FACULTY OF SCIENCE
FEDERAL UNIVERSITY OYE-EKITI
EKITI STATE, NIGERIA

BOOK OF ABSTRACTS/ PROGRAMME OF EVENTS

6th INTERNATIONAL SCIENCE CONFERENCE 2023

Conference Theme:

HARNESSING SCIENCE AND TECHNOLOGY FOR ACHIEVING SUSTAINABLE DEVELOPMENT GOALS (SDGS) IN THE POST COVID-19 ERA

VENUE: Faculty of Science Auditorium
Federal University Oye-Ekiti,
Ekiti State, Nigeria.

WEDNESDAY FRIDAY
10TH - 12TH MAY, 2023

Programme/Agenda

Wednesday , 10thMay 2023				
8:30a.m - 9:30a.m	Registration of Participants			
9:30a.m - 10:00a.m	Arrival of Invited Guests			
10:00a.m-10:10a.m	Arrival of the Vice-Chancellor			
10:10a.m – 10:15a.m	Opening Prayer/National Anthem and FUOYE Anthem			
10:15a.m- 10:20a.m	Welcome Address by Prof. A.A Ajiboye (Dean, Faculty of Science)			
10:20a.m- 10:30a.m	Vice-Chancellor's Address – Prof. A. S. Fasina (Vice Chancellor, Federal University Oye-Ekiti)			
10.30a.m – 10.55a.m	Speech by State Governor – Governor Biodun Oyebanji			
	PLENARY SESSION (Chair: Prof Sylvia Uzochukwu)			
11:00a.m-11:45a.m	Keynote Address 1 - Prof. Adekunle A. BakarePh.D (Ibadan) FAS, FZSN, FIPMD, Dean, Faculty of Science, University of Ibadan, Ibadan. Topic: ***Strengthening Scientific Research for Sustainable Development in Post-COVID Pandemic***			
11:45a.m-12:45a.m	Keynote address Speaker 2 Professor Joshua Olufemi Ojo , Professor of Health Physics &Environment. President, Living Science Foundation, Obafemi Awolowo University, Ile -Ife, Nigeria. Topic: The Role of Science, Technology and Innovation in Achieving Sustainable Development Goals in Post Covid-19 Era			
12:45-1:00 noon	Questions and Answers			
1:00p.m- 1:10.p.m	Vote of Thanks – Uche Nebo (Secretary, Central Organizing Committee)			
	Group photograph			
	PLENARY SESSION (Chair: Prof. O.S. Lawal)			
1:10p.m- : 2.00p.m	Keynote Speaker 3 Dr. Ethel E. Phiri, Stellenbosch University, SU. Topic:			
2:00pm-2:10pm	Questions and Answers			
	ORAL PRESENTATIONS			
	Venue: New Science Auditorium **Chair**: Prof. O. S. Hammed	**Venue: Old Science Auditorium** **Chair**: Prof. E.A. Odo	**Venue: 3 in 1 Laboratory (Chemistry)** **Chair**:Prof L.E. Okoror	**Venue: 3 in 1 Laboratory (Physics)** **Chair**: Prof. Oyawoye
2:10p.m-2:30p.m	FS-2023-SCI-001	FS-2023-SCI-008	FS-2023-SCI-015	FS-2023-SCI-021
2:30p.m-2:50p.m	FS-2023-SCI-002	FS -2023-SCI-009	FS 2023-SCI-016	FS-2023-SCI-022
2:50p.m-3:10p.m	FS-2023-SCI-003	FS 2023-SCI-010	FS-2023-SCI-017	FS-2023-SCI-023
3:10p.m -3:30p.m	FS-2023-SCI-004	FS-2023-SCI-011	FS-2023-SCI-018	FS-2023-SCI-024
3:30p.m -3:50p.m	FS-2023-SCI-006	FS-2023-SCI-012	FS-2023-SCI-019	FS 2023-SCI-025
3:50p.m -4:10p.m	FS-2023-SCI-007	FS-2023-SCI-014	FS-2023-SCI-020	FS-2023-SCI-027
4:10p.m	Lunch/Networking/Adjournment/Social Hour			

