



**ADAMAWA STATE UNIVERSITY
JOURNAL OF SCIENTIFIC RESEARCH**

VOLUME 4, NO. 2, AUGUST, 2016

ISSN:2251-0702

A Publication of

**FACULTY OF SCIENCE
ADAMAWA STATE UNIVERSITY (ADSU), MUBI
P.M.B 25**

Mubi, Adamawa state Nigeria.

Adsujsr2012@gmail.com

www.adsu.edu.ng +234 (0) 8036627553; +234 (0) 8101751685

EDITORIAL POLICY

ADSU Journal of Scientific Research is a journal for publication of original research articles from interested scholars and researchers in the academic community, international agencies, groups, individuals, institutions and other establishments concerning scientific approaches to sustainable development. Manuscripts are critically reviewed and published annually. Articles not previously or simultaneously published in any other scientific or technical journal, written in English or French language but not limited to the following areas of research are considered for publication.

- ❖ Agricultural Sciences
- ❖ Biological Sciences
- ❖ Computer Sciences
- ❖ Environmental Sciences
- ❖ Mathematical Sciences
- ❖ Medical Sciences
- ❖ Physical Sciences
- ❖ Science Education and Technology.

PHILOSOPHY

In any knowledge-based system, the currency of exchange is information **“To gauge the research temper of African people”**.

MANUSCRIPT

Manuscripts must be typewritten, double spaced on A4 paper with margins on both sides not exceeding twelve (12) pages, abstract and references inclusive.

- ❖ The title of the article should convey the topic of the research. Avoid words that add little to the meaningfulness of the article. E.g. “an empirical study of ...”, “A field study of ...” etc, such words make the title too lengthy.
- ❖ The abstract should not exceed two hundred words and should contain the aim of the study, methodology, main ideas of the discussion, research findings and conclusion.
- ❖ Research findings should be described in terms of intelligible to non-professionals/expert readers.
- ❖ The manuscripts are reviewed on the understanding that they are original and unpublished works of authors and are not considered for publication elsewhere.
- ❖ The title page should contain the Title of the Article, Names of the author(s) and Contact address(es), mobile phone number(s) and e-mail address(es) of the corresponding author(s).
- ❖ All references must have in-text citations and all in-text citations must reflect in the references.

- ❖ References must be typed separately and inserted at the end of each article based on the APA referencing format.
- ❖ Figures, tables and drawing should be clearly shown and the position(s) marked in the article.
- ❖ The authors are responsible for preparing manuscript copy which is clearly written in **scholarly acceptable** English or French language and contains no spelling, grammatical or punctuation errors.
- ❖ Papers should be submitted in hard and electronic copies or electronic copy alone.
- ❖ The Editorial board reserves the right to accept or reject manuscript(s) where it/they fail to meet the international standard/requirement and such decision is final.

CONTACTS

Editorial correspondence(s) and enquiries address to:

Yonnana Ezekiel (PhD)
Department of Geography
Adamawa State University,
P.M.B. 25 Mubi

Mobile: 234 (0) 8036627553; +234 (0) 8101751685

For online submission, address to adsujr2012@gmail.com

For more information, search our web page. www.adsu.edu.ng.

OWNER

Faculty of Science,
Adamawa State University (ADSU) Mubi.

EDITOTORIAL BOARD

Editor-in-Chief

Dr. Solomon Mamuru

Editorial Consultants

Prof. A.A. Adebayo

Prof. D.I. Malgwi

Prof. Felix Burari

Prof. J.T. Barminas

Dr. Mshelia Bello

MAUTECH, Yola.

UNIMAID.

ATBU

MAUTECH, Yola.

ATBU, Bauchi.

Editors

Prof. W.B Ndahi

Dr. U.A. Okoronka

Dr. Ibrahim Saidu

Dr. Philip A. Addas

Dr. I. Y. Sudi

Dr. Oliver N. Maitera

Dr. Ezekiel T. Williams

Dr. E. Yonnana

Dr. A. A. Zemba

Dr. Joshua Sunday

Dr. T. G. Kassem

Dr. Gideon Bibu

Dr. D. Y. Shingu

Dr. Danladi Ali

Dr. L. G. Ndatuwong

Dr. Dale W. Medugu

Dr. J. Filgona

Dr. Asabe Ibrahim

Crop. Sc. ADSU

Sci. Edu. ADSU

Geog. ADSU

Animal Sc. UNI-Agric. Makurdi

Biochem. ADSU

Chem. MAUTECH.

Chem. ADSU

Geog. ADSU

Geog. MAUTECH

Math. ADSU

Math.UNIJOS

Comp. Sc. UNIJOS

Chem. ADSU

Physics ADSU

Physics ADSU

Physics ADSU.

