Assalamualaikum Warahmatullahi Wabarakatuh.

First, I would like to say thanks to all committee, sponsor, our students, and our colleague for supporting The Fifth International Conferences of Indonesian Society for Remote Sensing (ICOIRS) and Indonesian Society for Remote Sensing Congress.

The 5th ICOIRS and MAPIN Congress was organized by collaboration of Indonesian Society for Remote Sensing (ISRS/MAPIN), Institut Teknologi Nasional (ITENAS), Center for Remote Sensing Institut Teknologi Bandung, Universitas Pendidikan Indonesia, Universitas Winaya Mukti and Universitas Pajajaran and supported by Ministry of Research, Technology and Higher Education (RISTEKDIKTI), Geospatial Information Agency (BIG), Indonesian National Institute of Aeronautics and Space (LAPAN), Agency for the Assessment and Application of Technology (BPPT), The Ministry of Agrarian Affairs and Spatial Planning/National Land Agency (ATR/BPN) and Meteorological, Climatological, and Geophysical Agency (BMKG). This event bring together researchers, policy makers, and practitioners from developed and developing countries to share insights into the challenges and opportunities of remote sensing technology and its application in solving the problems of Indonesia especially and South East Asia countries. It showcase cutting-edge research from around South East Asia, cutting-edge research from around South East Asia, focusing on themes of equity and risk, learning, capacity building, methodology, and possibly investment approaches in remote sensing. It explore practical adaptation policies and approaches, and share strategies for decision making to support global cooperation for conserving the earth and for a better human life.

The four-day conference among others consist of plenary, technical and poster sessions, panel discussions, congress of ISRS/MAPIN, exhibition, talk show, workshop, hands on training and city tour. We invite you to join us full time on The 5th ICOIRS and MAPIN Congress and make a successful conference on the application of Remote Sensing, Photogrammetry, GIS, GPS/GNSS, and other related digital mapping technologies in Indonesia and South East Asia.

Hopefully this technical programme can help and guide all of you to absorb all new things on this conference.

Please enjoy it. Thanks…

Wassalamualaikum warahmatullahi wabarakatuh

Sincerely
Dr. Soni Darmawan
(General Chair of ICOIRS2019 Organizing Committee)
KEYNOTE SPEAKERS
H. M. Ridwan Kamil, S.T., M.U.D.
Governor of West Java

Prof. Hasanuddin Z. Abidin
Head of Indonesian Geospatial Agency (BIG)

Dr. Orbita Roswintiarti, M.Sc
Deputy of Remote Sensing (LAPAN)

Prof. Dr. Ir. Dewany Sutrisno, M.AppSc
President of Indonesian Society for Remote Sensing (ISRS/MAPIN)

Prof. Chao-Hung Lin
National Cheng-Kung University, Taiwan

Prof. Wataru Takeuchi
Institute of Industrial Science, The University of Tokyo, Japan

Prof. Tian-Yuan Shih
National Chiao Tung University, Taiwan

Prof. Josaphat Tetuko Sri Sumantyo, Ph.D.
Chiba University, Japan

Prof. Sr. Dr. Mazlan Hashim FASc
Universiti Teknologi Malaysia (UTM), Malaysia

Dr. Gay Jane Perez
University of The Philippines, Philippines

Li Zhang, Ph.D
Co-chair of the Coastal Zone Working Group of the Digital Silk Road International Scientific Program (DBAR)
Chinese Academy of Sciences, China
INVITED SPEAKERS

Tanakorn Sritarapipat, Ph.D., ME., BE  
Suranaree University of Technology, Thailand

Dr. Firman Hadi  
Geoinformatics Centre – AIT, Thailand

Prof. Dr. Ir. Bangun Muljo DEA,DESS  
Institut Teknologi Sepuluh Nopember

Prof. Projo Danoedoro  
Universitas Gajah Mada

Prof. Dr. Ketut Wikantika  
Institut Teknologi Bandung

Prof. Dr.-Ing Fahmi Amhar  
Badan Informasi Geospasial (BIG)

Prof. Lilik Prasetyo  
Institut Pertanian Bogor

Dr. Agustan  
Pusat Teknologi Inventarisasi Sumberdaya Alam (PTISDA), BPPT.