Thursday11th May, 2023				
9:00a.m–10:00a.m	Arrival of Participants			
	PLENARY SESSION (Chair: Prof.L.E. Okoror)			
10:30- 11.30a.m	Invited Speaker 4 Prof. Thakur Colin Su rendra, Bankseta Research Chair on Digitalization , Director of the NEMISA KZN e-skills Colab Durban University of Technology, South Africa. Topic: How African Academics can Leveragethe Fourth Industrial Revolution (4IR)to Achieve SDGs in a post -COVID Era			
11.30a.m-11: 45a.m	Questions and Answers			
	ORAL PRESENTATIONS (Parallel Sessions)			
	Venue: New Science Auditorium (Chair: Prof. E. G. Olumayede)	**Venue: Old Science Auditorium (Chair**: Dr. O. Agbolade)	**Venue: Physics Laboratory (Chair**: Prof. (Mrs) R. Gabriel-Ajobiewe)	**Venue: PSB Laboratory (Chair**: Prof. Omodele Ibraheem)
11:45a.m – 12:20a.m	FS-2023-SCI-028	FS-2023-SCI-037	FS-2023-SCI-047	FS-2023-SCI-057
12:20a.m-12:40a.m	FS-2023-SCI-029	FS 2023-SCI-038	FS-2023-SCI-048	FS-2023-SCI-058
12:40a.m -1:00p.m	FS-2023-SCI-030	FS-2023-SCI-039	FS-2023-SCI-049	FS 2023-SCI-059
1:00 p.m -1:20p.m	FS-2023-SCI-031	FS-2023-SCI-040	FS-2023-SCI-050	FS-2023-SCI-060
1:20a.m-1:40p.m	FS-2023-SCI-032	FS-2023-SCI-041	FS-2023-SCI-052	FS-2023-SCI-061
1:40a.m-2:00p.m	FS-2023-SCI-033	FS-2023-SCI-042	FS-2023-SCI-053	FS-2023-SCI-062
2:00p.m -2:20p.m	FS-2023-SCI-034	FS-2023-SCI-044	FS-2023-SCI-054	FS-2023-SCI-063
2:20p.m -2:40p.m	FS-2023-SCI-035	FS-2023-SCI-045	FS-2023-SCI-055	FS-2023-SCI-064
2:40pm -3:00pm	FS-2023-SCI-036	FS-2023-SCI-046	FS-2023-SCI-056	FS-2023-SCI-065
3:00p.m-3:30p.m	Lunch			
3:30pm -3:50p.m	FS-2023-SCI-067	FS-2023-SCI-072	FS-2023-SCI-077	
3:50p.m- 4:10p.m	FS-2023-SCI-068	FS-2023-SCI-073	FS-2023-SCI-079	
4:10-4:30p.m	FS 2023-SCI-069	FS-2023-SCI-074	FS-2023-SCI-080	
4:30p.m -4:50p.m	FS 2023-SCI-070	FS-2023-SCI-075	FS-2023-SCI-081	
4:50p.m-5:10p.m	FS-2023-SCI-071	FS-2023-SCI-076	FS-2023-SCI-082	

FS-2023-SCI-061

Assessment of the Adverse Environmental Impact of Gully Erosion in Mokwa and Its Environs, Niger State, Nigeria

M. B. Alfa and A.G. Isah
Department of Geology, Federal University of Technology, Minna, Nigeria
Corresponding author: Email:alphabello@gmail.com, **Phone No:** +234 8035954673

