

**‘JOGER’
JOURNAL OF
GEOMATICS AND ENVIRONMENTAL
RESEARCH**

Volume 1, Number 1, December 2018

<https://unilorinjoger.com/>

Published by

Department of Surveying and Geoinformatics,
Faculty of Environmental Sciences,
University of Ilorin, Ilorin, Nigeria

Maiden Edition

EDITORIAL TEAM

EDITORIAL BOARD

Editor-In-Chief

Prof. J.B. Olaleye

Department of Surveying and Geoinformatics, University of Lagos, Lagos

Associate Editor-In-Chief

Prof. J.F. Olorunfemi

Department of Geography and Environmental Management, University of Ilorin

Managing Editor

Dr. Ayo Babalola

Department of Surveying and Geoinformatics, University of Ilorin, Ilorin

Editors

Dr. D.N. Olayinka

Department of Surveying and Geoinformatics, University of Ilorin, Ilorin

Dr. K.O. Odedare

Department of Surveying and Geoinformatics, University of Ilorin, Ilorin

Corresponding Editor/Secretary

A.O. Ipadeola

Department of Surveying and Geoinformatics, University of Ilorin, Ilorin

Assistant Editors

H.A. Ahmadu

Department of Surveying &
Geoinformatics.

University of Ilorin, Ilorin

A.O. Abdulyekeen

Department of Surveying &
Geoinformatics.

University of Ilorin, Ilorin

Editorial Advisers

Prof. O.T. Idowu – Federal University of Technology, Akure

Prof. A.A. Musa – Federal University of Technology, Yola

Prof. M.N. Ono – Nnamdi Azikiwe University, Akwa

Dr. G. Amuda-Yusuf – University of Ilorin, Ilorin

Dr O.G. Omogunloye - University of Lagos, Akoka

Dr J.D. Dodo – Centre for Geodesy & Geodynamics, Toro, Bauchi

Dr. A. S. Alademomi - University of Lagos, Akoka

Dr. E.G. Ayodele – University of Lagos, Akoka

Correspondence to:

The Editor-In-Chief
Journal of Geomatics and Environmental Research
Department of Surveying and Geoinformatics
Faculty of Environmental Sciences
University of Ilorin, Ilorin. P.M.B. 1515, Ilorin, Kwara State, Nigeria
Email: editorjoger@gmail.com | joger@unilorin.edu.ng
Tel: +2347063404832

All Rights Reserved

No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording or any information storage and retrieval system, without the prior permission in writing from the author or publisher.

Disclaimer:

The views expressed in this journal are those of the contributors and not necessarily those of the editorial board.

Maiden Edition

@Published by Department of Surveying and Geoinformatics, UNILORIN

Cover Photo/Design: AbleGod Concept | ablegodconcept@gmail.com

Text Layout: Ipadeola A.O. Dept. Surveying & Geo., UNILORIN

Printed by:

UNILORIN PRESS

SUBSCRIPTION

Nigeria

- Individual Subscribers - #2000 per copy (excluding postage)
- Institution or Library - #3000 per copy (Excluding Postage)

Africa: \$150 per copy (Including postage)

Europe: \$150 per copy (Including postage)

North America: \$200 per copy (Including postage)

South America: \$200 per copy (Including postage)

Other Continents: \$250 per copy (Including postage)

Note: *All Fees are subject to review*

TABLE OF CONTENTS

Title Page	i
Editorial Team	ii
Subscription	iii
Table of Contents	iv
List of Contributors	v
Note to Contributors	vi
Editorial	viii
Geomatics Techniques for Landuse Pattern Identification In Apatapiti Suburb Of Akure Metropolis, Ondo State Nigeria	
- Ogunlade, S. O.	1
Geospatial Analysis Of The Land Use And Land Cover Changes Of Ilorin Metropolis Between 2000 And 2017 Using Remote Sensing And GIS Techniques	
- Ipadeola A. O, Odunaiya A. K, Tella A.K., Issa B. S, Yusuf A., Olabode T. B.	15
Remote Sensing And GIS Techniques In Mapping The Limestone Deposits Of Guyuk Region – Adamawa State, Nigeria	
- Musa, Abubakar A. and Edan, Johnson D.	29
Application Of GIS And Remote Sensing In Land Use And Land Cover Change In Cocoa Production – Idanre, Southwestern Nigeria	
- Ajani A. O., Ilesanmi O. I, Ajani O. M.	39
Visualizing Population Data Using Geographic Information Systems	
- Babalola A. and Ogunkunle B. T.	46
Powerline Electric Hazard Vulnerability Mapping: A Case Study Of Federal University Of Technology, Akure, Ondo State	
- Odunaiya A. K., Ipadeola A. O., Tukka A. A.	56
Evaluating the Adherences of Developments to Physical Development Control Standards in Ori-Awo Residential Area, Oyo East L.G.A., Oyo Using GIS Technology.	
- Owoade S., Alagbe A.O., Ogundele O.	70
Assessment and Determination Of Spatial Distribution Pattern Of Filling Stations In Akure Metropolis, Ondo State Nigeria	
- Tukka, A.A., Odunaiya, A.K.	81
Deformation Monitoring Using Total Stations: An Evaluation of System Performance	
- Alade Azeez. K.	101
Reliability Study on Dam Deformation Monitoring Using Geodetic and Optimization Technique	
- Olunlade O.A., Omogunloye O.G., Olaleye J.B.	115

