

TABLE OF CONTENTS

SECTION A: BUILDING, CIVIL, ENVIRONMENTAL, GEOTECHICAL & WATER RESOURCES ENGINEERING

Development of Optimized Strength Model of Lateritic Hollow Block With 4% Mound Soil Inclusion	P. N. Onuamah and N. N. Osadabe	1
Predicting Flexural Strength of Concretes Incorporating River Gravel Using Multi-Layer Perceptron Networks: A Case Study of Eastern Nigeria	I. E. Umeonyiagu and C. C. Nwobi-Okoye	12
EN 338 Strength Grade and Uncertainty Models of Material Properties for Nigerian Grown <i>Terminalia Superba</i> (White Afara) Timber Specie	J. M. Kaura, I. Abubakar, I. Aliyu and U. Hassan	21
Modeling of Reservoir Inflow for Hydropower Dams Using Artificial Neural Network	A. W. Salami, A. A. Mohammed, J. A. Adeyemo and O. K. Olanlokun	28
Probabilistic Evaluation of EUROCODE 5 Fire Design Criteria of a Timber Portal Frame	J. M. Kaura, I. Abubakar, U. Hassan and I. Aliyu	37
Empirical Modeling of Oxygen Uptake of Flow Over Stepped Chutes	S. Munta, D. B. Adie and I. Abubakar	48
Evaluation of Rainfall Erosivity Index for Abuja, Nigeria Using Lombardi Method	M. O. Isikwue, J. E. Ocheme and M. I Aho	56
Modeling of Seepage Losses in Sewage Sludge Drying Bed	J. I. Obianyo and J. C. Agunwamba	64
Assessment of Noise Pollution from Sawmill Activities in Ilorin, Nigeria	A. S. Aremu, A. O. Aremu and D. O. Olukanni	72
Review of Elastic Analysis of Box Girder Bridges	G. C. Ezeokpube	80
Experimental Study On Flexural Response of FRP Strengthened Masonry Beams	C. E. Mbanusi and G. C. Ezeokpube	95
Application Of Used Engine Oil In Soil-Cement Stabilization	I. N. Obeta and J. Ohwoganhwo	104

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

A Study on Silica Sand Quality in Yazaram and Mugulbu Deposits for Glass Making	G. A. Duvuna and A. Ayuba	109
Performance of Jatropha Oil Blends in RD270 Two Cylinders Four Stroke Diesel Engine	G. A Duvuna and A. A. Wara	113

Transesterification of Crude <i>Jatropha Curcas linnaeus</i> Oil Catalyzed by Waste Marble Derived Solid Catalyst	M. A. Olutoye	119
A Permutation Encoding Technique Applied to Genetic Algorithm Solution of Resource Constrained Project Scheduling Problem	M. H Oladeinde and C. A Oladeinde	127
Modeling Effluent Assimilative Capacity of Ikpoba River, Benin City, Nigeria	C. M. Chiejine, A. C. Igboanugo and L. I. N. Ezemonye	133
Computer Modeling of Platinum Reforming Reactors	O. R. Momoh, I. A. Mohammed-Dabo, A. S. Ahmed and C. S. Ajinomoh	142
Analysis of Gear Milling at Various Speeds, Time and Feed Rates	K. A. Oladejo and K. T. Oriolowo	150

SECTION C: COMPUTER, TELECOMMUNICATIONS, ELECTRICAL & ELECTRONICS ENGINEERING

A Fuzzy Homomorphic Algorithm for Image Enhancement	U. A. Nnolim	156
Solar-Based Boost Differential Single Phase Inverter	C. U. Eya and M. U. Agu	164
Interference Effects of Bluetooth On Wlan Performance	J. E. Okhaifoh, J. O. Emagbetere and F. O. Edeko	177
Comparative Measurement of Stream Flow in the Ethiope River for Small Hydropower Development	S. O. Otuagoma, E. A. Ogujor and P. A. Kuale	184
Hybrid Modulation Scheme for Cascaded H-Bridge Inverter Cells	C. I. Odeh	193
Impact of Queuing on Call Completion Rate in GSM Networks	M. A. Nkop, K. M. Udofia, M. Umoren	203
Cloud Computing in Nigeria: The Cloud Ecosystem Perspective	F. M. Dahunsi and T. M. Owoseni	209