Abstract

Groundcover, erodibility of soils as well as volume and velocity of flows control the development of gully erosion. The assessment of these factors is necessary for mitigating the negative impacts of erosion on the environment and people. The recent devastating conditions of gully erosion in Mokwa calls for assessment of these factors in order to proffer lasting solutions to the impending problem. The objectives of this work are to produce geological map of Mokwa, classify the gullies, document negative impacts of the gullies and suggest appropriate ways of mitigating the situation. Methodology employed includes field examination of rock types and its distribution, measurement of gully dimensions and documentation of negative impacts on the environment and humans through physical observation and interviews. The identified rock types are sandstones, siltstones and mudstones belonging to Enagi Formation. This is overlain by interbedded claystones and ironstones of the Batati Formation. Due to the actively eroding gully head, unstable gully floor, eroding sidewalls, and gully depth of more than 6m, the examined gullies fall under the Class 1 category. According to observations, the gullies have an adverse effect on both the environment and people. On average, 3 lives are lost yearly, social amenities and infrastructures are destroyed, existing roads and farmlands are lost. Finally, suggested mitigations includes diversion of run-on water, installation of bed stabilizers, aggressive re-vegetation, erosion hazard information should be incorporated into long-term plans and residents should be aware of the hazards and preventive measures.

Keywords: Health, Pollution, Landslide, Impact, Hazard

FS-2023-SCI-062

Preliminary Studies of Pegmatites of Ogodo-Odobola Area of Idah Sheet 267NW, North-Central Nigeria

Y. A. Omanayin*, N.M. Waziri, U.S. Onoduku and A.A. Alabi
Department of Geology, Federal University of Technology, P. M. B. 065, Minna, Niger State, Nigeria
Corresponding author: Email: o.adinoyi@futminna.edu.ng, **Phone No.:** +2348038388110

Abstract

Pegmatites in the world over have been acknowledged to serve as host to lots of minerals (industrial, ore and gemstones). Recently, there is an upsurge in the interest for pegmatite deposits due to the newly discovered important uses of lithium ores among others. The granitic pegmatite of Ogodo-Odobola in Ajaokuta, Central Nigeria belongs to the pegmatite belt of North-Central Nigeria that has received very little attention and consequently, yet to be well studied. Therefore, detailed geological field mapping of the pegmatites and host rocks aimed at understanding their mode of occurrence and field relationship and to assess their mineralization potentials was conducted. The methods employed for this study include both geological fieldwork and laboratory analysis. Twelve (12) representative samples were selected for petrographic analysis. Geological fieldwork shows the study area is underlain by migmatite gneiss, schist, with intrusions of granite and pegmatite. The pegmatites occur in tabular form with varying widths and lengths. Principal joint directions show NNE-SSW direction which is believed to have influenced the pegmatite emplacement. Petrography of the representative rock samples reveal an average mineralogical composition of hornblende, biotite, quartz, plagioclase, microcline, muscovite, myrmekite and opaque minerals for the host rocks. While microcline, plagioclase, muscovite, biotite, and accessory and opaque mineral for the pegmatites. The pegmatite of the study area is worth probing as the results have shown prospect for possible economic minerals.

Keywords: Mineralization, Lithium Ores, Structural Features, Petrography, Ajaokuta

FS-2023-SCI-063

Tetrad Fixed Point Theorem for Binary Relation in Metric Spaces

S.A. Aniki
Department of Mathematics and Statistics, Faculty of Science, Confluence University of Science and Technology, Osara, Kogi State, Nigeria.
Corresponding author: Email:anikisa@custech.edu.ng, **Phone No:** +2348030896027

Abstract

Fixed point theorems have played a very paramount role in mastering the relationship between the field of Mathematics with a specification to mathematical analysis and other areas of sciences and its applications. Metric fixed point theory is an integral part of scientific investigation that spotlights the existence and uniqueness of fixed points under measurement conditions on both the space of the mapping and the mapping itself. However, this work presents an extension of tripled fixed point theorems to tetrad fixed point theorems in metric spaces endowed with a reflexive binary mixed monotonic relation. The fundamental characteristics of this method are that the contractive condition on the nonlinear mixed monotone map holds on the basis of assumptions on elements that are relatively comparable in the binary relation. Also, the existence, and uniqueness of positive definite solutions of a nonlinear matrix equation of the method were established.

Keywords: Reflexive relation, Mixed monotone map, Matrix equation, Nonlinear map