

2023 International Conference on Earth Observation and Geo-Spatial Information (ICEOGI 2023)

**Algiers, Algeria
22 – 24 May 2023**



**IEEE Catalog Number: CFP23DL9-POD
ISBN: 979-8-3503-9673-7**

**Copyright © 2023 by the Institute of Electrical and Electronics Engineers, Inc.
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP23DL9-POD
ISBN (Print-On-Demand):	979-8-3503-9673-7
ISBN (Online):	979-8-3503-9672-0

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

TABLE OF CONTENTS

Motion of Rainy Cells Observed in Radar Images	1
<i>Ouarda Raaf, Bahia Lounis, Abd-El-Hamid Adane</i>	
Spatiotemporal Analysis of LULC Impact on Surface Erosive Runoff (SER) Based SCS-CN Method	6
<i>Cherif Kessar, Bilal Blissag</i>	
Bagging Ensemble Based on Multi-Layer Perceptron Neural Network for Landslide Susceptibility Assessment	10
<i>Matougui Zakaria, Djerbal Lynda, Bahar Ramdane</i>	
Morphodynamics of a Breakwater-Protected Sandspit: 16 Years of Digital Elevation Models	16
<i>Ana Bio, José Alberto Gonçalves, Isabel Iglesias, Américo Magalhães, Luísa Bastos</i>	
Seismic Hazard Mapping in Northwestern Algeria	21
<i>Bouhadad Youcef, Guessoum Nabila, Benfedda Amar</i>	
GIS and IoT Integration: A State of the Art and Challenges.....	26
<i>Imoussaine Fatiha, Derbal Khalissa, Boukhedouma Saida</i>	
Data Cubes – A Modern Approach for Handling Earth Observation Data	32
<i>Anja Batina</i>	
Availability and Accessibility of Open Data Relevant for Urban Planning: A Case Study of Zagreb, Croatia	38
<i>Karlo Kevic, Hrvoje Tomic, Zeljko Bacic, Darko Šiško</i>	
AL-SBAS and EGNOS/GPS Performance for Cartographic Application in Africa.....	42
<i>Tabti Lahouaria, Kahlouche Salem, Derras Chahrazed, Ahmedbetchim Younes, Alicherif Abdelkrim</i>	
Simulated Data for SAR Tomographic Reconstruction in Urban Areas.....	46
<i>Ishak Daoud, Saoussen Belhadj-Aissa, Faiza Hocine, Assia Kourgli</i>	
Internet-of-Things and Wireless Sensor Networks as Enablers for Soil Observation in Smallholder Farms.....	52
<i>Amsale Zelalem Bayih, Rolf A. De By, Yaregal Assabie, Javier Morales Guarin</i>	
Application of Modern GIS in Smart Grid.....	58
<i>Amir Saeed Homainejad</i>	
3D Modeling of the Scientific and Educational Campus Borongaj Using Unmanned Aerial Vehicle	63
<i>Iva Cibilić, Vesna Posloncec-Petric, Nina Matošić</i>	
Modernization of Geoinformatics Curriculum Based on Problem-Based Learning - Experiences of the GEOBIZ Project	69
<i>Vesna Poslončec-Petrić, Željko Bačić, Zvonimir Nevistić, Iva Cibilić</i>	
Land Use and Land Cover Change Detection Based on Urban Spectral Indices: A Case Study of the Coastal Municipalities of Annaba Province, Algeria.....	74
<i>Ihab Soltani, Siham Benzouai</i>	

