*Taisei Koga and Yoichi Kunii*

1. GLOCAL MONITORING FOR DISASTER INFORMATION SHARING

ACRS21\_211

*Kohei Cho, Osamu Uchida and Keisuke Utsu*

1. A STUDY ON EVALUATING RECOVERY FROM FOREST FIRE   
   IN MONGOLIA USING NDVI AND NBR DERIVED FROM LANDSAT   
   OLI DATA ACRS21\_212

*Oyuntsetseg Tsogtgerel and Kohei Cho*

1. GIS-BASED VULNERABILITY ASSESSMENT OF HOUSEHOLDS   
   TO EXTREME RAINFALL-INDUCED FLOOD HAZARD IN   
   BARANGAY 2, CABADBARAN CITY ACRS21\_214

*Lorie Cris S. Asube and Sherwin I. Decasa*

1. WILDFIRE HOTSPOT CLUSTERING AND FALSE ALARM   
   DATA DETECTION DERIVED FROM SUOMI NPP SATELLITE   
   OVER THAILAND REGION ACRS21\_225

*Thanarporn Khanpanya, Panupat Horma, Supavit Nounkhaow,   
Prasit Maksin and Wasanchai Vongsantivanich*

1. APPLICATION OF SBAS-DINSAR TECHNIQUE TO INVESTIGATE   
   THE ASSOCIATION BETWEEN SUBSIDENCE PATTERN, GROUNDWATER LEVELS, AND RAINFALL VARIATIONS   
   IN CHOUSHUI RIVER ALLUVIAL FAN ACRS21\_246

*Nguyen Thai Vinh Truong and Ni Chuen Fa*

1. SURFACE DEFORMATION ANALYSIS IN ISTANBUL, TURKEY   
   USING MULTI-TEMPORAL ALOS-2 DATA ACRS21\_253

*Ahmet Delen, Caglar Bayik, Saygin Abdikan and Fusun Balik Sanli*

**ENVIRONMENTAL DOMAIN**

1. AGRICULTURAL MONITORING BY HIGH FREQUENCY AND HIGH RESOLUTION MULTIPLE SATELLITES AND ITS APPLICATIONS   
   TO HARVESTING DETECTION ACRS21\_016

*Takuto Shimode, Akira Iwasaki and Yoshio Inoue*

1. ACTIONABLE INTELLIGENCE POLICIES (AIP) FOR WASTE MANAGEMENT IN THE EASTERN ECONOMIC CORRIDOR (EEC), THAILAND: CONCEPTS, CHALLENGES, AND OPPORTUNITIES

ACRS21\_024

*Khruewan Champangern and Wissawa Jenjob*

1. EVALUATION AND CORRECTION OF DIFFERENT PRECIPITATION PRODUCTS OVER AKDENIZ BASIN, TURKEY ACRS21\_025

*Anas Hesham, Ali Danandeh Mehr and Dursun Zafer Seker*

1. FORMULATION OF AN ENVIRONMENTAL RESILIENCE INDEX AS   
   AN INDICATOR OF SUSTAINABILITY IN SELANGOR, MALAYSIA

ACRS21\_026

*M.Zainora Asmawi, Sharifah Husna Syed Zainal Yussof,   
Illyani Ibrahim and Wan Nurul Mardiah Wan Mohd Rani*

1. A FIRE RISK MAP FOR PROTECTED AREAS OF MONGOLIA: KHANGAIN NURUU NATIONAL PARK (NP), TARVAGATAIN   
   NURUU NP, KHANKHOKHII SPA, ULAAN TAIGA SPA AND KHOVSGOL LAKE SPA ACRS21\_033

*Elbegjargal Nasanbat, Amanjol Bulkhbai, Ochirkhuyag Lkhamjav and Chuluunbaatar Tsevee-Oirov*

1. THE RETRIEVAL OF CHLOROPHYLL-A CONCENTRATIONS IN INLAND WATER USING CONVOLUTION NEURAL NETWORK   
   ON SATELLITE IMAGERY ACRS21\_053

*Manh Van Nguyen, Chao-Hung Lin and Ariel C. Blanco*

1. UNDERSTANDING THE IMPACT OF RIPARIAN CORRIDORS ON MICROCLIMATE (CASE STUDY: BOGOR CITY, INDONESIA)

ACRS21\_080

*Prita Ayu Permatasari, Vidya Nur Trissanti,   
Luisa Febrina Amalo and Hefni Effendi*