Bio. Sc. ADSU

Math. ADSU

Associate Editors

Mr. Albert Domo

Mr. Toma Ibrahim

Mr. J. Wahedi

Bio. Sc. FU KASHERE

Biochem. ADSU

Bio. Sc. ADSU

TABLE OF CONTENTS

<i>Title page</i>	<i>i</i>
<i>Editorial Policy</i>	<i>ii</i>
<i>Editorial Team</i>	<i>iv</i>
<i>Table of Contents</i>	<i>v</i>
<i>Guide to Authors</i>	<i>viii</i>
Analysis of States, Controls and Cost Functional of Two Dimensional Energized Wave Equation Up to Ten Nodal Points Musa, Bawa	1 - 18
Application of Multiple Regression Analyses on factors responsible for Commercial Sex Work in Taraba State Nathan Nachandiya	19 - 24
Application of Remote Sensing and Geographic Information System Techniques for Investigation of Groundwater Sources for Possible Drilling of Borehole Hong Local Government Area of Adamawa State, Nigeria Timothy Sabo¹ Alfred Dika Mshelia²	25 - 34
Conceptual Framework for the Adoption of Cloud-Based Mobile Learning in Higher Education Yusufu Gambo¹ and Mshelia Peter Y²	35 - 44
Effects of Preservation methods and duration of storage on the Nutrient composition of <i>Clarias gariepinus</i> in Mubi, Adamawa State, Nigeria. Edward, A., Elihu, A. and Umar, I.	45 - 50
Effect of Project-Based Method on Students' Academic Performance in use of Library instruction in Adamawa State University, Mubi-Nigeria Lambau, K. B.¹ and Sababa, L. K.²	51 - 61
Effects of Computer Simulation Teaching Strategy on Senior Secondary School Students achievement in Physics in Girei, Adamawa State Okoronka U. A.¹ and Sania. M.²	62 - 70
Ethno-ecological survey of some natives and their knowledge of latex-producing plants in some vegetation belts of Northern Nigeria. ¹Papi, D.Y. and ²Mbaekwe, E.I.	71 - 82

Genetic Algorithm Based Neuro-Fuzzy Control of Thermal Power Plant (A Case Study of Savannah Sugar Power Plant) Gumpy, J. M.¹, Jiya J. D.², Aliyu O. U.². and Anene E.C.².	83 - 101
Genetic Diversity Studies among some Genotypes of Grain Amaranths (<i>Amaranthus spp</i>) in Mubi, Adamawa State. Jonah P.M.¹, Daniel E.W.², Adeniji O.T.³, Abimiku O.E.⁴, and Jibung G.G.⁵	102 - 110
Impact of Environmental Management Practice on Ground Water Quality in Mubi Metropolis Joseph Emmanuel and Mshelia, Manasseh Inuwa.	111 - 116
Influence of Feed Replacement Levels on Growth Performance and Carcass Characteristics of Weaner Rabbits in Mubi Babale, D.M¹, Bilham, H². and M.B. Masudi³	117 - 124
Pasture-Animal Indices and Stocking Rates of some Adamawa State Grazing Sites, Nigeria Khobe, D¹., Joseph, J². and Augustine, C¹.	125 - 134
Screening for Antitrypanosomal effect of <i>Moringa oleifera</i> (Lam) Leaf Extract on Rats experimentally infected with <i>Trypanosomabrucei</i> Elihu, A.,¹ Umar, I. ² and Edward, A¹	135 - 143
Senior Secondary School Teachers' Perception of difficult Topics in Biology Curriculum in Mubi North Local Government Area of Adamawa State, Nigeria Kojigili S. T. and Mohammed Sani I.	144 - 153
Source Parameter Imaging (Spl) Interpretation of Aeromagnetic Data over the Younger Granite Rocks around Amper and Environs, North Central Nigeria Kasidi S. Alkali S. C. and Yusuf S. N.	154 - 165
Spectrophotometric Evaluation of Biosynthesized Copper Nanoparticles using <i>Allium cepa</i> , <i>Azadirachta indica</i> And <i>Moringa oleifera</i> Plant Extracts Mamuru, S A., John S., Samuel P. and Edam, E	166 - 174
Susceptibility Status of <i>Anopheles</i> Mosquitoes Exposed to Three Test Papers in Adamawa, Northeast Nigeria ¹Wahedi, J.A., ¹Vincent, V.M., ²David, D.L. and ¹Iliyasu, U.S.	175 – 181

