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Volume 10, Number 1 (May/June 200)

Simulation of Load Bearing Rod Rolling of Carbon-Manganese Steel Using the 'Phantom Roll' Method. P.O. Aiyedun, Ph.D., L.E. Oseghale, M.Sc., and O.J. Alamu, Ph.D. (Keywords: simulation, phantom roll method, load, flat, grooved).

http://www.akamaiuniversity.us/PJST10_1_4.pdf

Effect of Stress Relief Annealing and Homogenizing Annealing on the Microstructure and Mechanical Properties of Cast Brass. J.A. Omotoyinbo, Ph.D. and S. Aribo, M.Eng. (Keywords: cast bras, stress relief annealing, homogenizing annealing, microstructure, mechanical properties).

http://www.akamaiuniversity.us/PJST10_1_15.pdf

Roller-Cam Systems Design: Development of a Profile Analysis Software. O.E. Simolowo, M.Phil. and O.A. Bamiro, Ph.D. (Keywords: cams, design, software, analyses).

http://www.akamaiuniversity.us/PJST10_1_20.pdf

Fault Detection and Diagnosis for DC Motor in Robot Movement System using Neural Network. A. Che Soh, M.Sc. and R.Z. Abdul Rahman, M.Eng. (Keywords: intelligent control, neural network, digital controller, DC motor, robot movement).

http://www.akamaiuniversity.us/PJST10_1_35.pdf

A Modified Approach to Induction Motor Stator Voltage and Frequency Control. C.U. Ogbuka, M.Eng. and M.U. Agu, Ph.D. (Keywords: induction motor, constant volts/hertz v/f, constant flux, motor torque and speed).

http://www.akamaiuniversity.us/PJST10_1_44.pdf

A Modified Closed Loop V/F Controlled Induction Motor Drive. C.U. Ogbuka, M.Eng. and M.U. Agu, Ph.D. (Keywords: induction motor, stationary reference frame, volts/hertz v/f control, torque and speed).

http://www.akamaiuniversity.us/PJST10_1_52.pdf

A Generalized Vector Method of Induction Motor Transient and Steady State Analysis. C.U. Ogbuka, M.Eng. and C.A. Nwosu, M.Eng. (Keywords: induction motor, steady state, transient state, reference frame, MATLAB/SIMULINK).

http://www.akamaiuniversity.us/PJST10_1_59.pdf

Performance Characteristics of Controlled Separately Excited DC Motor. C.U. Ogbuka, M.Eng. (Keywords: DC motor, PID controller, speed control, MATLAB/SIMULINK).

http://www.akamaiuniversity.us/PJST10_1_67.pdf

Performance Characteristics of Inverter Controlled Three Phase Induction Motor: Teaching and Research. C.U. Ogbuka, M.Eng. (Keywords: induction motor, harmonics six step inverter, MATLAB).

http://www.akamaiuniversity.us/PJST10_1_75.pdf

Magnetics of an Idealized Asynchronous Reluctance Machine with no Moving Conductors. L.U. Anih, Ph.D. (Keywords: magnetomotive force, mmf, permeance, auxiliary transposed windings, skewed windings).

http://www.akamaiuniversity.us/PJST10_1_82.pdf

The Simulation of Using Hydrogen Fuel in Gasoline Internal Combustion Engines. Mohammed Awwad Al-Dabbas, Ph.D. and Ammar Ahmed Al-Rousan, Ph.D. (Keywords: hydrogen fuel, H₂, gasoline, simulation, fuel cells, combustion chamber, servo jet, engine, ICE).

http://www.akamaiuniversity.us/PJST10_1_93.pdf

Ferrographic Oil Analysis Technique for Lubricant Monitoring and Analysis in Internal Combustion Engines. I.A. Lateef, B.Tech., PGD, M.O. Arowolo, M.Tech., and O.A. Akintaro, COREN. (Keywords: measurement, analysis technique, lubrication, ferrographic method, oil analysis, wear rate, internal combustion engine).

http://www.akamaiuniversity.us/PJST10_1_107.pdf

Power and Energy Balance in Wind-Solar Hybrid Power System. C.A. Nwosu, M.Eng. and M.U. Agu, Ph.D. (Keywords: hybrid, power, CHP, combined heat and power, renewable energy, energy storage sub-system).

http://www.akamaiuniversity.us/PJST10_1_110.pdf

Simple and Safe Solar Heating: A Whole Systems Approach. Stefan Thiesen, Ph.D. (Keywords: SECUSOL, solar energy, solar heating, solar thermal systems, overheating, stagnation).

http://www.akamaiuniversity.us/PJST10_1_117.pdf

Solar Thermal Energy Utilization in Food Processing Industry in India.

Paritosh Nandi, Ph.D. (Keywords: food processing industry, solar parabolic concentrator, thermal system, heat exchanger, solar radiation, sweetmeat).

http://www.akamaiuniversity.us/PJST10_1_123.pdf

Experimental Investigation of Characteristics of a Double-Base Swirl Injector In a Liquid Rocket Propellant Engine.

F. Ommi, Ph.D., S.M. Hosseinalipour, Ph.D., A. Kargar, M.Eng., E. Movahed, and K. Nekofar, Ph.D. (Keywords: LPRE, liquid propellant rocket engine, swirl dual-based injector, propulsion, spray cone, spray angle).

http://www.akamaiuniversity.us/PJST10_1_132.pdf

An Accurate Scheme by Block Method for Third Order Ordinary Differential Equations. B.T. Olabode, Ph.D. (Keywords: linear multistep methods, LMMs, odes, P-stability, Zero-stability, third order, IVPs, initial value problems, interval of periodicity, predictor-corrector).

http://www.akamaiuniversity.us/PJST10_1_136.pdf

A Six-Step Scheme for the Solution of Fourth Order Ordinary Differential Equations. B.T. Olabode, Ph.D. (Keywords: linear multistep methods, LMMs, p-stability, zero-stability, third order, IVPs, odes, interval of periodicity, predictor-corrector).

http://www.akamaiuniversity.us/PJST10_1_143.pdf

On New Techniques for Testing Incomplete Data Using Regression Models.

O.B. Aladeniyi, O.E. Olowofeso, and O.A. Fasoranbaku. (Keywords: missing data, heteroscedasticity, regression model, explanatory variables, parameters).

http://www.akamaiuniversity.us/PJST10_1_149.pdf

Some New Type of Generalized Difference Paranormed Sequence Spaces Defined by Sequence of Orlicz Functions Associated with Multiplier Sequences.

Bipan Hazarika and Binod Chandra Tripathy. (Keywords: paranorm, Orlicz function, solid space, symmetric space).

http://www.akamaiuniversity.us/PJST10_1_161.pdf

The Place of Parametric Statistical Methods in Conducting Research in the Millennium Age.

O.O. Olaewe, Ph.D. and A.E.A. Kareem, M.Sc. (Keywords: research activity, research process, statistics, research design, statistical analysis, parametric statistics).

http://www.akamaiuniversity.us/PJST10_1_170.pdf

Application of Mathematical Model to Optimization of the Production Capacity of Paint Manufacturing Company. A.O. Odior, M.Eng. and F.A. Oyawale, Ph.D. (Keywords: paint production, time study model, mathematical model, product inspection).

http://www.akamaiuniversity.us/PJST10_1_178.pdf

Planning: An Effective Tool for Industrial Maintenance. T.I. Adelabu, COREN and I.A. Lateef, B.Tech., PGD. (Keywords: planning, planning horizon, employee motivation, labor efficiency, job planning).

http://www.akamaiuniversity.us/PJST10_1_185.pdf

Cost Minimization Approach to Manpower Planning in a Manufacturing Company. S.O. Ismaila, Ph.D., O.G. Akanbi, Ph.D., and O.E. Charles-Owaba, Ph.D. (Keywords: manpower planning, queue model, regression analysis, manufacturing company).

http://www.akamaiuniversity.us/PJST10_1_191.pdf

The Use of Time as an Optimality Performance Criterion in Manpower Control. Akaninyene U. Udom and Peter I. Uche. (Keywords: time, optimality, recruitment control, performance criterion, stochastic differential equation).

http://www.akamaiuniversity.us/PJST10_1_197.pdf

Effecting E-Learning with U-Learning Technology in Nigerian Educational System. O.K. Boyinbode, M.Sc. and K.G. Akintola, M.Sc. (Keywords: ubiquitous learning, sensors, electronic learning, ubiquitous computing).

http://www.akamaiuniversity.us/PJST10_1_204.pdf

Technical Literacy and Public Understanding of Technology. A. Maruf Aminu, B.Eng. (Keywords: technical knowledge, technical literacy, understanding, public, society).

http://www.akamaiuniversity.us/PJST10_1_211.pdf

Repositioning the Current Electrical Power Engineering Curricula to Stimulate More Interest. A. Maruf Aminu, B.Eng. (Keywords: engineering curricula, industry requirements, educational gaps, tertiary education).

http://www.akamaiuniversity.us/PJST10_1_215.pdf

The Effect of Research and Development in Developing Countries: Nigeria's Perspective. D.W.S. Alausa, ACSN, MNIEM, MNSE and Engr. C.U. Okoye, MNIEM, MNSE, COREN. (Keywords: development, developing countries, R&D, research, technical progress).

http://www.akamaiuniversity.us/PJST10_1_220.pdf

Technology in Modern Day Life: Challenges to Polytechnic Education. S.A. Olagoke, JP, MNSChE, MNIEM, MNIM, COREN and D.W.S. Alausa, ACSN, MNIEM, MNSE. (Keywords: technical development, education, research, technical progress).

http://www.akamaiuniversity.us/PJST10_1_226.pdf

Towards Effective SIWES Curriculum Development in Applied Sciences for Adequate Skills Utilization: A Case Study of the School of Applied Science, Nuhu Bamalli Polytechnic, Zaria. Afolalu Felix Olugbenga. (Keywords: students' industrial work experience scheme, SIWES, polytechnic education, training, educational reform Nigeria).

http://www.akamaiuniversity.us/PJST10_1_234.pdf

A Library Grid Network for Enhancing Learning in Nigerian Universities.