1. RANGE FORECASTING OF AN ENDANGERED ISLAND ENDEMIC BIRD SPECIES USING ENSEMBLE SPECIES DISTRIBUTION MODELING ACRS21\_084

*Isabella Pauline Quijano, Mary Joyce Flores and Chito Patiño*

1. HABITAT SUITABILITY ANALYSIS OF TIGERS USING DECISION SUPPORT SYSTEM OF INDIAN BIO-RESOURCE INFORMATION NETWORK (IBIN) PORTAL ACRS21\_088

*Amrapali Tiwari, Sameer Saran and Kirti Avishek*

1. AN ESTIMATION METHOD OF APPROPRIATE CHLOROPHYLL-  
   A CONCENTRATIONS VIA THE LINEAR COMBINATION INDEX   
   FOR SENTINEL-2/MSI DATA IN HIROSHIMA BAY ACRS21\_094

*Yoshinari Oguro, Tomohisa Konishi, Seiji Ito and Chiemi Miura*

1. ANALYSIS OF FOREST COVER CHANGES AND FOREST GREENHOUSE GAS EMISSIONS IN THE PHILIPPINES   
   FROM 2011-2020 USING SATELLITE-DERIVED PRODUCTS ACRS21\_103

*Brent Fallarcuna, Rizza Karen Veridiano and Jose Andres Ignacio, PhD*

1. DECISION TREE BASED CLASSIFICATION AND HABITAT SUITABILITY PREDICTION OF MIGRATORY BIRD:   
   A CASE STUDY OF *Vanellus gregarious* ACRS21\_119

*Vishal Kumar, Sameer Saran and C Jeganathan*

1. DELINEATING GROUNDWATER VULNERABILITY IN METRO   
   CEBU USING DRASTIC MODEL ACRS21\_130

*Chito Patiño, Florwilyn Cayson and Jao Hallen Bañados*

1. ESTIMATING ABOVEGROUND FOREST CARBON STOCKS   
   USING MULTI-SENSOR SATELLITE DATA AND FIELD MEASUREMENTS IN THE PHILIPPINES ACRS21\_138

*Jose Don T. De Alban, Rizza Karen A. Veridiano, Sean E.H. Pang,   
Mari Trix L. Estomata, Johanness Jamaludin, Angelica Kristina M. Jaojoco, Margie T. Parinas, Sheryl Rose C. Reyes, Roven D. Tumaneng   
and Akash Verma*

1. VALIDATION OF PRECIPITABLE WATER ESTIMATES   
   DERIVED BY A COST-EFFECTIVE DUAL-FREQUENCY GNSS RECEIVER SYSTEM ACRS21\_149

*Ryu Noritomi, Keiji Imaoka, Hidenori Shingin and Kakuji Ogawara*

1. SOIL EROSION ASSESSMENT IN LAK DISTRICT,   
   DAK LAK PROVINCE, VIETNAM ACRS21\_164

*Nguyen Huy Anh, Doan Nguyen Chung,   
Nguyen Trinh Minh Anh and NguyenThi My Loan*

1. ANALYZING THE RESPONSE OF GROUNDWATER LEVEL TO   
   TIDAL WAVE IN COASTAL AQUIFER, TAOYUAN, TAIWAN ACRS21\_175

*Duong Quynh Thanh, Chuen-Fa Ni,   
Wei-Ci Li and Nguyen Dinh Giang Nam*

1. SPATIAL ANALYSIS OF GROUNDWATER DISTRIBUTION AND QUALITY USING GIS AND REMOTE SENSING TECHNIQUES   
   (CASE STUDY OF BOLGODA RIVER BASIN, SRI LANKA) ACRS21\_177

*G.M.T.S. Fernando, C.H. Edussuriya, K.P.S.Uthpala,   
T.S.Stalin and M.A.A.N.Hemakumara*

1. SPATIAL DISTRIBUTION OF SOIL ORGANIC CARBON FOR SUSTAINABLE FOREST CONSERVATION ACRS21\_210

*Udhayan A., Mishra A., Bhaskaran G. and Ramachandran A.*

1. CONTRIBUTION OF TREES OUTSIDE FORESTS IN MITIGATING CLIMATE CHANGE – A REVIEW ACRS21\_215

*Mishra A., Udhayan A., Palani P. and Ramachandran A.*

1. DISCUSSION ABOUT THE RISK CONTROL IN LAKE BIWA BASIN BASED ON THE LANDSCAPE ARCHITECTURE ACRS21\_216

*Kenji Iwama and Kiyoshi Torii*

1. WATER QUALITY ASSESSMENT AND MAPPING ON MARINE   
   FISH CAGE SITES IN NASIPIT, AGUSAN DEL NORTE, PHILIPPINES   
   USING REMOTE SENSING AND GIS ACRS21\_230

