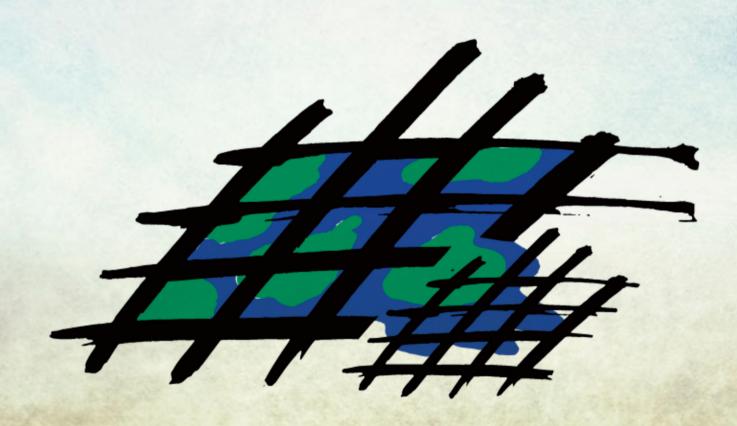




Journal of Geographic Information System





Journal Editorial Board

ISSN: 2151-1950 (Print) ISSN: 2151-1969 (Online)

https://www.scirp.org/journal/jgis

Editorial Board

Dr. Tofael AhamedUniversity of Tsukuba, Japan**Prof. Dafer Algarni**King Saud University, Saudi Arabia

Prof. Carlos Marcelo Di BellaInstituto de Clima y Agua CIRN-INTA Castelar, Argentina

Prof. Christophe Claramunt Naval Academy Research Institute, France

Prof. Weihong Cui International Europe and Asia Academy of Sciences, China

Prof. Fuchu Dai Chinese Academy of Sciences, China

Prof. Anrong DangTsinghua University, ChinaDr. Ahmed F. ElaksherCal Poly Pomona, USA

Prof. Abdelkader El Garouani Sidi Mohamed Ibn Abdellah University, Morocco

Prof. Hossein Ghadiri Griffith University, Australia

Prof. Shuanggen Jin Shanghai Astronomical Observatory, China

Prof. Saro Lee Korea Institute of Geoscience and Mineral Resources, South Korea

Dr. Xiang Li East China Normal University, China

Prof. Michel Mainguenaud Institut National des Sciences Appliquées, France

Prof. Jordi Martí-Henneberg University of Lleida, Spain

Prof. Hervé MartinJoseph Fourier University, FranceDr. Kaveh Ostad-Ali-AskariIsfahan University of Technology, IranProf. Sudhanshu Sekhar PandaUniversity of North Georgia, USAProf. Christopher James PettitThe University of Melbourne, Australia

Dr. Saied PirastehUniversity of Waterloo, Canada

Prof. Roberto Franco Plata AutonomousUniversity of the State of Mexico, MexicoProf. Biswajeet PradhanDresden University of Technology, GermanyProf. Xiaosheng QinNanyang Technological University, Singapore

Dr. Sowmya SelvarajanUtah Valley University, USADr. Himan ShahabiUniversity of Kurdistan, IranProf. Shih-Lung ShawUniversity of Tennessee, USA

Dr. P. S. Sriraj University of Illinois at Chicago, USA

Prof. Eddy Lynn Usery Center of Excellence for Geospatial Information Science, USA

Dr. Herna Viktor University of Ottawa, Canada

Prof. Jianhua XuEast China Normal University, ChinaProf. Xiaohuan YangChinese Academy of Sciences, China

Prof. Axing Zhu University of Wisconsin, USA

Dr. Liang-feng ZhuEast China Normal University, China



ISSN Online: 2151-1969 ISSN Print: 2151-1950

Table of Contents

Volume 13 Number 2	April 2021
Forest Cover Dynamics of a Lowland Rainforest in Southwestern Nigeria Using GIS and Remote Sensing Techniques	
T. V. Oluwajuwon, A. A. Alo, F. N. Ogana, O. A. Adekugbe	83
GIS-Based Methodology for Crash Prediction on Single-Lane Rural Highways	
M. Macedo, E. K. Rabbani, M. Maia, M. Macedo, B. Ferreira	98
An Analytical Framework for Measuring Inequality in the Public Opinion on Po	licing
M. Adepeju, F. Jimoh	122
The Validity of Open-Source Elevations for Different Topographic Map Scales a Geomatics Applications	nd
G. M. Dawod, I. E. Ascoura.	148
Quantitative Geomorphological and Hydromorphometric Analysis of Drainage As Sabriyah (Kuwait) Using GIS Techniques	Basins of
A. Al-Hurban, F. Al-Ruwaih, A. Al-Dughairi	166
Comparison of Geographically Weighted Regression of Benthic Substrate Mode. Accuracy on Large and Small Wadeable Streams	ling
K. R. Sheehan, S. A. Welsh.	194
Drilling in the Water by "Creating a Safe and Free Passage for the Movement of Equipment between the Surface and the Bottom", Using Several Methods for Ex Natural Resources and Scientific Research	•
W. Nabil	210
Multi-Hazard Evaluation Using Cluster Analysis—For Designated Evacuation C Yokohama	enters of
T. Ochiai, T. Enomoto	243
Mapping and Characterization of the Landscape Units of the Coastal Hydrograp Basin of Rio Pacoti, Ceará, Brazil	phic
Á. A. Dourado, J. F. Sobrinho, F. E. L. Barbosa, E. C. Lima	260
Updating Traditional 1/50,000 Topographic Maps Using Crowd-Sourced Geoda Free Sources Satellite Images	ta and
A. Belhaj Ali, H. Hamza	274

Journal of Geographic Information System (JGIS) Journal Information

SUBSCRIPTIONS

The *Journal of Geographic Information System* (Online at Scientific Research Publishing, https://www.scirp.org/) is published bimonthly by Scientific Research Publishing, Inc., USA.