O.K. Boyinbode, R.O. Akinyede, and O.S. Adeola. (Keywords: information technology, grid computing, library information grid technology, university education, Nigeria, virtualized resources).

http://www.akamaiuniversity.us/PJST10_1_240.pdf

Reliability Analysis of Fixed Wireless Networks in Nigeria. Seyi Stephen Olokede, M.Sc. (Keywords: reliability, analysis, fixed wireless, Nigerian, Nigeria).

http://www.akamaiuniversity.us/PJST10_1_251.pdf

Strategies for Low Cost Rural Telephony. Idachaba Francis Enejo, M.Eng. (Keywords: GSM phone booths, range extenders, global system for mobile, shared access concept).

http://www.akamaiuniversity.us/PJST10_1_256.pdf

Congestion Analysis on the Nigerian Global System for Mobile Communications (GSM) Network. B.M. Kuboye, M.Tech., ANCS, B.K. Alese, Ph.D., MIEE, and O. Fajuyigbe, Ph.D. (Keywords: GSM, global system for mobile communications, telecom, network congestion).

http://www.akamaiuniversity.us/PJST10_1_262.pdf

Analysis of Resource Utilization in FPGA Implementation of an Embedded System Using Soft Core Processor. M.U. Kharat, Ph.D. and V.S.

Rahangadale, M.E. (Keywords: field programmable gate array, FPGA, reconfigurable embedded processors).

http://www.akamaiuniversity.us/PJST10_1_272.pdf

Comparative Analysis of Alternative Last Mile Broadband Access Technologies (Wi-Fi and WiMAX). Frank A. Ibikunle, Ph.D. (MIEEE, MNSE). (Keywords: broadband wireless, last mile access, rural connectivity, WiMAX, Wi-Fi, digital divide).

http://www.akamaiuniversity.us/PJST10_1_280.pdf

Broadband Wireless Access Solution base on OFDMA Technique in WiMAX IEEE 802.16. F.A. Ibikunle, Ph.D., MNSE, MIEEE. (Keywords: OFDMA, WiMAX, sub-carriers, sub-channels, broadband wireless).

http://www.akamaiuniversity.us/PJST10_1_286.pdf

Chemical Profile of Pleurotus tuberregium (Fr) Sing's Sclerotia. Catherine Chidinma Ikewuchi, M.Sc. and Jude Chigozie Ikewuchi, M.Sc. (Keywords: phytochemical screening, *Pleurotus tuberregium* (Fr) sclerotium, proximate composition).

http://www.akamaiuniversity.us/PJST10_1_295.pdf

Translational Overture Effect through Polar Equations in Two-Dimensional Digital Animations. M. Nuruzzaman, Ph.D. (Keywords: digital animation, spatial domain processing, special effect, 2D animation).

http://www.akamaiuniversity.us/PJST10_1_300.pdf

Transforming Nigeria Health Care System through Wireless Sensor Networks. O.K. Boyinbode, M.Sc. and K.G. Akintola M.Sc. (Keywords: medical monitoring, telemedicine, medical sensors, body worn sensors, wireless personal or body area networks, WPAN, WBAN).

http://www.akamaiuniversity.us/PJST10_1_310.pdf

Bombay Blood Group: A Case Report. Dr. Mansoor Quli Khan, MBBS, MD, Ph.D. (Keywords: Bombay phenotype, transfusion, Oh blood group, rare blood type, blood antigens).

http://www.akamaiuniversity.us/PJST10_1_333.pdf

A Critical Evaluation of the Concept of 'Nasa Hi Shiraso Dwaram' (Nasal Route Entry for the Cranial Cavity). Dr. H.J. Sangeeta, M.D. (Ayu) and Dr. Hemant D. Toshikhane, M.S.(Ayu). (Keywords: nasal drug delivery, nasya, nasal cavity, Ayurveda, traditional Indian medicine).

http://www.akamaiuniversity.us/PJST10_1_338.pdf

Fracture Management in Traditional Indian Medicine. Dr. Hemant D. Toshikhane, M.S.(Ayu) and Dr. H.J. Sangeeta, M.D. (Ayu). (Keywords: bone fracture, skeletal system injuries, Ayurveda, traditional Indian medicine).

http://www.akamaiuniversity.us/PJST10_1_342.pdf

Allelopathic Effects of Some Crop Residues on the Germination and Growth of Maize (*Zea mays* L). J. Kayode, Ph.D. and J.M. Ayeni, M.Sc. (Keywords: sorghum stem extract, rice husk extract, germination, corn, plant development, allelopathy, allelochemicals).

http://www.akamaiuniversity.us/PJST10_1_345.pdf

Phytochemical Analysis and Cholinesterase Inhibition of *Cyperus platycaulis*. J.O. Echeme, Ph.D. and M.E. Khan, M.Sc. (Keywords: physicochemical, ChE, cytotoxicity, antibacterial properties, tannins, ethnomedicine, folk medicine, active ingredients, tuberculosis, extracts).
http://www.akamaiuniversity.us/PJST10_1_350.pdf

Chemical Profile of *Pleurotus tuberregium* (Fr) Sing's Sclerotia. Catherine Chidinma Ikwuchi, M.Sc. and Jude Chigozie Ikwuchi, M.Sc. (Keywords: phytochemical screening, *Pleurotus tuberregium* (Fr) sclerotium, proximate composition).
http://www.akamaiuniversity.us/PJST10_1_357.pdf

Comparative Study of the Mineral Element Composition of Some Common Nigerian Medicinal Plants. Jude Chigozie Ikwuchi, M.Sc. and Catherine Chidinma Ikwuchi, M.Sc. (Keywords: *Acalypha wilkesiana*, *Chromolaena odorata*, mineral composition, *Tridax procumbens*).
http://www.akamaiuniversity.us/PJST10_1_362.pdf

Comparative Study of the Vitamin Composition of Some Common Nigerian Medicinal Plants. Catherine Chidinma Ikwuchi, M.Sc. and Jude Chigozie Ikwuchi, M.Sc. (Keywords: *Acalypha wilkesiana*, *Chromolaena odorata*, *Tridax procumbens*, vitamin composition).
http://www.akamaiuniversity.us/PJST10_1_367.pdf

The Effect of Tribological Processes on Productivity: A Case Study of Industries in Ibadan Metropolis of Nigeria. O.E. Simolowo, M.Phil. and M.B. Adeniji, B.Sc. (Keywords: tribology, industry, productivity, process-reliability, industrial downtime).
http://www.akamaiuniversity.us/PJST10_1_372.pdf

Phytochemical and Antimicrobial Screening of *Ficus platyphylla* against Human/Animal Pathogens. D. Kubmarawa, M.E. Khan, A.M. Puna, and M. Hassan. (Keywords: *Ficus platyphylla*, phytochemical, antimicrobial activity, *Staphylococcus aureus*, *Pseudomonas aeruginosa*, flavonoids).
http://www.akamaiuniversity.us/PJST10_1_382.pdf

Evaluation of the Effects of Pollution with Spent Lubricating Oil on the Physical and Chemical Properties of Soil. J. Kayode, Ph.D., A.A. Oyedeji, B.Sc., and O. Olowoyo, B.Sc. (Keywords: soil quality, soil characteristics, POL, SOL, contamination, chemical properties).
http://www.akamaiuniversity.us/PJST10_1_387.pdf

Levels of Potentially Toxic Metals in Synthetic Industrial Essential Oils Utilized in Northern Nigeria. Stephen S. Hati, Ph.D., Goni A. Dimari, Ph.D. and Victor O. Ogugbuaja, Ph.D. (Keywords: synthetic fragrance, direct application, toxic metals, human health, northern Nigeria).
http://www.akamaiuniversity.us/PJST10_1_392.pdf

Study of Thermal Properties of Babool Wood and its Polyacrylonitrile Composites. Shalendra Kumar Pathak, M.Tech., Lokesh Upadhay, B.Tech. and Ghanshyam Srivastava, Ph.D. (Keywords: benzoyl peroxide, polyacrylonitrile, impregnation, thermo-oxidative stability).
http://www.akamaiuniversity.us/PJST10_1_399.pdf

Study of Thermal Properties of Eucalyptus Wood and its Polyacrylonitrile Composites. Shalendra Kumar Pathak, M.Tech., Mohd Arif, B.Tech., and Ghanshyam Srivastava, Ph.D. (Keywords: benzoyl peroxide, polyacrylonitrile, impregnation, thermo-oxidative stability).
http://www.akamaiuniversity.us/PJST10_1_406.pdf

Fabrication and Optical Constants of CdMnS Ternary Thin Films Deposited by Chemical Bath. C.I. Oriaku, M.Sc., F.I. Ezema, Ph.D., and J.C. Osuwa, Ph.D. (Keywords: CBD, chemical bath deposition, deposition technique, thin films, ternary compounds).
http://www.akamaiuniversity.us/PJST10_1_413.pdf

Inorganic Acids Doped PANI-PVA Composites Films as a Gas Sensor. D.B. Dupare, M.Sc., M.D. Shirsat, Ph.D., and A.S. Aswar, Ph.D. (Keywords: polymer blend, polyvinyl alcohol, polyaniline, conducting polymer, inorganic acids, gas sensor).
http://www.akamaiuniversity.us/PJST10_1_417.pdf

Preparation and Characterization of Aluminum Doped Zirconium Sulphide Thin Films. R. Thiyagarajan, M. Mahaboob Beevi, and M. Anusuya. (Keywords: thin films, structural properties, optical band gap).
http://www.akamaiuniversity.us/PJST10_1_423.pdf

Kinetic, Equilibrium, and Thermodynamic Studies of the Biosorption of Cd(II) and Pb(II) from Aqueous Solutions by *Talinum triangulare* (Water Leaf). J. Oyebamiji Babalola, N.A. Adesola Babarinde, Olalekan A. Popoola, and Vincent O. Oninla. (Keywords: biosorption, *Talinum triangulare*, cadmium (II), lead (II), isotherm).
http://www.akamaiuniversity.us/PJST10_1_428.pdf