*Michelle V. Japitana and Rica Jane B. Lasala*

**REMOTE SENSING APPLICATION FOR PUBLIC HEALTH** 175

1. IMPACT OF TEMPERATURE ON TUBERCULOSIS ESTIMATED   
   FROM SATELLITE REMOTE SENSING BEFORE AND DURING   
   COVID-19 PANDEMIC ACRS21\_110

*Insan Wastuwidya Mahardiani and Shou Hao Chiang*

1. GIS-BASED SITE SUITABILITY ANALYSIS FOR   
   THE DEVELOPMENT OF HEALTHCARE FACILITIES IN   
   TACLOBAN CITY ACRS21\_231

*Maria Cecilia R. Paringit, Marian Stephanie R. Lao   
and Stephen Ross L. Roleda*

1. CARBON MONOXIDE EMISSIONS MONITORING DURING   
   COVID-19 PANDEMIC IN JAKARTA ACRS21\_233

*Luisa Febrina Amalo, Prita Ayu Permatasari and Arif Kurnia Wijayanto*

**REMOTE SENSING AND MAPPING**

1. DETERMINATION OF MAIZE PLANTATIONS ON   
   A LARGE-SCALE AGRICULTURAL BASIN WITH SENTINEL 2 SATELLITE IMAGES ACRS21\_002

*Ugur Alganci and Dursun Zafer Seker*

1. DRONE IMAGES FOR MANGO PRODUCTION ESTIMATION

ACRS21\_003

*Yi-Ta Hsieh, Ming-Huei Dai, Yu Han Chou,   
Jan-Chang Chen and Chun-Hung Wei*

1. ENHANCING BATHYMETRIC MAPPING CAPABILITY   
   USING MULTI-ZONE ENSEMBLE FITTING: FACILITATING EMERGING POST COVID-19 DEMANDS ACRS21\_012

*Kelvin Tang Kang Wee and Huang Lei*

1. ADVANCING THE USE OF LIDAR IN GEOTECHNICAL   
   APPLICATIONS IN HONG KONG – A 10-YEAR OVERVIEW ACRS21\_014

*Anthony C.T. So, Tony Y.K. Ho, Jeffrey C.F. Wong, Alice C.S. Lai,   
W.K. Leung and Julian S.H. Kwan*

1. ESTIMATING ABOVEGROUND NET PRIMARY P  
   RODUCTIVITY OF REFORESTED TREES IN URBAN   
   LANDSCAPE USING INTEGRATED BIOPHYSICAL VARIABLES   
   AND REMOTELY SENSED DATA ACRS21\_019

*Mthembeni Mngadi, John Odindi, Onisimo Mutanga and Mbulisi Sibanda*

1. ESTIMATION AND UPDATING OF DIGITAL SURFACE MODEL   
   (DSM) USING WORLDVIEW-3 DATASET ACRS21\_023

*Indra Bahadur Chhetri and Junichi Susaki*

1. COMPARATIVE INVESTIGATION OF GEOMORPHOLOGY   
   BY AERIAL PHOTOGRAPH INTERPRETATION (API), DIGITAL   
   AERIAL PHOTOGRAPH INTERPRETATION (DAPI) AND   
   AIRBORNE LIGHT DETECTION AND RANGING (LIDAR) SURVEY:   
   A CASE STUDY IN THE FORMER MA ON SHAN OPEN-PIT   
   IRON MINE ACRS21\_028

*Gary S. Y. FUNG and Tammy P. Y. TAM*

1. DELINEATING RUBBER PLANTATIONS IN LANDSLIDE   
   PRONE AREAS OF KERALA, INDIA USING REMOTE SENSING   
   AND GIS ACRS21\_031