Land Change Detection in Sentinel-2 Images Using IR-MAD and Deep Neural Network.....	81
<i>Ahmed Tahraoui, Radja Kheddam, Aichouche Belhadj-Aissa</i>	
Securing IoT Smart Irrigation Systems with Adapted Blockchain Based Approach	87
<i>Rabaie Benameur, Bouabdellah Kechar, Zahia Bidai, Amine Dahane</i>	
Neighborhood Selection and Cholesky Matrix for CAPON-Based SAR Tomography Inversion.....	93
<i>Karima Hadj-Rabah, Faiza Hocine, Gilda Schirinzi</i>	
Forest Tree Species Classification Using Machine Learning and Satellite Images	98
<i>Nabila Chergui, Yasmina Saker, Yousra Belayat</i>	
Evaluation Techniques for PolSAR Speckle Filtering.....	103
<i>Souhila Boutarfa, Youcef Smara, Chaimaa Youcef, Radia Balla</i>	
Monitoring Lake Chad Basin Water Quality Using Earth Observation Satellite Observations.....	109
<i>Abderamane Hamit, Jean-Michel Martinez, Tristan Harmel, Thierry Tormos, Mauricio Cordeiro, Nicolas Gasnier, Alice Andral, Hassane Amadou, Hycinth Banseka, Alio Abdoulaye, Aminu Magaji Bala, Guillaume Morin, Nathalie Reynaud, Aurélie Sand, Sarantuyaa Zandaryaa, Bandiougou Diawara</i>	
Urban Characterization Based on Recent Incoherent Polarimetric Decompositions.....	117
<i>Hammouda Ikram, Souissi Boularbah, Ouazzeddine Mounira, Latrache Houda</i>	
Pansharpening Methods Based on a Redundant Contourlet Transform	122
<i>Soumeya Ourabia, Nadia Baaziz, Youcef Smara</i>	
PolSAR Data Classification Using Extreme Gradient Boosting Classifier	128
<i>Houda Latrache, Mounira Ouazzeddine, Boularbah Souissi, Ikram Hammouda</i>	
Clustering Enhancement Using Particle Swarm Optimization Algorithm.....	133
<i>Boulemdjel Amel, Bendaoud Amira, Hachouf Fella</i>	
Geographic Information System for Air Traffic Optimization Based on Simulated Annealing in Training Environment.....	138
<i>Rafik Amara, Maamar Bougherara, Brahim Gouraya, Mostefa Belhadj Aissa</i>	
Multicriteria Ensemble Learning for Multispectral Image Classification	142
<i>Mohamed El Amine Douad, Noureddine Aribi, Samir Loudni, Yahia Lebbah</i>	
Flood-Prone Urban Area Mapping Using Machine Learning, a Case Study of M'sila City (Algeria)	148
<i>Medjadj Tarek, Tahmi Sadek, Ghribi Hayet</i>	
Application of Digital Twin in City Management	152
<i>Lucija Šain, Željko Bačić, Zvonimir Nevistić</i>	
Change Detection in Multitemporal SAR Images: A Multiresolution Analysis and Hypothesis Testing Approach.....	158
<i>Boulerbah Chabira, Takieddine Skanderi, Aichouche Belhadj Aissa</i>	
Impact of Transmitter Local Oscillator Spurious on SAR Images	162
<i>Harkati Lekhmissi, Bouaraba Azzedine, Haddad Nabil</i>	
Along-Track Displacement Retrieval Using Sentinel-1 Images.....	166
<i>Mohamed Amine Latrouci, Faiza Hocine, Saoussen Belhadj Aissa, Ishak Daoud</i>	

Towards a SOLAP Based Decision Support System for Forest Fire Management	170
<i>Asma Belaroussi, Khalissa Derbal, Rachid Benabdellah, Mostefa Belhadj-Aissa</i>	
Deep Neural Networks for Water Quality Mapping	176
<i>B. Lounis, A. Belguenbour, Y. Smara</i>	
Detecting and Counting Area of Crop Fields in Sentinel-2 Images Using Mask R-CNN Algorithm.....	180
<i>Abderrahman Zerguine, Mostefa Belhadj Aissa</i>	
Contribution of Remote Sensing and GIS in the Analysis of Landscape Ecology: Case of the High Steppe Plains of Algeria	185
<i>Boussadia-Omari Lynda, Hirche Azziz, Ouillon Sylvain, Ait Hammouda Tahar, Yahiacherif Sadaoui Samia, Daoudi-Merbah Farida</i>	
Remote Sensing-Based Model for Estimating Groundwater Pumping: Case Study of Irrigated Perimeter of the Medjerda Lower Valley, Tunisia	191
<i>Mahjouba Jerbi, Fatma Trabelsi, Salsabil Bel Hadj Ali</i>	

Author Index