Kinetic, Isothermal, and Thermodynamic Studies of the Biosorption of Ni(II) and Cr(III) from Aqueous Solutions by *Talinum triangulare* (Water Leaf). J. Oyebamiji Babalola, N.A. Adesola Babarinde, Olalekan A. Popoola, and Vincent O. Oninla. (Keywords: biosorption, *Talinum triangulare*, pseudo-second-order, adsorption isotherms).

http://www.akamaiuniversity.us/PJST10_1_439.pdf

Kinetics and Mechanism of Mn (II) Catalyzed Oxidation of D-Arabinose and D-Xylose by Chromium (VI) Ions in Perchloric Acid Medium. A.S. Ogunlaja, E.O. Odebunmi, and S.O. Owalude. (Keywords: kinetics, sugars, chromium oxidation, arabinose, xylose, manganese chloride catalysis, perchloric acid).

http://www.akamaiuniversity.us/PJST10_1_451.pdf

Effect of 0.05M NaCl on Corrosion of Coated Reinforcing Steels in Concrete. O.O. Akinyemi, M.Sc. and O.J. Alamu, Ph.D. (Keywords: corrosion, concrete, coatings, steel)

http://www.akamaiuniversity.us/PJST10_1_462.pdf

Model Predictive Control for pH Control of Cephadrine Purification Process. V. Balaji, Research Scholar. and N. Vasudevan, Ph.D. (Keywords: model predictive control, PID, controller, Cephadrine, LabView, process control).

http://www.akamaiuniversity.us/PJST10_1_472.pdf

Amino Acid, Mineral, and Vitamin Composition of *Sansevieria liberica* Gérôme and Labroy. Catherine Chidinma Ikewuchi, M.Sc. and Jude Chigozie Ikewuchi, M.Sc. (Keywords: Amino acid, mineral and vitamin profile, *Sansevieria liberica*).

http://www.akamaiuniversity.us/PJST10_1_477.pdf

Role of Electrical Resistivity Method for Groundwater Exploration in Hard Rock Areas: A Case Study from Fidiwo/Ajebo Areas of Southwestern Nigeria. Stephen O. Ariyo and Gabriel O. Adeyemi. (Keywords: electrical resistivity, groundwater exploration, hard rock, Fidiwo, Ajebo, southwestern Nigeria, vertical electrical sounding, VES).

http://www.akamaiuniversity.us/PJST10_1_483.pdf

Petrogenetic and Geotectonic Implications of Lokpa-Ukwu Pyroclastics in Southern Benue Trough, Nigeria. J.N. John-Onwualu, M.Sc. and V.U. Ukaegbu, Ph.D. (Keywords: geology, geochemistry, Cretaceous sedimentary formations).

http://www.akamaiuniversity.us/PJST10_1_487.pdf

Evaluation of Pore Water Pressure Characteristics in Embankment Model. Abdoulla Namdar and Mehdi Khodashenas Pelkoo. (Keywords: embankment, pore water pressure, dense layer, liquefaction).

http://www.akamaiuniversity.us/PJST10_1_501.pdf

Well Log Interpretation Model for the Determination of Lithology and Fluid Contents. O.C. Akinyokun, P.A. Enikanselu, A.B. Adeyemo, and A. Adesida. (Keywords: well log analysis, lithology, neural network, fuzzy logic, geophysical data).

http://www.akamaiuniversity.us/PJST10_1_507.pdf

Geology and Stratigraphy of Middle Cretaceous Sequences Northeast of Afikpo Basin, Lower Benue Trough, Nigeria. V.U. Ukaegbu, Ph.D. and I.O. Akpabio, Ph.D. (Keywords: Afikpo basin, lithostratigraphic units, geology, Asu river group, Turonian Ezeaku formation).

http://www.akamaiuniversity.us/PJST10_1_518.pdf

Relevance of Geophysics in Road Failures Investigation in a Typical Basement Complex of Southwestern Nigeria. K.A.N. Adiat, M.Tech., A.O. Adelusi, Ph.D., and M.A. Ayuk, M.Tech. (Keywords: geophysics, road subsurface, civil engineering, road engineering, road failure).

http://www.akamaiuniversity.us/PJST10_1_528.pdf

Detection of Seismic ULF Geo-Electrical Potential Variations as Tremor Precursors Prior to Quarry Blasts. A.A. Adetoyinbo, O.I. Popoola, O.S. Hammed, and L.A. Sumonu. (Keywords: geo-electrical, seismic, ultra low frequency, ULF, precursors, fracture).

http://www.akamaiuniversity.us/PJST10_1_540.pdf

Spatial Periodicities of Structural Features of the Basement Complex of Southwestern Nigeria Deduced from Auto-Covariance and Power Spectra of Aeromagnetic Data. G.C. Onyedim, Ph.D. and O.O. Ocan, Ph.D. (Keywords: magnetic anomalies, autocorrelation, power spectrum, harmonics, lineaments).

http://www.akamaiuniversity.us/PJST10_1_556.pdf

Variability in Geochemical Properties of Termitaria: University of Ibadan Case Study. G.M. Ayininuola, M.Sc., CREN. (Keywords: geotechnical properties, chemical properties, termitaria, geological zones, shear strength).

http://www.akamaiuniversity.us/PJST10_1_567.pdf

Influence of Sodium Chloride on Subgrade Soil California Bearing Ratio. G.M. Ayininuola, M.Sc., CREN, and O.A. Agbede, Ph.D. (Keywords: cation exchange capacity, CEC, California bearing ration, CBR, soil, subgrade, salt).

http://www.akamaiuniversity.us/PJST10_1_573.pdf

Geo-Environmental Impact Assessment of Effluent Water Disposal on Underground Water in Parts of Samaru, Zaria Kaduna State, Nigeria. Afolalu Felix Olugbenga. (Keywords: groundwater contamination, BOD, COD, TDS, SS, nitrate, phosphate).

http://www.akamaiuniversity.us/PJST10_1_581.pdf

Preliminary Investigation of Some Radiometric Anomalies at Kufena Ring Complex, Zaria Kaduna State, Using Gamma Ray Scintillometer.

Afolalu Felix Olugbenga. (Keywords: radioelement, radioecology, mineralization, uranium deposits, geological surveys).

http://www.akamaiuniversity.us/PJST10_1_591.pdf

Two Dimensional Shallow Resistivity Investigation of the Ground Water Potential at Nuhu Bamalli Polytechnic, Zaria Main Campus using Electrical Imaging Technique.

Afolalu Felix Olugbenga. (Keywords: shallow resistivity survey, ground water potential, water exploration).

http://www.akamaiuniversity.us/PJST10_1_602.pdf

Depositional Environments, Organic Richness, and Petroleum Generating Potential of the Campanian to Maastrichtian Enugu Formation, Anambra Basin, Nigeria.

Olusola J. Ojo, Ph.D., Ajibola U. Kolawole and Samuel O. Akande. (Keywords: hydrocarbon exploration, total organic carbon, TOC, soluble organic matter, SOM).

http://www.akamaiuniversity.us/PJST10_1_614.pdf

A Comparative Estimate of Sediment Transport Along the Coast of West Africa.

Sunday Olakunle Oyegoke, Ph.D. (Keywords: West Africa, wave climate, littoral drift, longshore sediment transport computation, Gulf of Guinea).

http://www.akamaiuniversity.us/PJST10_1_628.pdf

Computer Model Study of the Effect of Resistive Topsoil on Interpretation Results of Subsurface Geoelectric Layers' Parameters.

A.E. Adeniran, M.O. Olorunfemi, Ph.D., and O.G. Bayowa. (Keywords: resistive topsoil, forward modeling, resistive type curves, curve matching, geoelectric parameters, statistical analysis, vertical electrical sounding, VES).

http://www.akamaiuniversity.us/PJST10_1_635.pdf

The Bouguer Gravity Anomaly Map of the Calabar Flank, Southeastern, Nigeria.

A.A. Okiwelu, Ph.D., E.E. Okwueze, Ph.D., and I.O. Akpabio, Ph.D. (Keywords: gravity, anomaly, Bouguer, free-air, drift, geology, Calabar Flank).

http://www.akamaiuniversity.us/PJST10_1_656.pdf

Gravitational Scalar Potential Values Exterior to the Sun and Planets.

Chifu Ebenezer Ndikilar, M.Sc., Adam Usman, Ph.D., and Osita Meludu, Ph.D.

(Keywords: scalar potential, oblate spheroid, sun, planets, equator, pole).

http://www.akamaiuniversity.us/PJST10_1_663.pdf

Preliminary Results from 3-D Approach to Ionospheric Conductivities in the Equatorial Region.

G.A. Agbo and F.N. Okeke. (Keywords: ionosphere, ionospheric conductivities, electrojet, equatorial region, geomagnetic elements).

http://www.akamaiuniversity.us/PJST10_1_674.pdf

Solar Radiation in Port Harcourt: Correlation with Sunshine Duration. A. Chukwuemeka, M.Sc. and M.N. Nnabuchi, Ph.D. (Keywords: sunshine, clearness index, solar radiation).

http://www.akamaiuniversity.us/PJST10_1_681.pdf

Effects of Some Atmospheric Parameters on the Dynamics of Lower Stratospheric Ozone in the Low Latitude. B.C. Isikwue and F.N. Okeke. (Keywords: O₃, ozone, extra-tropical suction pump, ETSP, quasi biennial oscillation, QBO, atmospheric gases, atmospheric dynamics, lower stratosphere, atmospheric variability).

http://www.akamaiuniversity.us/PJST10_1_686.pdf

Empirical Models for the Correlation of Global Solar Radiation with Meteorological Data for Enugu, Nigeria. C. Augustine and M.N. Nnabuchi. (Keywords: sunshine, maximum temperature, cloudiness index, relative humidity, solar radiation).

http://www.akamaiuniversity.us/PJST10_1_693.pdf

Thermal Conductivity Estimates in the Niger Delta Using Lithological Data and Geophysical Well Logs. Idara O. Akpabio, Ph.D. (Keywords: thermal conductivity, heat flow, sand percentage, temperature).