*Pradeep B., Jessy M.D and James Jacob*

1. AUTOMATIC RETRIEVAL OF RAILWAY MASTS TILT   
   ANGLE FROM MOBILE LASER SCANNING DATA ACRS21\_035

*Atika Marwati and Chi-Kuei Wang*

1. VIRTUAL CAMPUS TOUR GENERATION USING UAV DATA:   
   CASE STUDY GEBZE TECHNICAL UNIVERSITY ACRS21\_044

*U. G. Sefercik, T. Kavzoglu, M. Nazar, C. Atalay and M. Madak*

1. 3D POSITIONING ACCURACY AND LAND COVER CLASSIFICATION PERFORMANCE OF THE UAVS: CASE STUDY OF DJI PHANTOM IV MULTISPECTRAL RTK ACRS21\_045

*Umut Gunes Sefercik, Taskin Kavzoglu, Ismail Colkesen, Samed Adali,   
Salih Dinc, Mertcan Nazar and Muhammed Yusuf Ozturk*

1. THE ESTIMATION OF URBAN EXPANSION EXTENT AND   
   FRACTAL DIMENSION ACRS21\_046

*Myagmartseren Purevtseren, Myagmarjav Indra, Ganpurev Dashlegtseg, Byambakhuu Gantumur and Davaakhuu Battumur*

1. EVALUATION OF SATELLITE IMAGERY DATA FOR CROP YIELD SIMULATION IN SARABURI PROVINCE, THAILAND ACRS21\_050

*Kulapramote Prathumchai, Masahiko Nagai,   
Kullachart Prathumchai and Anisara Pensuk Tibkaew*

1. UP-TO-DATE GEOLOGICAL MAP OF LAKE CHAD IN CENTRAL AFRICA USING GEOSPATIAL APPROACH ACRS21\_052

*Alhaji Hussaini, Mohd Razali Mahmud, Kelvin Tang Kang Wee,   
Nasir Mohammed and Musa Adam Muhammad*

1. CORRELATION MODEL OF OIL PALM AGE BASED ON OPTICAL   
   AND RADAR SENSORS ACRS21\_055

*Moch Iqbal Fauzan, Anggita Pratiwi Sutrisno,   
Soni Darmawan and Rika Hernawati*

1. STUDY ON MMS POINT CLOUD AND UAV IMAGES FUSION   
   TO CONSTRUCT 3D MAP ACRS21\_059

*Mohammad Gholami Farkosuhi, Yoonjo Choi,   
Seunghwan Hong and Hong-Gyoo Sohn*

1. OBSERVATION OF SUSPENDED SEDIMENT ALONG THE NORTH   
   OF TAIWAN COASTAL WATER REGION FROM THE FORMOSAT-5 HIGH-RESOLUTION IMAGERY ACRS21\_061

*Pham Minh Chau and Wang Chi-Kuei*

1. A COMBINATION OF NORMALIZED DIFFERENCE   
   VEGETATION INDEX AND MULTI-TEMPORAL RADAR   
   VEGETATION INDEX OF SENTINEL DATA FOR LANDUSE/LANDCOVER CLASSIFICATION ACRS21\_069

*Le Minh Hang, Nguyen Dinh Duong and Tran Anh Tuan*

1. PERFORMANCE IMPROVEMENT OF VISUAL ODOMETRY   
   WITH IMU-STEREO CAMERA FOR INDOOR UAV ACRS21\_071

*Kazuha Saito, Gai Ozaki, Kenta Okudaira and Masafumi Nakagawa*

1. EXAMINATION OF TIME-SERIES GENERATION METHOD   
   OF SATELLITE DATA FOR VEGETATION MAPPING   
   IN A CLOUDY REGION ACRS21\_074

*Hidetake Hirayama, Ram C. Sharma and Keitarou Hara*

1. ANALYSIS OF THE RELATIONSHIP BETWEEN URBAN   
   HEAT ISLANDS AND LAND USE BY REMOTE SENSING   
   TECHNIQUES (A CASE STUDY OF COLOMBO DISTRICT,   
   SRI LANKA) ACRS21\_076

*K.P.S. Uthpala, S. Sivanantharajah and C.H. Edussuriya*

1. URBAN RIVER MAPPING BY BOAT-BASED MOBILE LASER SCANNING WITH PPP-RTK ACRS21\_077

*Kimura Naoto, Masafumi Nakagawa, Koki Kurita, Tomohiro Ozeki,   
Nobuaki Kubo, Etsuro Shimizu and Ryosuke Shibasaki*