Dr. Soni Darmawan  
Institut Teknologi Nasional Bandung
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**Information:**
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Correlation Analysis of PM10 Air Pollution with NDVI (Normalized Difference Vegetation Index) Based on Landsat-8 and Sentinel-2A Satellite Images

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Abstract. Dust particulates in the air Suspended Particulate Matter (SPM) is a mixture of various organic and inorganic compounds with small diameters ranging from <1 micron - 500 microns. Particulate (PM10) is an air particle that is less than 10 microns in size. This study correlates the NDVI vegetation index with PM10 in Bandung, West Java in 2001 - 2019 from these results show the relationship between NDVI and air pollution index is negative or inversely proportional, which means the higher (+) NDVI, the air pollution index decreases (-) with a confidence level of 39.35\% in 2001, 45.13\% in 2006, 60.04\% in 2011, 36.83\% in 2016, 50.71\% in 2019 and 46.96\% in 2018 and 48.96\% in 2019 with Sentinel. Thus, the NDVI index can be used to obtain air pollution information that indicates if the NDVI index value in the extraction will get a correlation value between Landsat 8 satellite images and Sentinel 2A where the correlation results on field measurements are Landsat at 68.93\% and Sentinel 90.15\%.

Keywords: Particulate matter, PM10, PM2.5, Landsat 8, Sentinel 2A, NDVI, TVDI
SAR Sentinel-1: Mitigation strategies for Earth's surface displacements in Aceh, Indonesia

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Abstract. Gayo plateau, Aceh-Indonesia is one of an urbanized area affected by tectonic phenomena due to the presence of the Great Sumatran Fault, which extends from the north in Aceh to the south in Lampung. This area was affected by strong seismically phenomena (Gayo plateau earthquake on 2 July 2013, Mw 6.3) which induced landslide and deformation. InSAR application using Sentinel-1 times series with Terrain Observation Progressive Scans (TOPS) mode has permitted a short acquisition repetition cycle, an extremely large coverage, a high spatial resolution for the covered area and a small baseline separation particularly suited for interferometry application. All of those characteristics suggest intensive exploitation of these data through the use of the interferometry technology and in particular the stacking interferometry for monitoring ground surface displacement. A Persistent Scatterer and Quasi – PS technique which was used in this research. The results of Persistent Scatterer, Quasi – PS, and the combination of both techniques with ascending and descending of Sentinel-1A were presented in this paper. The SARPROZ software which PS and Quasi-PS technique seems to be the best candidate for this application relative to the morphology and large extension of the Lut Tawar Lake in the Gayo plateau. We have been collecting SAR imaging over the Lut Tawar Lake since 2017. This allows taking into measures for seismic hazard mitigation widely in the Gayo plateau.

Keywords: Sentinel-1, Persistent Scatterer, Quasi-PS, Central Aceh
Detection of Urban Heat Island (UHI) in Central Jakarta Based on Landsat Imagery

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Abstract. Climate change is an issue of global concern, one of which is Urban Heat Island (UHI). The phenomenon of Urban Heat Island is a major challenge in every developing city in the world against global warming. Urban Heat Island is a phenomenon in which city temperatures that are densely packed are higher than the open-air temperature in all villages or on the edge of the city. This problem is also supported by the increasing urbanization process in a city that seems to never stop. The purpose of this study was to study changes in the value of UHI (Urban Heat Island) in Central Jakarta City in 2013 and 2018. The method used was Alghoritm Split Window (SWA). The Window Split algorithm uses band 10 and band 11 on the Thermal Infrared Sensor (TIR), band 4 and band 5 on the Optical Land Imager (OLI). The results obtained from the graph showing the value of Urban Heat Island gained an increase from 2013 to 2018, wherein 2018 the value of the Island of Urban Heat was higher than in 2013.

Keywords: Climate, Urban Heat Island, Split-Window Algorithm, Graph