http://www.akamaiuniversity.us/PJST10_1_701.pdf

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Effects of Process Annealing on Mechanical Properties of Strain-Hardened Copper: A Case of Kabel Metal Nigeria Limited. O.S. Olokode, M.Sc., B.O. Bolaji, Ph.D., and O. Aiyedun, Ph.D. (Keywords: annealing, cold-rolling, copper, deformation, mechanical properties, strain hardening).

http://www.akamaiuniversity.us/PJST9_2_278.pdf

Effect of Coiled Capillary Tube Pitch on Vapor Compression Refrigeration System Performance. M.A. Akintunde, Ph.D. (Keywords: capillary tube, geometry, helical coil, serpentine coil, COP, correlations, refrigeration).

http://www.akamaiuniversity.us/PJST9_2_284.pdf

Logic Indicating Device for Troubleshooting for Non-Pulsed Output Signals of Integrated Circuits (ICs). J.C. Osuwa, C.I. Oriaku, and E.O. Abgoma. (Keywords: logic indicating device, complementary metal-oxide semiconductor, CMOS, transistor-transistor logic, TTL, integrated circuits, non-pulsed signals, troubleshooting, electronics).

http://www.akamaiuniversity.us/PJST9_2_294.pdf

State-Space Averaged Modeling of a Nonideal Boost Converter. C.A. Nwosu, M.Eng. (Keywords: switching converters, performance, boost converters, line-to-output, control-to-output, EMI).

http://www.akamaiuniversity.us/PJST9_2_302.pdf

A High Performance DC-DC Converter with Battery Charging Circuit. N. Rajarajeswari, M.E. and K. Thanushkodi, Ph.D. (Keywords: DC-DC converter, fuzzy logic controller, AFLC, bi-directional power flow, battery, MATLAB).

http://www.akamaiuniversity.us/PJST9_2_309.pdf

Artificial Neural Network Modeling of Heat Transfer in a Staggered Cross-flow Tube-type Heat Exchanger. D.A. Fadare, Ph.D. and A.S. Fatona, M.Sc. (Keywords: artificial neural network, ANN, heat transfer, staggered, cross-flow, heat exchanger).

http://www.akamaiuniversity.us/PJST9_2_317.pdf

Auxiliary Winding Switching Circuit for Single-Phase Induction Motors. I.A. Odigwe, MNSE, MIEEE, MIET; A.U. Adoghe, MNSE, MIEEE, MIET; A.A. Awelewa, MNSE, MIEEE; and I.A. Samuel, MNSE, R-Engr. (Keywords: centrifugal switch, auxiliary winding, electronic switch, induction motor, synchronous speed, starting capacitor).

http://www.akamaiuniversity.us/PJST9_2_324.pdf

Mitigation of Stability Problem in a Boost Converter having an Input Filter. C.A. Nwosu, M.Eng. and G.C. Asomba, Ph.D. (Keywords: input filter, stability, damping, phase margin).

http://www.akamaiuniversity.us/PJST9_2_328.pdf

Analysis and Validation of Power Conversion Efficiency in PV System. G.C. Asomba, Ph.D. and C.A. Nwosu, M.Eng. (Keywords: photovoltaic, PV, inverters, losses, efficiency).

http://www.akamaiuniversity.us/PJST9_2_337.pdf

Remote Monitor and Controller System for Power Generators. A.U. Adoghe, MNSE, MIEEE and I.A. Odigwe, MNSE, MIEEE, MIET. (Keywords: controller, generator, remote, monitor, automatic, power systems).

http://www.akamaiuniversity.us/PJST9_2_344.pdf

Motion of Particles of Non-Zero Rest Masses Exterior to a Spherical Mass Distribution with a Time Dependent Potential Field. Chifu E. Ndikilar, M.Sc., Adam Usman, Ph.D., and Osita C. Meludu, Ph.D. (Keywords: equations of motion, general relativity, time-dependent potential field, Schwarzschild's solution).

http://www.akamaiuniversity.us/PJST9_2_351.pdf

On the Theory and Application of Adomian Decomposition Method for Numerical Solution of Second-Order Ordinary Differential Equations. E.A. Ibijola, Ph.D. and B.J. Adegboyegun, M.Sc. (Keywords: Adomian decomposition method, approximate solution, convergence, second order differential equations).
http://www.akamaiuniversity.us/PJST9_2_357.pdf

Lower Memory Utilization for Digital Data Acquisition and Transmission Systems. M.C. Cheng, B.Eng. and Z. Abdul Halim, M.Sc. (Keywords: digital sampling, data acquisition, memory, universal remote, logic analyzer, compression, sampling rate, digital data storage).
http://www.akamaiuniversity.us/PJST9_2_363.pdf

Development of a Computer-Controlled Security Gate System. O.T. Arulogun, O.M. Olaniyi, and A.A. Ipadeola. (Keywords: security, centronic port, PC, sensors, electromechanical systems, surveillance system).
http://www.akamaiuniversity.us/PJST9_2_371.pdf

Development of Security System using Facial Recognition. O.T. Arulogun, E.O. Omidiora, O.M. Olaniyi, and A.A. Ipadeola. (Keywords: security, centronic port, PC, personal computer, interface, electromechanical systems, surveillance system).
http://www.akamaiuniversity.us/PJST9_2_377.pdf

Framework for Client-Server Distributed Database System for Licensing and Registration of Automobiles in Nigeria. Olabode Olatubosun, Ph.D. and Solanke Olakunle, M.Tech. (Keywords: distributed database system, licensing, automobile, fragmentation, replication, registration).
http://www.akamaiuniversity.us/PJST9_2_386.pdf

Framework for Client-Server Distributed Database System for Population Census. Olabode Olatubosun, Ph.D. and O.C. Akinyokun. (Keywords: distributed database system, population census, fragmentation, replication, vital registration).
http://www.akamaiuniversity.us/PJST9_2_395.pdf

Developed Personal Record Software. R.E. Okonigene, Ph.D., Mnse, R.Engr., FRHD, G.I. Ighalo, Ph.D., MNSE, R.Engr., and E. Ogbeifun. (Keywords: p record software, MS Visual Basic 6.0®, computation of GPA, computer hardware, computer software).
http://www.akamaiuniversity.us/PJST9_2_407.pdf

Manpower Planning Using Decision Analysis: Case of Crown Company. F.A. Oyawale, Ph.D. and O.A. Adegboyega, M.Sc. (Keywords: decision analysis, manpower planning work sampling, uncertainty).
http://www.akamaiuniversity.us/PJST9_2_413.pdf

Estimation of Air Traffic Accident Cost in Nigeria. K.A. Adebisi, Ph.D. (Keywords: cost model, economic impact, airline accidents, Nigerian air travel, probability).

http://www.akamaiuniversity.us/PJST9_2_420.pdf

An Integer Linear Programming Model of a University Course Timetabling Problem. V.O. Oladokun, Ph.D. and S.O. Badmus, B.Sc. (Keywords: course timetabling, integer linear programming, ILP, heuristic).

http://www.akamaiuniversity.us/PJST9_2_426.pdf

Optimal Policy for Material Requirements Planning and Procurements. K.J. Basse, M.Sc. (Keywords: material requirements planning, MRPP, MRP, procurements, probability, cost control, inventory).

http://www.akamaiuniversity.us/PJST9_2_432.pdf

Performance Evaluation of GSM Mobile System in Nigeria. A.S. Adegoke, M.Sc., MNSE, I.T. Babalola, MNSE, and W.A. Balogun, MIEEE. (Keywords: network accessibility, call drop, efficiency, congestion).

http://www.akamaiuniversity.us/PJST9_2_436.pdf

Prospect of Wind Energy in the Coastal Belt of Bangladesh. A.N.M. Mominul Islam Mukut, M.Sc., Md. Quamrul Islam, Ph.D., and Muhammad Mahbubul Alam, Ph.D. (Keywords: Bangladesh, Coastal region, Wind energy, Wind data, Velocity duration).

http://www.akamaiuniversity.us/PJST9_2_442.pdf

Community-Based Independent Power Plant: A Case for Renewable Energy Resources. C.A. Nwosu, M.Eng., G.C. Asomba, Ph.D., and C.U. Ogbuka, B.Eng. (Keywords: wind power, hydroelectricity, hydro power, small scale, renewable energy, pump storage).

http://www.akamaiuniversity.us/PJST9_2_452.pdf

Analysis of Thin Chalcogenide PbS Films Prepared from Chemical Bath.

C.I. Oriaku and J.C. Osuwa. (Keywords: thin films, chalcogenide films, chemical bath deposition, CBD, photothermal materials).

http://www.akamaiuniversity.us/PJST9_2_461.pdf

Reaction Study and Phase Formation in Bi₂O₃-ZnO-Nb₂O₅ Ternary System. K.B. Tan, Ph.D., C.K. Lee, Ph.D., Z. Zainal, Ph.D., C.C. Khaw, Ph.D., Y.P. Tan, Ph.D., and H. Shaari, Ph.D. (Keywords: diagram, pyrochlores, monoclinic zirconolite, subsolidus).

http://www.akamaiuniversity.us/PJST9_2_468.pdf

Voltammetric Studies of Cadmium Ion at the Mercury Electrode in the Presence of Glutathione. W.T. Tan, Ph.D., M. Zidan, M.Sc., Z. Zainal, Ph.D., and K. Anuar, Ph.D. (Keywords: voltammetric behaviors, Cd(II), GSH, glutathione, OSWV).

http://www.akamaiuniversity.us/PJST9_2_480.pdf

Characterization and Evaluation of the Refractory Properties of Nsu Clay Deposit in Imo State Nigeria. B.C. Chukwudi, M.Eng. (Keywords: kaolinite, fireclay, alumina, refractory material, plasticity index).

http://www.akamaiuniversity.us/PJST9_2_487.pdf

Flocculation of Kaolinite Clay using Natural Polymer. B.C. Chukwudi, M.Eng. and Remy Uche, Ph.D. (Keywords: causticised cassava starch, kaolinite, settling rate, floc size, bed height).

http://www.akamaiuniversity.us/PJST9_2_495.pdf

An F-K Procedure of Eliminating Guided Wave Energy from Shallow Marine Seismic Data. D.O. Ogagarue, Ph.D. (Keywords: seismic records, seismology, guided waves, noise, water layer).