The Potentials of Geospatial Database Management Systems in Shelterbelt Development and Monitoring Bulus Luka Gadiga	182 - 192
The Strong Convergence and Stability of Ishikawa and Thianwan Iterative Schemes in a Convex Metric Space K. Rauf¹, O. B. Saeed¹ and O. T. Wahab² and R. U. Kanu³	193 - 204
Ascorbate Content and Antinutritional profile of some Wild Fruits sold in Mubi Market, Nigeria. Joel Filgona^{1*}, Blessing Timothy², Toma Ibrahim³	205 - 215
Factors influencing Maternal Health Care Delivery System in Mubi North and South Local Government Areas of Adamawa State, Nigeria. Jummai V. Zira, Yonnana Ezekiel and Samuel Hyellamada Jerry	216 - 226

GUIDE TO AUTHORS

Originality

ADSU Journal of Scientific Research is a journal for publication of original research articles from interested scholars and researchers in the academic community, international agencies, groups, individuals, institutions and other establishments concerning scientific approaches to sustainable development. Manuscripts are critically reviewed and published annually. Articles not previously or simultaneously published in any other scientific or technical journal, written in English or French language but not limited to the following areas of research are considered for publication.

- ❖ Agricultural Sciences
- ❖ Biological Sciences
- ❖ Computer Sciences
- ❖ Environmental Sciences
- ❖ Mathematical Sciences
- ❖ Medical Sciences
- ❖ Physical Sciences
- ❖ Science Education and Technology.

Copyright

Submission of an article for publication implies the transfer of the copyright from author(s) to the publisher upon acceptance. Accepted papers become the permanent property of the “Adamawa State University Journal of Scientific Research” and may not be reproduced by any means without the written consent of the Managing Editor or Editor-in-Chief.

Typescript

All manuscripts must be typewritten, font size 12, double spaced on A4 paper with margins on both sides, not exceeding twelve (12) pages, abstract and references inclusive. Receipts of paper will be acknowledged. Authors will be informed of the referees' report and rejected papers will be returned to the authors.

Manuscript Categories

- (i). Full length paper (maximum: 13 pages 50 references)
- (ii). Short Communication (maximum: 8 pages 25 references)
- (iii). Review (maximum: 40 pages 90 references)

Manuscript Preparation

Title of paper

The title of the article should convey the topic of the research. Avoid words that add little to the meaningfulness of the article. E.g. “an empirical study of ...”, “A field study of ...” etc, such words make the title too lengthy

Names and address(es) of the Authors

The title page should contain the Title of the Article, Names of the author(s) and Contact address(es), mobile phone number(s) and e-mail address(es) of the corresponding author(s).

Abstract

The abstract should not exceed two hundred (200) words. Should be written in simple language, clear and concise and should contain the aim(s) of the study, methodology, main ideas of the discussion, research findings and conclusion. Abbreviations should be avoided and if used, should be explained at least once.

Keywords

A minimum of five (5) and maximum of six (6) keywords must be given at the end of the abstract.

Introduction

This should provide a general context for the work, explaining its significance and indicating why it should be of interest to scientist of other areas. Literature cited must be discussed to show the relationship between published work(s) and the research study.

Materials and Methods

Previously described methods should be cited and not elaborated upon. Details should be referred to literature cited. New approaches or methodologies should receive detailed attention. Statistical methods of treatment should be mention if used.

Results and Discussion

Results and Discussions should be combined. The original and important findings should be stated. Results should be illustrated with figures or tables where necessary but these should be kept to the minimum. The discussion should be highlight what is new in the research.

Conclusion

It should summarize the major findings that could be drawn, pointing out their significance and alluding possible future directions.

Acknowledgements

These should be presented at the end of the text and before the references. Technical assistance, financial assistance and advice may be acknowledged.

References

References should follow the current APA format.

Tables

Tables should be typed in separate sheet and numbers consecutively with Arabic numerals (e.g. Table 1, Table 2 etc). They have a short descriptive caption at the top.

Figures

Figures should be numbered consecutively with Arabic numerals (e.g. Fig. 1, Fig. 2 etc). Graphs should preferably be drawn using appropriate computer software and presented on single page ready to mount. These should be constructed in a manner that they understood without reading the text. Appropriate symbols should be used on graphs and explained in the legends. Graphs should not duplicate results presented in the tables. Photographs should be produced in black and white. Titles and comments of the figures and photographs should be provided on a separate page using MS word.

Units and Symbols

SI units should be used for physical quantities. Symbols, units and nomenclatures should conform to the recommendations of International Union of Pure and Applied Chemistry (IUPAC).

Manuscript Submission

Manuscripts should be submitted in hard and electronic copies or preferably electronic copy alone (e-mail) to the above address for publication.

We encourage more submissions from you subsequently.