



TABLE OF CONTENTS

SECTION A: BUILDING, CIVIL AND GEOTECHNICAL ENGINEERING

- Improvement of Deltaic Lateritic Soil using River Sand and Cement for use as Pavement Construction Material
D. Imafidon, O. R. Ogirigbo and J. O. Ehiorobo 168
- Deterioration and Microstructural Characterization of Reinforced Concrete Beam Buried in Lagoon and Fresh Waters
U. T. Igba, J. O. Akinyele, F. M. Alayaki, S. I. Kuye and S. O. Oyebisi 177
- Prediction of Indoor Total Volatile Organic Compound in a University Hostel Using a Neural Network Model
F.C. Nkeshita, A.A. Adekunle and A. Abegurin 186
- Effect of Increasing Rate of Tricycles on Saturation Flows at Signalized Intersections in Uyo, Akwa Ibom State, Nigeria *I. N. Usanga and R. K. Etim* 191
- Use of Higher Order Plate Theory in Dynamic Analysis of SSFS and CSFS Thick Rectangular Plates in Orthogonal Polynomials *I. C. Onyechere, U. C. Anya, O. M. Ibearugbulem, A. U. Igbojiaku, E. O. Ihemegbulem, K. C. Igwilo* 199

SECTION B: CHEMICAL, INDUSTRIAL, MATERIALS, MECHANICAL, METALLURGICAL, PETROLEUM AND PRODUCTION ENGINEERING

- Risk Assessment Approach to Regulatory Compliance Challenges in Aging Facilities: A Case Study of Harlypet Oil and Gas Nigeria Limited Facilities
C.E. Alaneme, S.A. Al-Jeshi and S.B. Al-Otaibi 210
- Valuating Hydrocarbon Pipeline Facility Service Beyond 20–25 Year Economic Life: Accounting for Residual Value
C. E. Alaneme, S. N. Al-Lajam, A. A. Al-Jaafari and S. B. Al-Otaibi 222
- Enhancement of Mobile Scissor Lifting System for Windy Environments *K.E. Jack, U.A. Essien, O.S. Bamisaye, K.O. Paul, E.E. Ozoemela and C.N. Okpo* 229
- Current Trends in Welding Flux Development *A. D. Adeyeye* 241
- Design of a Fused Filament Fabrication (FFF) 3D-Printer
A. O. Oluwajobi and F. O. Kolawole 252
- Mathematical Modelling of Heat and Mass Transfer in a Roof Type Solar Distillation System
F. Onoroh, S.S. Folorunsho, M. Ogbonnaya and U.P. Onochie 261
- Chemical, Morphological Characterizations of Ririwai Biotite and Determination of Yield Point of its Weighting Agent Application in Drilling Mud
N. Salahudeen, U. Mohammed and M. N. Yahya 269
- A Review on the Prediction and Assessment of Powder Factor in Blast Fragmentation
G. Agyei and M. O. Nkrumah 275



SECTION C: COMPUTER, TELECOMMUNICATIONS, SOFTWARE, ELECTRICAL AND ELECTRONICS ENGINEERING

Implementing Fingerprint Authentication in Computer-Based Tests

A. E. Ewwiekpaefe and V. O. Eyinla 284

Web-Based Text Editing System for Nigerian Major Languages

A. A. Kasali, K. O. Jimoh, M. A. Adeagbo, S. A. Bello 292

Optimization of Sparse Randomly Spaced Linear Antenna Array using Hybrid Iteratively Reweighted Least Squares

S. A. Mustapha, S. M. Sani and K. A. Abu-Bilal 302

Privacy Enforcement on Subscribers Data in Cloud Computing

S. A. Akinboro, U. J. Asanga and M. O. Abass 308

Electrical Power Supply Consumption in Education Sector and Energy Audit: Case Study of University of Jos

B. I. Gwaivangmin 321

Achieving Effective Customer Relationship using Frequent Pattern-Growth Algorithm Association Rule Learning Technique

N. V. Ugwu and C. N. Udanor 329

SECTION D: AGRICULTURAL, BIORESOURCES, BIOMEDICAL, FOOD, ENVIRONMENTAL & WATER RESOURCES ENGINEERING

Thin Layer Drying Kinetics of Freshwater Clawed Lobsters (*Astacus astacus*)

D. S. Zibokere and E. W. Egbe 340

Performance Evaluation of a Compression Ignition Engine using Sand Apple (*Parinari polyandra B.*) Ethyl ester (Biodiesel)

F.vB. Akande, A. Saleh, D. T. Adeyemi and O. O. Oniya 348