http://www.akamaiuniversity.us/PJST9_2_502.pdf

Interpretation of Electromagnetic and Geoelectric Sounding Data for Groundwater Resources around Obanla-Obakekere, near Akure, Southwestern Nigeria. G.O. Omosuyi, Ph.D., A.O. Adegoke, M.Tech., and A.O. Adelusi, Ph.D. (Keywords: electromagnetic profiling, depth sounding, geoelectric layers, lithologic layers, aquifer units, hydrogeologic framework).

http://www.akamaiuniversity.us/PJST9_2_509.pdf

Structural Evolution, Magmatism, and Effects of Hydrocarbon Maturation in Lower Benue Trough, Nigeria: A Case Study of Lokpaukwu, Uturu, and Ishiagu. E.E. Etuk, M.Sc., N. Ukpabi, M.Sc., V.U. Ukaegbu, Ph.D., and I.O. Akpabio, Ph.D. (Keywords: petroleum, petroliferous formations, geology, intrusions, mudrock structures).

http://www.akamaiuniversity.us/PJST9_2_526.pdf

Scale Selection for Hydraulic Model of the Lagos Costal Zone. S.O. Oyegoke and S.A. Ayankogbe. (Keywords: hydraulic models, scale laws, moveable bed materials).

http://www.akamaiuniversity.us/PJST9_2_533.pdf

Geophysical Seismic Refraction and Uphole Survey Analysis of Weathered Layer Characteristics in the “Mono” Field, North Western Niger Delta, Nigeria. P.A. Enikanselu, Ph.D. (Keywords: seismic refraction, uphole, time-intercept, weathered layer and reverse-shooting).

http://www.akamaiuniversity.us/PJST9_2_537.pdf

Seismic Activity in Nigeria. Edward O. Osagie, Ph.D. (Keywords: earthquake, tremors, geological history, seismic activity).

http://www.akamaiuniversity.us/PJST9_2_546.pdf

SP Anomalies Around Abakaliki Anticlinorium of Southeastern Nigeria.

G.U. Chukwu, A.S. Ekine, and J.O. Ebeniro. (Keywords: self-potential, pyrrhotite, mineralization, ore body, pyrite).

http://www.akamaiuniversity.us/PJST9_2_552.pdf

Localized Vp-Vs Relationships for the Niger Delta Sediments. D.O.

Ogagarue, Ph.D. (Keywords: compressional and shear velocity, Castagna's mud-rock line, hydrocarbon exploration).

http://www.akamaiuniversity.us/PJST9_2_558.pdf

Goelectric Sounding to Delineate Shallow Aquifers in the Coastal Plain Sands of Okitipupa Area, Southwestern Nigeria. G.O. Omosuyi, J.S. Ojo, and

M.O. Olorunfemi. (Keywords: goelectric sounding, aquifer units, coastal plain sands, aquifer vulnerability).

http://www.akamaiuniversity.us/PJST9_2_562.pdf

Physico-Chemical Assessment of Ijapo Clay Deposit as Binder for Moulding in Foundry. M.A. Akintunde, Ph.D. and S.O. Omole, OND, HND.

(Keywords: greensand, clay, mechanical tests, bentonite, Ijapo Clay, composition).

http://www.akamaiuniversity.us/PJST9_2_578.pdf

Empirical Models for the Correlation of Global Solar Radiation with Meteorological Data for Iseyin, Nigeria. E.O. Falayi, Ph.D., J.O. Adepitan,

Ph.D., and A.B. Rabi, Ph.D. (Keywords: solar global solar radiation, relative humidity, temperature, relative sunshine duration).

http://www.akamaiuniversity.us/PJST9_2_583.pdf

Water Quality Assessment of Boreholes in Umuahia South Local Government Area of Abia State, Nigeria. G.U. Chukwu, M.Sc. (Keywords:

water quality guidelines, borehole, groundwater, potable water, hardness, correlation).

http://www.akamaiuniversity.us/PJST9_2_592.pdf

Poverty-Driven Causes and Effects of Environmental Degradation in Nigeria. G.U. Chukwu, M.Sc. (Keywords: environmental pollution, poverty,

ozone-layer, toxicity, CFC).

http://www.akamaiuniversity.us/PJST9_2_599.pdf

Policy Approaches to the Recycling and Disposal of Electronic Waste.

Jonathan Wolfington, M.S. and Anthony R. Maranto, Ph.D. (Keywords: electronic components, e-waste, computer disposal, public policy, toxic waste, recycling).

http://www.akamaiuniversity.us/PJST9_2_603.pdf

Kinetics, Equilibrium, and Thermodynamics Studies of the Biosorption of Lead(II) and Chromium(III) by *Basella alba* L.

J.O. Babalola, Ph.D., N.A.A. Babarinde, Ph.D., V.O. Oninla, M.Sc., and O.A. Popoola, M.Sc. (Keywords: biosorption, lead, chromium, kinetics, thermodynamics, *Basella alba* Linn.)

http://www.akamaiuniversity.us/PJST9_2_610.pdf

Kinetic, Equilibrium, and Thermodynamic Studies of the Biosorption of Pb(II) from solution by *Calymperes erosum*.

N.A. Adesola Babarinde, Ph.D., J. Oyebamiji Babalola, Ph.D., and Oluwatosin A. Onafalujo, B.Sc. (Keywords: *Calymperes erosum*, lead(II), biosorption, equilibrium, thermodynamics).

http://www.akamaiuniversity.us/PJST9_2_621.pdf

Modeling of Thermal Properties of Food Components.

M.A. Akintunde, Ph.D. (Keywords: refrigeration, thermal conductivity, thermal diffusivity, density, specific heat)

http://www.akamaiuniversity.us/PJST9_2_629.pdf

Analysis of Moisture Transport in the Solar Drying of Food Items.

B.O. Bolaji, Ph.D. (Keywords: food items, liquid concentration, moisture transport, solar dryer, food preservation).

http://www.akamaiuniversity.us/PJST9_2_640.pdf

Evaluating the Relationship Between Running Times and DNA Sequence Sizes using a Generic-Based Filtering Program.

O.O. Oluwagbemi, M.Sc. and A.C. Omonhinmin, M.Sc. (Keywords: generic programming, DNA sequences, trend analysis, computer science, bioinformatics).

http://www.akamaiuniversity.us/PJST9_2_647.pdf

Population Structure, Age Gradations, and Regeneration Status of *Pterocarpus dalbergioides* Roxb., An Endemic Species of Andaman Islands, India

P. Rama Chandra Prasad, Ph.D., C. Sudhakar Reddy, Ph.D., S.H. Raza, Ph.D., and C.B.S. Dutt, Ph.D. (Keywords: spatial distribution, padauk, species diversity, age gradations, conservation, extinction).

http://www.akamaiuniversity.us/PJST9_2_658.pdf

Effects of X-Rays on the Physico-Chemical Properties of Soybean Oil.

E.H. Agba, Ph.D. and E.J. Ibanga, Ph.D. (Keywords: irradiation, food, density, refractive index, pH, iodine, viscosity, free fatty acid, biodiesel).

http://www.akamaiuniversity.us/PJST9_2_665.pdf

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Mitigation of Effects of the Atmosphere on Radio Wave Propagation. A.S.

Adegoke, M.Sc., MNSE. (Keywords: telecommunications, radio waves, atmospheric factors, absorption, signal attenuation)

http://www.akamaiuniversity.us/PJST9_1_5.pdf

Effects of Propagation Delay on Signal Transmission. A.S. Adegoke, M.Sc.

and M.A. Onasanya, M.Sc. (Keywords: tropospheric delay, troposphere, ionospheric delay, ionosphere, refractive index, propagation speed)

http://www.akamaiuniversity.us/PJST9_1_13.pdf

Energy-Time and Space-Time. Linus O'Sullivan, BBA. (Keywords:

electromagnetic field, photons, gravity, gravitational force, theoretical physics)

http://www.akamaiuniversity.us/PJST9_1_20.pdf

Method of Independent Determination of Cutting Forces on the Rake and Clearance Faces of a Lathe Cutting Tool. O.O. Awopetu, Ph.D. and M.A.

Akintunde, Ph.D. (Keywords: cutting force, extrapolation, thickness of cut, wear plane, ferrite-pearlitic, austenite, straight carbides, tungsten-titanium carbides, tungsten-titanium-tantalum carbides)

http://www.akamaiuniversity.us/PJST9_1_24.pdf

Periodic Solutions for a Non-Linear Boundary Value Problem (BVP) of a Fourth Order Differential Equation. Hilary Mbadiwe Ogbu, M.Sc. (Keywords:

boundary value problems (BVP), a priori bounds, compact and equicontinuity, integrated and so-called energy equation)

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The Sequence Dependent Machine Set-Up Problem: A Brief Overview. V.O.