1. ASSESSMENT OF LAND SURFACE TEMPERATURE IN DRY AND   
   WET SEASON USING SENTINEL IMAGERIES IN CAMERON HIGHLANDS, MALAYSIA ACRS21\_081

*Nurul Suliana Ahmad Hazmi, Shahruddin Ahmad, Maizatuldura Mohd Isa, Hana Mohamed Jamil, Roslinah Samad and Shimatun Jumani Ibrahim*

1. A REGIONAL SCALE MAPPING OF BAMBOO GROVE   
   DISTRIBUTION USING MACHINE LEARNING WITH   
   MULTI-TEMPORAL LANDSAT-8 OLI IMAGERY ACRS21\_101

*Hiroto Shimazaki*

1. ANALYZING THE EFFECTS OF BLUE-GREEN-GREY INFRASTRUCTURE PATTERNS ON LAND SURFACE   
   TEMPERATURE: A CASE STUDY OF HUE CITY ACRS21\_107

*Do Thi Viet Huong, Nguyen Bac Giang, Nguyen Quang Viet,   
Doan Ngoc Nguyen Phong and Bui Thi Thu*

1. USE OF UAV BASED VEGETATION INDICES FOR MAPPING   
   AND MONITORING OF PLANT HEALTH IN VIETNAM’S COFFEE PLANTATIONS ACRS21\_109

*Tran Hung, Nguyen Thi Hue, Do Danh Toan,   
Duong Thi Nghia and Nguyen Thi Hong*

1. MAPPING LAND USE LAND COVER OF TRA VINH PROVINCE   
   IN 2020 USING MULTI-TEMPORAL AND MULTI-SOURCE OF   
   REMOTE SENSING IMAGERY ACRS21\_113

*Thi Hong Diep Nguyen, Duy Tien Pham, Kieu Diem Phan,   
Thi Cam Nhung Dinh and Thanh Tran Giam*

1. IMPROVEMENT OF LAND COVER CLASSIFICATION USING   
   MULTI-BAND IMAGE COMPOSITION ANCILLARY GEOGRAPHIC INFORMATION ACRS21\_117

*Van-Trung Chu, Shou-Hao Chiang and Tang-Huang Lin*

1. DETERMINATION OF SEA SURFACE MUCILAGE FORMATIONS USING MULTITEMPORAL SENTINEL-2 IMAGERY ACRS21\_120

*Ismail Colkesen, Muhammed Yusuf Ozturk,   
Taskin Kavzoglu and Umut Gunes Sefercik*

1. RESEARCH ON FOREST COVER CHANGE USING SENTINEL-2 IMAGES IN COMBINATION WITH SENTINEL-1 IMAGES ON   
   GOOGLE EARTH ENGINE PLATFORM ACRS21\_124

*Tran Van Anh, Tran Hong Hanh,   
Le Thanh Nghi and Doan Thi Nam Phuong*

1. LAND USE/LAND COVER DETECTION AT UNIVERSITI PUTRA MALAYSIA USING GOOGLE EARTH ENGINE ACRS21\_141

*Vikneswaran Jeya Kumaran and Abdul Rashid bin Mohamed Shariff*

1. GENERATION OF INFORMATION BASE ON APPLE ORCHARDS   
   USING GEO-INFORMATICS IN SHIMLA DISTRICT OF   
   HIMACHAL PRADESH ACRS21\_150

*Alka Sharma and Sushma Panigrahy*

1. ESTIMATION OF MANGROVE BIOMASS USING LANDSAT DATA   
   ON GOOGLE EARTH ENGINE (GEE) PLATFORM ACRS21\_160

*Alief Wiraguna Aseran, Soni Darmawan and Rika Hernawati*

1. MULTI-LAYER PERCEPTRON-MARKOV CHAIN-BASED   
   ARTIFICIAL NEURAL NETWORK FOR MODELLING URBAN EXPANSION IN ULAANBAATAR, MONGOLIA ACRS21\_165

*Adiya-Ochir Gurdorj, Bolorchuluun Chogsom,   
Bilguuntugs Tovuusuren and Anudari Bayarhangai*

1. FLOOD HAZARD MAPPING FOR A REPEATED FLOODING AREA   
   IN NORTHERN THAILAND ACRS21\_168

*Aphittha Yodying, Nattapon Mahavik, Sarintip Tantanee,   
Agbesi Kwadzo Keteku, Charatdao Kongmuang, Polpreecha Chidburee, Kamonchat Seejata and Sasithon Chatsudarat*