LIST OF CONTRIBUTORS

- Ogunlade S.O.** - Department of Surveying and Geoinformatics,
Federal University of Technology, Akure, Ondo State, Nigeria
- Ipadeola A. O** - Department of Surveying and Geoinformatics,
University of Ilorin, Ilorin, Kwara State, Nigeria
- Odunaiya A. K.** - Department of Surveying and Geoinformatics,
Federal University of Technology, Akure, Ondo State, Nigeria
- Tella A.K.** - Department of Surveying and Geoinformatics
Osun State College of Technology, Esa Oke, Nigeria
- Issa B. S.** - Department of Surveying and Geoinformatics,
University of Ilorin, Ilorin, Kwara State, Nigeria
- Yusuf A.** - Department of Surveying and Geoinformatics,
University of Ilorin, Ilorin, Kwara State, Nigeria
- Olabode T. B.** - Department of Surveying and Geoinformatics,
University of Ilorin, Ilorin, Kwara State, Nigeria
- Musa, A. A.** - Department of Surveying and Geoinformatics,
Modibbo Adama University of Technology, Yola, Nigeria
- Edan, J. D.** - Department of Surveying and Geoinformatics,
Modibbo Adama University of Technology, Yola, Nigeria
- Ajani A. O.** - Department of Geographical Information Systems (GIS)
Federal School of Surveying, Oyo, Oyo-State, Nigeria
- Ilesanmi O. I.** - Department of Geographical Information Systems (GIS)
Federal School of Surveying, Oyo, Oyo-State, Nigeria
- Ajani O. M.** - Department of Geographical Information Systems (GIS)
Federal School of Surveying, Oyo, Oyo-State, Nigeria
- Babalola A.** - Department of Surveying and Geoinformatics,
University of Ilorin, Ilorin, Kwara State, Nigeria
- Ogunkunle B. T.** - Department of Surveying and Geoinformatics, UNILORIN
- Odunaiya A. K.** - Department of Surveying and Geoinformatics,
Federal University of Technology, Akure, Ondo State, Nigeria
- Ipadeola A. O.** - Department of Surveying and Geoinformatics,
University of Ilorin, Ilorin, Kwara State, Nigeria
- Tukka A. A.** - Department of Surveying and Geoinformatics,
Federal University of Technology, Akure, Ondo State, Nigeria
- Owoade S.** - Dept. of Geoinformatics, Federal School of Surveying, Oyo. Nigeria
- Alagbe A.O.** - Dept. of Geoinformatics, Federal School of Surveying, Oyo. Nigeria
- Ogundele O.** - Dept. of Geoinformatics, Federal School of Surveying, Oyo. Nigeria
- Tukka A. A.** - Department of Surveying and Geoinformatics,
Federal University of Technology, Akure, Ondo State, Nigeria
- Odunaiya A. K.** - Department of Surveying and Geoinformatics,
Federal University of Technology, Akure, Ondo State, Nigeria
- Alade A.K.** - Department of Surveying and Geoinformatics,
University of Ilorin, Ilorin, Kwara State, Nigeria
- Olunlade O.A.** - Department of Surveying and Geoinformatics Engineering,
University of Lagos, Akoka, Lagos. Nigeria.
- Omogunloye O.G.** - Department of Surveying and Geoinformatics Engineering,
University of Lagos, Akoka, Lagos. Nigeria.
- Olaleye J.B.** - Department of Surveying and Geoinformatics Engineering,
University of Lagos, Akoka, Lagos. Nigeria.