Oladokun, Ph.D. and O.E. Charles-Owaba, Ph.D. (Keywords: MSP, machine set up problem, traveling salesman problem, combinatorial optimization, engineering principals)

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Design of a Neural Network Based Optical Character Recognition System

for Musical Notes. A.E. Akinwonmi, M.Tech., O.S. Adewale, Ph.D., B.K. Alese, Ph.D., and O.S. Adetunmbi, M.Tech. (Keywords: optical, character, musical notes, neural networks, OCR, MIDI)

http://www.akamaiuniversity.us/PJST9_1_45.pdf

Overview of 3G and WiMAX Technology. Nitin S. Choubey, Ph.D. and Madan

U. Kharat, Ph.D. (Keywords: telecommunications, wireless, information technology, telephony, mobile services)

http://www.akamaiuniversity.us/PJST9_1_59.pdf

Computer-Based Instrumentation: A Boost for Industrialization. A.E.A. Kareem, M.Sc., T.R. Bamigbade, B.Sc., and I.A. Lateef, B.Tech., PGD. (Keywords: instrumentation, PC, sensors, industrialization, non-compatible signal, digital computer, compatible)
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Predicting Students' Academic Performance using Artificial Neural Network: A Case Study of an Engineering Course. V.O. Oladokun, Ph.D., A.T. Adebajo, B.Sc., and O.E. Charles-Owaba, Ph.D. (Keywords: university admissions, student performance, Artificial Neural Networks, ANN, tertiary education, predictive models)
http://www.akamaiuniversity.us/PJST9_1_72.pdf

Converting Traditional Classroom into Virtual Classroom. Hamed Ademayowa Idowu, M.Eng, Dip. IBM, CCNA, CCNP. (Keywords: information and communication technology, education environments, virtual classroom infrastructure, universities, higher education)
http://www.akamaiuniversity.us/PJST9_1_80.pdf

A Survey on the Use of Computers and Internet in Conducting Research and Training in a Developing Country. K.O. Lawal, M.Sc., A.A. Adegbemile, M.Sc., J.O. Aribisala, Ph.D., and S.A. Oke, M.Sc. (Keywords: engineering curriculum, computers, internet, university teaching, education)
http://www.akamaiuniversity.us/PJST9_1_83.pdf

The Roles of ICT in Information Processing and National Development in Nigeria. A.E.A. Kareem, M.Sc., O.O. Olaewe, Ph.D. , and O.A. Odeniyi, M.Sc. (Keywords: ICT, information communication technology, GSM, global system for mobile telecommunications, computers, national development, government policy)
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Combined-Cycle Plant Simulation Toolbox for Power Plant Simulator. A. Salehi, M.Eng.Sc.1, A.R. Seifi, Ph.D. 2*, and A.A. Safavi, Ph.D. (Keywords: gas power plant, combined-cycle power plant, modeling and simulation, MATLAB®, SIMULINK®)
http://www.akamaiuniversity.us/PJST9_1_97.pdf

A Statistical Analysis of Wind Energy Potential in Ibadan, Nigeria, Based on Weibull Distribution Function. D.A. Fadare, Ph.D. (Keywords: Ibadan, wind speed, renewable energy, Weibull distribution function, statistical modeling)
http://www.akamaiuniversity.us/PJST9_1_110.pdf

Evaluation of Corrosion Cost in Some Selected Fruit Juice-Processing Industries in South-West Nigeria. C.C. Enveremadu, Ph.D., A.A. Adekunle, B.Tech., and A. Adeala, M.Sc. (Keywords: manufacturing, maintenance, life cycle costing, management studies, corrosion management)
http://www.akamaiuniversity.us/PJST9_1_120.pdf

MATLAB Simulation for Continuous Stirred Tank Reactor. V. Balaji, Research Scholar, N. Vasudevan, Ph.D., and E. Maheswari, M.E. (Keywords: adaptive control, simulation, modeling, CSTR, continuous stirred tank reactor, MATLAB®)
http://www.akamaiuniversity.us/PJST9_1_127.pdf

An Optimized Design of Solar Burner Through Thermal and Structural Analysis of Plate and Coil of Burner using ANSYS. Syed Asfandyar, M.S., Muhammad Rafique, Ph.D., and M. Javed Hyder, Ph.D. (Keywords: ANSYS®, optimized design, solar burner, structural analysis, Von Mises stresses)
http://www.akamaiuniversity.us/PJST9_1_132.pdf

Simulation of D.C. Machines Transient Behaviors: Teaching and Research. O.I. Okoro, Ph.D., C.U. Ogbuka, B.Eng., and M.U. Agu, Ph.D. (Keywords: D.C. machines, direct current, transient, stability, SIMULINK, modeling)
http://www.akamaiuniversity.us/PJST9_1_142.pdf

Solving Electrical Circuits Transient Problems with MATLAB® and SIMPLORER®. C.U. Ogbuka, B.Eng., O.I. Okoro, Ph.D., and M.U. Agu, Ph.D. (Keywords: A.C., alternating current, MATLAB®, SIMPLORER®, transient, circuit, modeling)
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Theoretical Analysis of a Relationship between Master/Wheel Cylinder Diameter Ratio and Brake Efficiency. I.A. Lateef, B.Tech., B.A. Hassan, M.Ed., and A.E.A. Kareem, M.Sc. (Keywords: master cylinder diameter, wheel cylinder diameter, brake efficiency, force on control pedal, force on actuating mechanism, radii on pedal)
http://www.akamaiuniversity.us/PJST9_1_155.pdf

The Zener-Hollomon Parameter Characteristics in Hot Rolling of AISI 316 using the Reverse Sandwich Model. O.J. Alamu, Ph.D., S.O. Giwa, M.Sc., M.A. Sulaiman, M.Sc., C.C. Enweremadu, Ph.D., and I.A. Lateef, B.Tech. (Keywords: stainless steel production, reverse sandwich, RSM, hot rolling, deformation, strain rate)
http://www.akamaiuniversity.us/PJST9_1_163.pdf

Investigation of the Grain Structure of the Fusion Zone of Single Pass Arc Welding of Structural Steel (NST 34 L-C). F.A. Oyawale, Ph.D. and K.O. Sanusi, M.Sc. (Keywords: structural steel, fusion welding, solidification, temperature gradient)

http://www.akamaiuniversity.us/PJST9_1_173.pdf

Scheduling to Minimize Total Completion Time of Jobs in a Printing Firm. E.O. Oyetunji, Ph.D. and A.E. Oluleye, Ph.D.

(Keywords: scheduling, signal machine, total completion time, performance measure, heuristic)

http://www.akamaiuniversity.us/PJST9_1_179.pdf

Analysis of the Rule of Molecular Polarizability in the Study of the Dielectric Behavior of Liquids. E.I. Ugwu, Ph.D. and H.M. Ogbu, M.Sc. (Keywords: polarization, relaxation time, dielectric, susceptibility, dipole moment, field)

http://www.akamaiuniversity.us/PJST9_1_189.pdf

Isotherm and Thermodynamic Studies of the Biosorption of Zinc (II) from Solution by Maize Leaf. N.A. Adesola Babarinde, Ph.D., J. Oyebamiji Babalola, Ph.D., and Adenike A. Adetunji, B.Sc. (Keywords: biosorption, Zn(II), zinc, Freundlich isotherm, Langmuir isotherm, maize leaf)

http://www.akamaiuniversity.us/PJST9_1_196.pdf

Nutritive and Anti-Nutritive Composition of the Wild (Inedible) Species of *Dioscorea bulbifera* (Potato Yam) and *Dioscorea dumentorum* (Bitter Yam). M.N. Ogbuagu, M.Sc. (Keywords: wild yams, wild foods, nutrients, anti-nutrients, *Dioscorea bulbifera*, *Dioscorea dumentorum*)

http://www.akamaiuniversity.us/PJST9_1_203.pdf

Assessment of Radioactivity Content of Quarry Dust in Abakaliki, Nigeria. E.I. Ugwu, Ph.D., K.O. Agwu, and H.M. Ogbu, M.Sc. (Keywords: radionuclides, naturally occurring, uranium, radium, thorium, potassium, gamma spectrometry, alpha / beta spectrometry)

http://www.akamaiuniversity.us/PJST9_1_208.pdf

Settling Behavior of Kaolinite Clay in the Absence of Flocculant. Benneth C. Chukwudi, M.Eng. (Keywords: kaolinite, settling behavior, solid loading, edge-face association, face-face association)

http://www.akamaiuniversity.us/PJST9_1_212.pdf

Geoelectric Investigation for Groundwater Development of Southern Part of Nigeria. Idara Akpabio, Ph.D. and Eridiong Ekpo, M.Sc. (Keywords: vertical electrical sounding, groundwater, aquifers, subsurface, Schlumberger array, VES)

http://www.akamaiuniversity.us/PJST9_1_219.pdf

Sequence Stratigraphic Framework of the “Paradise-Field” Niger Delta, Nigeria. A.O. Anyiam, M.Sc. and A.W. Mode, Ph.D. (Keywords: geological exploration, biostratigraphic, petroleum, Niger River, depocenters)

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Toxic Trace Element Pollution in Storm Water of Karachi: A Graphical Approach. A. Zubair, Ph.D., M.A. Farooq, M.Sc., and H.N Abbasi, M.Sc. (Keywords: ground water, storm water, runoff, non-point pollution, heavy metals, cadmium, copper, dissolved solids, lead, arsenic, iron, zinc)

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Detection and Monitoring of Dumpsite-Induced Groundwater Contamination using Electrical Resistivity Method. P.A. Enikanselu, Ph.D. (Keywords: dumpsite, saturated zone, plume, geoelectric section, vertical electric sounding, VES, groundwater, contamination)

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Occupational Lead Exposure in Printing Presses: An Analytical Approach. S.A. Oke, M.Sc., T.E. Phillips, A. Kolawole, M.Sc., C.E. Ofiabulu, M.Sc., and D.A. Adeyeye, M.Sc. (Keywords: printing press, small enterprises, daily intake, elimination rate, blood lead, lead, Pb, poisoning, occupational health, Nigeria)

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Immunophenotypic Study of Leukaemia Cases. Mansoor Quli Khan, MD, Ph.D., Soad Ali, MBBS, M.Sc., Vijay P. Gupta, DFM, Ph.D., and Arif Shah, Ph.D., D.Sc. (Keywords: clinical research, Leukaemia, Leukemia, cancer, morphological differences)

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Investigation of Groundwater Prospect Using Electromagnetic and Geoelectric Sounding at Afunbiowo, near Akure, Southwestern Nigeria. G.O. Omosuyi, A. Adeyemo, and A.O. Adegoke. (Keywords: electromagnetic profiling, vertical electrical sounding, VES, fissured zones, aquifers, hydrogeological framework)

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Relationship Between Drainage Basin Area and Stream Length for River Gongola, Nigeria. S.O. Oyegoke and Chifumnanya Ifeadi. (Keywords: topographic maps, Strahler Stream Order, stream length, drainage basin, divides, basin area)

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Analysis and Characterization of Clay Soil in Abakaliki, Nigeria

E.S. Nweke, M.Sc. and E.I. Ugwu, Ph.D. (Keywords: particle size, sediment, density, porosity, soil, ion exchange, building material, sintering, ceramics, bricks)

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Reservoir Characterization: Implications From Petrophysical Data of the “Paradise-Field”, Niger Delta, Nigeria. A.W. Mode, Ph.D. and A.O. Anyiam, M.Sc. (Keywords: petroleum exploration, geology, petrophysical analysis, hydrocarbons)

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Frequency Distribution Analysis of Available Wind Resources in Umudike, Abia State, Nigeria, for Wind Energy Conversion System Design. C.I.