1. DEFORESTATION OF FOREST TYPES BETWEEN 2009 AND 2019 ALONG A TOPOGRAPHICAL GRADIENT USING REMOTELY   
   SENSED DATA IN CAMERON HIGHLANDS, MALAYSIA ACRS21\_169

*Darren How Jin Aik, Mohd Hasmadi Ismail,   
Farrah Melissa Muharam and Mohamad Azani Alias*

1. EVALUATING PERFORMANCE OF MAJORITY RULES   
   IN PER-PIXEL AND OBIA LAND-COVER CLASSIFICATION   
   USING WORLDVIEW MULTISPECTRAL IMAGERY OF URBAN   
   FRINGE AREA, INDONESIA ACRS21\_173

*Projo Danoedoro, Diwyacitta Dirda Gupita and Pronika Kricella*

1. COMPARING TWO DIFFERENT RADIOMETRIC CORRECTIONS   
   IN A VEGETATION MAPPING OF MOUNTAINOUS AREA   
   USING FOREST COVER DENSITY TRANSFORMATION ACRS21\_178

*Huwaida Nur Salsabila and Projo Danoedoro*

1. ANALYSIS OF URBAN HEAT ISLAND AND ITS RELATION WITH LAND USE LAND COVER IN NAGALAND, INDIA ACRS21\_179

*Kedovikho Yhoshü*

1. MAPPING AND MONITORING THE RICE CROP IN VIETNAM: EXPERIENCED USING RIICE TECHNOLOGIES ACRS21\_184

*Quang Chi Truong, Hung Van Bui, Emma Quicho, Luca Gatti,   
Vu Hoang Phan, Minh Quang Vo, Thang Ngoc Bui,   
Dung Quang Nguyen and Nam Hai Bui*

1. DETERMINING RICE CROPPING PATTERNS IN TRA VINH   
   PROVINCE USING REMOTE SENSING TIME SERIES S-1 ACRS21\_186

*Pham Duy Tien, Nguyen Thi Hong Diep and Duong Van Nha*

1. EVALUATION OF LAND COVER CHANGES USING DCP   
   VALIDATION DATA ACRS21\_187

*Yoshie Ishii, Koki Iwao and Tsuguki Kinoshita*

1. ANALYSIS OF THE SURFACE URBAN HEAT ISLAND   
   IN CAN THO CITY USING LANDSAT DATA ACRS21\_190

*Nguyen Kieu Diem and Phan Kieu Diem*

1. EVALUATING THE GROSS PRIMARY PRODUCTION (GPP)   
   IN DIFFERENT AGRICULTURAL LAND USE TYPES IN THE VIETNAMESE MEKONG DELTA USING VEGETATION PHOTOSYNTHESIS MODEL (VPM) ACRS21\_193

*Phan Kieu Diem, Nguyen Kieu Diem,   
Pariwate Varnakovida and Amnat Chidthaisong*

1. THE CALCULATION OF THE NORTH BANTEN GEOID   
   FROM GRAVITY RESOLUTION OF 5 BY 5 KM ACRS21\_195

*Dadan Ramdani, Eki Riyanti Suyatno and Yadi Aryadi*

1. ANALYSIS OF CLOUD-BASED NDVI TRENDS OF   
   A COUNTRY-WIDE FOREST RESTORATION PROGRAM ACRS21\_196

*Kyle Pierre R. Israel and Nathaniel C. Bantayan*

1. IDENTIFICATION OF BEST MACHINE LEARNING TECHNIQUE   
   AND MONITORING AND DETECTING CHANGES OF LAND   
   USE LAND COVER (LULC) FROM 2005 TO 2019: A CASE STUDY IN COLOMBO DISTRICT, SRI LANKA ACRS21\_197

*M.W.I.L. Somawansha*

1. UTILIZATION OF HYPERSPECTRAL DATA AND   
   MACHINE LEARNING ALGORITHMS FOR ESTIMATING CHLOROPHYLL CONTENTS IN WASABI LEAVES ACRS21\_199

*Adenan Yandra Nofrizal, Rei Sonobe, Hiroto Yamashita,   
Marumi Mihara, Akio Morita and Takashi Ikka*