Subscription rates:

Print: \$89 per issue.

To subscribe, please contact Journals Subscriptions Department, E-mail: sub@scirp.org

SERVICES

Advertisements

Advertisement Sales Department, E-mail: service@scirp.org

Reprints (minimum quantity 100 copies)

Reprints Co-ordinator, Scientific Research Publishing, Inc., USA.

E-mail: sub@scirp.org

COPYRIGHT

Copyright and reuse rights for the front matter of the journal:

Copyright © 2021 by Scientific Research Publishing Inc.

This work is licensed under the Creative Commons Attribution International License (CC BY).

http://creativecommons.org/licenses/by/4.0/

Copyright for individual papers of the journal:

Copyright © 2021 by author(s) and Scientific Research Publishing Inc.

Reuse rights for individual papers:

Note: At SCIRP authors can choose between CC BY and CC BY-NC. Please consult each paper for its reuse rights.

Disclaimer of liability

Statements and opinions expressed in the articles and communications are those of the individual contributors and not the statements and opinion of Scientific Research Publishing, Inc. We assume no responsibility or liability for any damage or injury to persons or property arising out of the use of any materials, instructions, methods or ideas contained herein. We expressly disclaim any implied warranties of merchantability or fitness for a particular purpose. If expert assistance is required, the services of a competent professional person should be sought.

PRODUCTION INFORMATION

For manuscripts that have been accepted for publication, please contact:

E-mail: jgis@scirp.org



Call for Papers

Journal of Geographic **Information System (JGIS)**

ISSN 2151-1950 (Print) ISSN 2151-1969 (Online)

https://www.scirp.org/journal/jgis/

JGIS is an international refereed journal dedicated to the latest advancement of Geographic Information System. The goal of this journal is to keep a record of the state-of-the-art research and promote the research work in these fast moving areas. The journal publishes the highest quality, original papers included but not limited to the fields:

Subject Coverage

- Cartography and Geodesy
- Computational Geometry
- Computer Vision Applications in GIS
- Distributed, Parallel, and GPU Algorithms for GIS
 Spatial Data Structures and Algorithms
- Earth Observation
- Environmental Geomatics—GIS, RS and Other **Spatial Information Technologies**
- Geographic Information Retrieval
- Geographical Analysis for Urban and Regional Development
- GIS and Cloud Computing
- GIS and High Performance Computing
- Human Computer Interaction and Visualization
- Image and Video Understanding
- Location Privacy, Data Sharing and Security
- Location-Based Services
- Performance Evaluation
- Photogrammetry
- Similarity Searching
- Social Networks and Volunteer Geographic
- Spatial Analysis and Integration

- Spatial and Spatio-Temporal Information Acquisition
- Spatial Data Mining and Knowledge Discovery
- Spatial Data Quality and Uncertainty
- Spatial Data Warehousing, OLAP, and Decision Support
- Spatial Information and Society
- Spatial Modeling and Reasoning
- Spatial Query Processing and Optimization
- Spatial Semantic Web
- Spatio-Temporal Data Handling
- Spatio-Temporal Sensor Networks
- Spatio-Temporal Stream Processing
- Spatio-Textual Searching
- Standardization and Interoperability for GIS
- Storage and Indexing
- Systems, Architectures and Middleware for GIS
- Traffic Telematics
- Transportation
- Visual Languages and Querying
- Wireless, Web, and Real-Time Applications

We are also interested in short papers (letters) that clearly address a specific problem, and short survey or position papers that sketch the results or problems on a specific topic. Authors of selected short papers would be invited to write a regular paper on the same topic for future issues of the JGIS.

Notes for Intending Authors

Submitted papers should not have been previously published nor be currently under consideration for publication elsewhere. Paper submission will be handled electronically through the website. All papers are refereed through a peer review process. For more details about the submissions, please access the website.

Website and E-mail

https://www.scirp.org/journal/jgis E-mail: jgis@scirp.org

What is SCIRP?

Scientific Research Publishing (SCIRP) is one of the largest Open Access journal publishers. It is currently publishing more than 200 open access, online, peer-reviewed journals covering a wide range of academic disciplines. SCIRP serves the worldwide academic communities and contributes to the progress and application of science with its publication.

What is Open Access?

All original research papers published by SCIRP are made freely and permanently accessible online immediately upon publication. To be able to provide open access journals, SCIRP defrays operation costs from authors and subscription charges only for its printed version. Open access publishing allows an immediate, worldwide, barrier-free, open access to the full text of research papers, which is in the best interests of the scientific community.

- High visibility for maximum global exposure with open access publishing model
- Rigorous peer review of research papers
- Prompt faster publication with less cost
- Guaranteed targeted, multidisciplinary audience





Website: https://www.scirp.org Subscription: sub@scirp.org Advertisement: service@scirp.org