Oriaku, B.Sc., J.C. Osuwa, Ph.D., A.D. Asiegbu, Ph.D., G.U. Chukwu, M.Sc. and C.O. Kanu, B.Sc. (Keywords: Umudike, frequency distribution, wind speed, wind power, wind energy conversion, WECS)

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Studies on the Gieseler Plastometry Parameters of the American Pittson Coal for Metallurgical Cokemaking at the Ajaokuta Steel Plant, Nigeria.

A.O. Adeleke, M.Sc., R.S. Makan, HND, PG, and S.A. Ibitoye, Ph.D. (Keywords: coal, coking, fluidity, cokemaking, coke)

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Development and Evaluation of Palm Kernel Oil Biodiesel Fuel. O.J. Alamu, Ph.D. (Keywords: energy, environment, ethanol, palm kernel oil, biodiesel, renewable fuel)

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Design of an Anaerobic Waste Digester. S.J. Ojolo, Ph.D. and S.A. Oke, M.Sc. (Keywords: biogas, digester, anaerobic, energy, biofuel, alternative fuel, methane)

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Design and Construction of an Autoclave. F.A. Oyawale, Ph.D. and A.E. Olaoye, M.Sc. (Keywords: autoclave, pathogenic organisms, design, engineering, sterilization, health applications, cost effective)

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Neural Network Based Analysis of Induction Motors with Saturable Inductances. M.H. Shafiei, M.S., A.R. Seifi, Ph.D., and P. Karimaghaee, Ph.D. (Keywords: induction machine, saturation modeling, neural networks, electrical engineering, induction motor)

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The Effects of Friction Factors on Capillary Tube Length. M.A. Akintunde, Ph.D. (Keywords: capillary, refrigeration, friction factor, tube length, mathematical model, thermodynamic properties, pressure drop)
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Wave Propagation in Non-Homogenous Thin Films of Slowly Varying Refractive Index: W.K.B. Solution Model. E.I. Ugwu, Ph.D.* and A. Agbo, M.Sc. (Keywords: non-homogenous, refractive index, approximation, reflection co-efficient, amplitude, propagation, WKB, Wentzel Kramers Brillouion, transverse electric, transverse magnetic)
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Cyclic Voltammetry Study of Copper Tin Sulfide Compounds. K. Anuar, Ph.D., W.T. Tan, Ph.D., M.S. Atan, M.Sc., K. Dzulkefly, Ph.D., S.M. Ho, M.Sc., H. Md Jelas, Ph.D. and N. Saravanan, Ph.D. (Keywords: copper tin sulfide, cyclic voltammetry, metal chalcogenide, thin films)
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Heat Flow Estimates in the Western Niger Delta Basin, Nigeria. D.O. Ogagarue, Ph.D. (Keywords: geophysical data, petroleum exploration, hydrodynamics, tectonics, hydrocarbon reserves)
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Influence of Particle Size and Firing Temperature on Burnt Properties of Rice/Clay Mix. E.J. Ibanga, Ph.D. and A.D. Ahmed, Ph.D. (Keywords: burnt bricks, rice husk, compressive strength, water adsorption)
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Fuzzy Logic Control of Food Frying Process: A Conception of Frying Process Control. P.B. Osofisan, Ph.D.* and M.O. Falodun, B.Sc.(Eng.). (Keywords: frying of food, frying oil, process control, fuzzy logic, measured and manipulated variable)
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Fuzzy Logic Control of Food Frying Process: An Optimization of Traveling Speed of the Conveyor Belts. P.B. Osofisan, Ph.D.* and M.O. Falodun, B.Sc.(Eng.). (Keywords: conveyors, Petri nets, fuzzy logic, tracking, optimization and servomotor control)
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Fuzzy Logic Control of Food Frying Process: Efficiency and Energy Optimization of Food Frying Process. P.B. Osofisan, Ph.D.* and M.O. Falodun, B.Sc.(Eng.) (Keywords: fuzzy logic, optimization, conveyor speeds, adjustable speed drives, ASD, variable structure systems, VSS)
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Fuzzy Logic Control of Food Frying Process: Motor Speed Control of Food Frying Process . P.B. Osofisan, Ph.D.* and M.O. Falodun, B.Sc.(Eng.). (Keywords: fuzzy logic, brushless DC motor, servomotor control, fuzzy reasoning system, high efficiency control)
http://www.akamaiuniversity.us/PJST8_2_304.pdf

Fuzzy Logic Control of Food Frying Process: Optimization of DC Winding Currents of Food Frying Process Control. P.B. Osofisan, Ph.D.* and M.O. Falodun, B.Sc.(Eng.). (Keywords: fuzzy logic, field orientation control, FOC, servomotor controls, DC winding currents, brush and brushless motor)
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Application of Time Study Model in an Oil Palm Processing Company: A Case Study. A.O. Odior. (Keywords: edible palm oil, bunch reception, fruits, digestion, pulp pressing, production stages, food processing)
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Development and Application of an Inflation-Based Productivity Model. S.A. Oke, M.Sc., I.O. Oyedokun, O.G. Akanbi, Ph.D., and F.A. Oyawale, Ph.D. (Keywords: inflation, productivity, incentive, modeling, production, gain sharing)
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Modeling the Total Surface Area and Volume of Potholes on a Length of Road. S.A. Oke, M.Sc. and O. Ajayi. (Keywords: area, volume, total area, surface of a 3-D object, three dimensional geometry, road engineering, maintenance, repair)
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Factor Analytic Approach to Computer Network/Information Security Awareness in South-Western Nigeria. B.K. Alese, Ph.D., O.J. Olojo, M.Tech., O.S. Adewale, Ph.D., A.A. Adetunmbi, Ph.D., and S.O. Falaki, M.Ed. (Keywords: information systems, computer security, network security, network usage)
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Web-Based Neural Network Model for University Undergraduate Admission Selection and Placement. O.S. Adewale, Ph.D., A.B. Adebisi, M.Tech. and O.O. Solanke, M.Tech. (Keywords: automated selection, matriculation, entrance examination, University Matriculation Examination, UME, JAMB, higher education)
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Embedding Information and Communications Technologies (ICT) in Nigeria Local Government System. O. Olabode and A. Akingbesote. (Keywords: local government, e-government, ICT, technical model, internet)
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Evolution of the Fourth Generation Mobile Networks: Trends and Tendencies. O. Shoewu, M.Sc. (Keywords: mobile networks, digital technology, data transmission, modulation, and frequency bands)

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Power Line Communication Technology. L.I. Oborkhale, M.Eng. and O. Shoewu, M.Sc. (Keywords: power line, communication, technology, frequency, telecommunications, transmission)

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Characterizations and Performance of a Solid-State Inverter and its Applications in Photovoltaics. B.A. Ezekoye, Ph.D. and V.N. Ugha, M.Sc. (Keywords: photovoltaic, solar, direct current, alternating current, electronics)

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Design and Prototype Development of a Mini-Electric Arc Furnace. F.A. Oyawale, Ph.D. and D.O. Olawale, M.Sc. (Keywords: electric arc furnace, melting rate, electrode consumption rate, transformer efficiency)

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A Survey of Automobile Drives in a Developing Country. Ademola Dare, Ph.D., S.A. Oke, M.Sc., and Nurudeen Lawal, B.Sc. (Keywords: automobile, car, light vehicles, wheel drives, developing countries, survey, transportation)

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Phosphate Recovery from Municipal Wastewater through Crystallization of Calcium Phosphate. A. Alamdari, Ph.D. and S. Rohani, M.Sc. (Keywords: crystallization, phosphate removal, recovery, wastewater treatment, $\text{Ca}_3(\text{PO}_4)_2$)

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Hydrogeochemical Analysis of Water Samples in Nando and Environs of the Anambra Basin of South Eastern Nigeria. M.E. Egbunike, Ph.D. (Keywords: hydrogeology, lithostratigraphic formations, shale, clay, aquifers, groundwater)

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First Dual-Sensor Ocean Bottom Cable 3D Seismic Acquisition South Atlantic Ocean, Offshore Niger Delta, Nigeria. C.C. Ugbor, M.Sc. (Keywords: seismic acquisition, ocean bottom cable, OBC, multi-sensor, subsurface formations, petroleum exploration)