NOTE TO CONTRIBUTORS

The Journal of Geomatics and Environmental Research (JOGER) is a bi-annual journal published by the Department of Surveying and Geoinformatics, Faculty of Environmental Sciences, University of Ilorin, Ilorin with a devotion to issues in the fields of geomatics, geospatial technology and environmental technology. Articles for submission are to be submitted through the email address of the journal editorjoger@gmail.com | joger@unilorin.edu.ng. The manuscript should be written using MS-Word, New Times Roman font size 12, double spaced on A4 sized paper with the following margins; Top: 1.25"; Bottom 2.3", Left 1.85"; Right 1.4". Articles should not exceed 15 pages. #1000 will be surcharged per page for any excess page above 15pages. References within the text should be cited in APA 6th edition style, by author and year.

➤ **Title**

The title of the paper should be brief and short, written at the top of the page all bold, capitalized and centered. This should be followed by the name(s) of the author(s) and address(es). The email and phone number of the corresponding author must be specified.

All headings and subheadings should be well defined bold and in sentence case.

➤ **Abstract**

The abstract should describe the background, problem statement, methods employed, major findings and conclusions. The abstract should not exceed 250 words. At least five keywords should be provided.

➤ **Introduction**

This should give a concise and clear background of the subject matter of the article with the aim and objectives.

➤ **Methodology**

This should contain the instruments, materials and the procedure used in achieving the purpose of the work. This should be systematically and unambiguously stated.

➤ **Results and Discussions**

The results are expected to be presented in a manner that is precise, ideas brought up from it and the findings discussed.

➤ **Conclusions and Recommendations**

This should contain a brief summary of the conclusions drawn from the study as result of the findings. Recommendations from the findings should be stated.

➤ **Reference**

The referencing style should be APA 6th edition format for book and journal. The reference should contain all the authors cited in an alphabetical order.

➤ **Tables**

Tables should be numbered consecutively throughout the paper referring to them in the text as Table 1, Table 2, etc., with a title at the top of each table. Avoid the use of vertical rules. Table should not duplicate results presented in graphs.

➤ **Illustrations**

Illustrations in form of maps, diagrams, and charts/graphs should be sequentially numbered and given concise titles, which should be written below the illustrations.

➤ **Units, Symbols and Abbreviations:**

Only S.I Units as defined by the international standard organization (ISO) are acceptable. Abbreviations should be written in full at first mention

➤ **Final Submission**

The reviewer's report, the revised and corrected manuscript, copyright form and the copy of payment receipt of fifteen thousand (#15,000) for publication fee shall be returned through the journal's email address; *editorjoger@gmail.com/joger@unilorin.edu.ng*. This payment covers for one complimentary copy for the corresponding author only. Purchase of more copies by authors is at the rate of one thousand five hundred naira only (#1500) per copy. All payments should be made to the journal bank account as detailed below:

Account Name: Journal of Geomatics and Environmental Research
Account Number: 1015805521
Bank: Zenith Bank Plc.

EDITORIAL

It is a great pleasure to welcome you to the “world” of Journal of Geomatics and Environmental Research (JOGER) a publication of the department of Surveying and Geoinformatics, University of Ilorin, Ilorin, Kwara State, Nigeria. This is the maiden edition of the journal and we are glad the vision of having a quality and sustainable journal that captures the field of geomatics and environmental studies in all ramifications is now a reality.

This maiden issue presents articles in the areas of Geospatial Techniques, Remote Sensing, Geographic Information System (GIS), and Deformation Monitoring Techniques. The studies captured are Geomatics Techniques for Landuse Pattern Identification in Apatapiti Suburb of Akure Metropolis, Ondo State Nigeria. Geospatial Analysis of the Land Use and Land Cover Changes of Ilorin Metropolis between 2000 and 2017 Using Remote Sensing and GIS Techniques. Remote Sensing and GIS Techniques in Mapping the Limestone Deposits of Guyuk Region – Adamawa State, Nigeria. Application of GIS and Remote Sensing in Land Use and Land Cover Change in Cocoa Production – Idanre, Southwestern Nigeria. Visualizing Population Data Using Geographic Information Systems. Power line Electric Hazard Vulnerability Mapping: A Case Study of Federal University of Technology, Akure, Ondo State, Nigeria. Evaluating the Adherences of Developments to Physical Development Control Standards in Ori-Awo Residential Area, Oyo East L.G.A., Oyo using GIS Technology. Assessment and Determination of Spatial Distribution Pattern of Filling Stations in Akure Metropolis, Ondo State Nigeria. Deformation Monitoring Using Total Stations: An Evaluation of System Performance. Reliability Study on Dam Deformation Monitoring Using Geodetic and Optimization Technique.

We look forward to receiving your articles in subsequent editions of the journal. Thanks for publishing with *JOGER*.

Prof. Olaleye J.B.
Editor-In-Chief