1. ACCURACY ASSESSMENT OF DSM AND DTM   
   USING MAXAR IMAGERY (15 CM) ACRS21\_205

*Chhaya Sharma, Santosh Singh, Yashwant Singh and Lakhyajit Baruah*

1. IDENTIFICATION OF OPTIMUM METHOD FOR SENTINEL-1 SAR IMAGE FLOOD MAPPING DURING TROPICAL STORM KROVANH   
   IN AGUSAN DEL SUR, PHILIPPINES ACRS21\_208

*Krisha Ann N. Oller, Kimberly A. Pastor,   
Monalaine M. Bermoy and Kendel P. Bolanio*

1. HUMAN-ELEPHANT CONFLICT TRIGGERING FACTORS IDENTIFICATION USING FUZZY LOGIC MODELLING ACRS21\_213

*Nurafiqkah MUHID and Noordyana HASSAN*

1. TEN-YEAR COMPARATIVE ANALYSIS OF INFRASTRUCTURE GROWTH OF STATE UNIVERSITIES AND COLLEGES IN CARAGA REGION, PHILIPPINES USING REMOTE SENSING AND GIS

ACRS21\_227

*Michelle V. Japitana, Alger B. Etorma and Lavin Orcullo*

1. OPTICAL SATELLITE TIME SERIES ANALYSIS FOR GANODERMA BONINESE ATTACK DETECTION ON OIL PALM PLANTATION

ACRS21\_228

*Ita Carolita, Anisa Rarasati, I Kadek Yoga, Dede Dirgahayu,   
Heru Noviar, M. Rosyid and J. Suprijatna*

1. SPATIOTEMPORAL EPIDEMIOLOGY OF ANTHRACNOSE-TWISTER DISEASE OF ONION IN PRODUCTION AREAS OF STO. DOMINGO, NUEVA ECIJA, PHILIPPINES ACRS21\_237

*Dan Charlie Joy C. Pangilinan, Ronaldo T. Alberto,   
Celynne O. Padilla and Fernan T. Fiegalan*

1. USES OF MULTI-DATE SATELLITE IMAGES FOR MONITORING   
   OF LAND COVER CHANGES OVER COAL-FIRED POWER PLANT SURROUNDED AREAS IN THE QUANG NINH PROVINCE ACRS21\_249

*Chu Hai Tung, Dang Truong Giang, Do Thi Phuong Thao,   
Mai Anh Dung and Le Anh Tai*

1. SAR AND OPTICAL SENSOR DATA FUSION FOR EARTHQUAKE DAMAGE ASSESSMENT AND ANALYSIS OF THE SIGNIFICANT FEATURES ACRS21\_251

*Gunjan Joshi, Ryo Natsuaki and Akira Hirose*

1. INSAR ANALYSIS OF TERRAIN DEFORMATION DUE TO   
   AN ONGOING SERIES OF COLLAPSE EARTHQUAKES   
   IN THE CENTRAL HIGHLANDS OF SRI LANKA ACRS21\_255

*D R Welikanna, Juinichi Susaki and Shengye Jin*

1. APPLICATION OF LANDSAT IMAGERY FOR THE INTERPRETATION OF SURFACE WATER QUALITY – A CASE STUDY OF DE VONG –   
   CO CO RIVER, QUANG NAM ACRS21\_259

*Quynh Khanh Nguyen Cao, Duyen Chau My Nguyen and Long Ta Bui*

1. NOVASAR AIS DATA PRODUCT POST-PROCESSING   
   AND VISUALIZATION ACRS21\_261

*Samvram Sahu, Jayasri PV, Sauvic Dutta,   
Usha Sundari Ryali and Sita Kumari EVS*

**EDUCATION AND TRAINING**

1. THE DOWN CONVERTER IN-HOUSE DEVELOPMENT PHASE 2: LESSON AND LEARNING ACRS21\_001

*Warinthorn Kiadtikornthaweeyot and Rapirat Ritronnasak*

1. CASE STUDY OF GIS TECHNOLOGY TRANSFER AND TRAINING   
   IN CAMBODIA FOR RECONSTRUCTION ASSISTANCE AND FRIENDSHIP WITH JAPAN ACRS21\_067

*Hidekazu Takahashi, Akihiro Okumura,   
Seilaroath YOS and Takehiko Ichikawa*

1. REMOTE SENSING FOR ENVIRONMENTAL EDUCATION   
   USING GOOGLE EARTH ENGINE ACRS21\_093

*Tomohisa Konishi, Seiji Ito and Yoshinari Oguro*