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Comparative Study of the Offset-Geophone and Down-deep Hydrophone Seismic Refraction Survey with Application to the Niger Delta Basin, Nigeria. D.O. Ogagarue, Ph.D. (Keywords: seismic refraction, geological data, uphole survey, hydrophone, geophone, weathering layer)
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Fuzzy Logic Modeling of the Fluidized Catalytic Cracking Unit of a Petrochemical Refinery. P.B. Osofisan, Ph.D. and O.J. Obafaiye, M.Sc. (Keywords: process engineering, control models, fuzzy logic, hydrocarbon, gasoline production, industrial catalyst)
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Application of Neural Network to Load Forecasting in Nigerian Electrical Power System. G.A. Adepoju, M.Sc., S.O.A. Ogunjuyigbe, M.Sc., and K.O. Alawode, B.Tech. (Keywords: load forecasting, electricity generation, electric power system, neural network)
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Application of Neurofuzzy in the Development of Road Bump Designs. S.A. Oke, M.Sc., A.O. Johnson, B.Sc., T.A.O. Salau, Ph.D., and A.O. Adeyefa, M.Sc. (Keywords: road bump, traffic control, neuro-fuzzy, uncertainties, imprecision, speed bump design, mathematical model)
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Application of Neural Network to Improve Dynamic Branch Prediction of Superscalar Microprocessors. P.B. Osofisan, Ph.D. and O.A. Afunlehin, M.Sc.(Eng.) (Keywords: neural network, branch prediction, superscalar microprocessor, benchmarks)
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Transforming the Conventional Graphic Layouts of Civil Infrastructure into Geospatial Themes for Urban Management. Amjed S. Almas, M.Sc. and C.A. Rahim, Ph.D. (Keywords: thematic information, GIS, urban, geospatial technologies, Remote Sensing (RS), Environment, urban planning)
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The Effects of Solar Radiations on Telecommunications. B.A. Ezekoye, Ph.D. and R.M. Obodo, M.Sc. (Keywords: radio frequencies, ionosphere, solar activity, electron density, communication disturbance)
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The Trends in Broadband Wireless Networks Technologies. Augustine C. Odinma, Ph.D., Lawrence I. Oborkhale, M.Eng., and Muhammadou M.O. Kah, Ph.D. (Keywords: telecommunications, wireless standards, network technologies, mobile networks, wireless)
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Stability and Harmonic Oscillations in a Homogenous Third Order Differential Equation with Numerical Illustrations. Hilary Mbadiwe Ogbu, M.Sc. (Keywords: constant coefficient equation, stability, harmonic oscillation, homogeneous equations, qualitative properties)
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Existence of Periodic Solutions for a Certain Boundary Value Problem of a Nonlinear Forth Order Differential Equation. Hilary Mbadiwe Ogbu, M.Sc. (Keywords: boundary value problems, a priori bounds, compact and equicontinuity, integrated and so called energy equation)
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Job Scheduling in a Small Scale Gari Processing Firm in Nigeria. A.E. Oluleye, Ph.D., E. Oyetunji, Ph.D., Ladi Ogunwolu, Ph.D., and S.A. Oke, M.Sc. (Keywords: Gari, order scheduling, small and medium enterprises, performance measure, Nigeria, fresh roots, CDS heuristics, A1 heuristics)
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Computation of Optogeometric Properties of Thin Films Optical Waveguides using the Newton-Raphson Method. E.J. Ibanga, Ph.D. and E.N. Asagha, M.Sc. (Keywords: waveguide, dielectric, refractive index, thickness, dielectric and polymer thin films)
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Analysis of Chemically Deposited MnS Thin Films. S.N. Agbo, M.Sc. and F.I. Ezema, Ph.D. (Keywords: chemical bath deposition, MnS. manganese sulphide, thin films, optical properties, solar application)
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Optical Characteristics of Chemical Bath Deposited CdS Thin Film Characteristics within UV, Visible, and NIR Radiation. E.I. Ugwu, Ph.D. and D.U. Onah, M.Sc. (Keywords: solution growth, transmittance, dielectric constant, adsorption co-efficient, reflectance, band-gap, refractive index, cadmium sulphide)
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Kawasaki Disease: A Case Report. M.Q. Khan, Ph.D. MD. (Key words: medical case study, scientific communication)
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Optical Properties of Iron Halide (FeCl₂) Thin Film Deposited Using Solution Growth Technique (SGT). E.I. Ugwu, Ph.D. (Key words: dielectric

constant, absorbance, wavelength, transmittance, reflectance, band gap, solution growth)

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Electrochemical Preparation and Characterization of Polypyrrole-Polyethylene Glycol Conducting Polymer Composite Films. A. Kassim, Ph.D., H.N.M. Ekarmul Mahmud, Ph.D., L.M. Yee, M.Sc., and N. Hanipah, B.Sc. (Keywords: conducting polymer, polypyrrole, polyethylene glycol, p-toluene sulfonate.)

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Optical Properties of PbHgS Ternary Thin Films Deposited by Solution Growth Technique. B.A. Ezekoye, Ph.D. and C.E. Okeke, Ph.D. (Key words: ternary thin film, electroless, optical constants, optical bandgap, photovoltaic)

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Influence of Thermal Annealing on the Structural and Optical Properties of Lead Oxide Thin Films Prepared by Chemical Bath Deposition Technique. D.D.O. Eya, Ph.D. (Keywords: lead oxide, thin films, post-deposition annealing, optical properties, structural properties, grain size)

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Existence of Periodic Solutions for a certain Non-Linear Third Order Differential Equation. H.M. Ogbu, Ph.D. (Keywords: fixed point technique, apriori bounds, compact and equicontinuity, integrated and so call energy equation)

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A Necessary and Sufficient Condition for Stability and Harmonic Oscillations in Certain Second Order Differential Equation. H.M. Ogbu, Ph.D. (Keywords: Liapunov functions, stability, oscillation, solution paths, positive definite, positive semi-definite, and quadratic forms)

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A new User Friendly Software for Teaching and Research in Engineering Education . O.I. Okoro, Ph.D., P. Govender, Ph.D., and E. Chikuni, Ph.D. (Keywords: engineering education, MATLAB, simulation, RLC network, mechanical systems)

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Cryptographic Voting Protocol for Campus Elections. O. Shoewu, M.Sc. and A.K. Arolu, B.Sc. (Keywords: voting protocol, campus elections, cryptography, digital signature)

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Radio Frequency Identification Technology: Development, Application, and Security Issues. O. Shoewu, M.Sc. and O. Badejo, B.Sc. (Keywords: RFID, electronic security, wireless, data communication, tags, transponders)

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A Case Study Application of Time Study Model in an Aluminum Company. S.A. Oke, M.Sc. (Keywords: manufacturing, process analysis, efficiency study, time study, management analysis, differential calculus, mathematical modelling)

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Application of Fuzzy Logic Concept to Profitability Quantification in Plastic Recycling. S.A. Oke, M.Sc., A.O. Johnson, B.Sc., I.O. Popoola, B.Sc., O.E. Charles-Owaba, Ph.D., and F.A. Oyawale, Ph.D. (Keywords: manufacturing, process analysis, mathematical modelling, profitability, return on investment, recycling, plastics, polymers, material reclamation)

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Design, Construction, and Performance Evaluation of Plastic Biodigester and Storage of Biogas. V.A. Ezekoye, M.Sc. and C.E. Okeke, Ph.D. (Keywords: renewable energy, agricultural waste, biofuel waste derived fuel, microbial digestion, anaerobic digestion, fermentation)

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Development and Performance Evaluation of Modified Integrated Passive Solar Grain Dryer. B.A. Ezekoye, Ph.D. and O.M. Enebe, M.Sc. (Keywords: solar grain dryer, passive, performance evaluation, relative humidity, ambient temperature, dryer efficiency)

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Positive and Future Prospects of Solar Water Heating in Nigeria. S.N. Agbo, M.Sc. and O.U. Oparaku, Ph.D. (Keywords: renewable energy, energy policy, developing countries, energy technologies)

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Effect of Hot Water Withdrawal Rate on the Mean System Temperature of a Thermosyphon Solar Water Heater. S.N. Agbo, M.Sc. (Keywords: renewable energy, solar water heaters, energy technologies, thermodynamic modelling)

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Comparative Study of Graphical Methods and Velocity Analysis of 2-D Seismic Reflection Data with Application to Niger Delta. D.N. Obiora, Ph.D. (Keywords: geological analysis, Benin formation, Agbada formation, Akata formation, comparative analytical methods, aeromagnetic anomalies, oil field identification, petroleum occurrence)

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Virtual Private Network Security using a Combination of Techniques. S.O. Ajose, Ph.D., I.I. Ezebuio, Ph.D., D.Sc., and A.I.O. Yussuff, M.Sc. (Key words: VPN, virtual private network security)

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Quality of Service Mechanisms and Challenges for IP Networks. A.C. Odinma, Ph.D. and L. Oborkhale, M.Eng. (Key words: quality of service, internet, real time services, voice communication networks, telecommunications, delay sensitive traffic, MPLS, DiffServe, IntServ)

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Quality of Service and Class of Service in Voice Communications Networks. (Paper withdrawn by request of authors)

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Next Generation Networks: Whence, Where, and Whither. A.C. Odinma, Ph.D. (Key words: second generation, 2G, third generation, 3G, fourth generation, 4G, beyond 3G, B3G, communication networks)

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Design of a Microprocessor Based Automatic Gate. O. Shoewu and O.T. Baruwa (Key words: automatic gate, microprocessor, automobile, traffic controllers, software, parking)

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Basic Principles and Functions of Electrical Machines. O.I. Okoro, Ph.D., M.U. Agu, Ph.D., and E. Chinkuni, Ph.D. (Key words: electrical machines, operation design, maintenance, protection, stator)

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Steel Fibers and Steel Fiber Reinforced Concrete in Civil Engineering. J. Katzer, Ph.D. (Key words: tensile strength, construction material, engineering technology).

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Optical Properties and Chemical Bath Deposited CuAlS₂ Thin Films. D.N. Okoli, M.Sc., A.J. Ekpunobi, Ph.D., and C.E. Okeke, Ph.D. (Key words: solar coating, thin film deposition, chemical deposition, optical properties, solid state characteristics, photovoltaic, copper aluminum sulphide).

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Optical Properties and Applications of Cadmium Selenide (CdSe) Thin Films Prepared by Chemical Bath Deposition Technique. D.D.O. Eya, Ph.D. (Key words: cadmium selenide, chemical bath, optical properties, thin films, refractive index).

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Optical and Solid State Characterization of Optimized Manganese Sulphide Thin Films and Their Possible Applications in Solar Energy. M.N. Nnabuchi, Ph.D. (Key words: solar coating, thin film deposition, chemical deposition, optical properties, solid state characteristics, photovoltaic, MnS).

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Preconcentration of Low Grade Sedimentary Phosphate Ore Using Selective Flocculation. R. Parsaei, M.Sc., A. Alamdari, Ph.D., A. Jahanmiri, Ph.D., and M.A. Rajabzadeh Ph.D. (Key words: selective flocculation, mineral processing, industrial minerals, non-metallic ores, phosphate rock).

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Optical Properties of Cuprous Oxide Thin Film Prepared by Chemical Bath Deposition Technique. D.O. Eya, Ph.D., A.J. Ekpunobi, Ph.D., and C.E. Okeke, Ph.D. F.A.S. (Key words: cuprous oxide, Cu₂O, optical properties, thin film, chemical bath deposition, annealing temperature, band gap, PACS Nos: 81.10.Dn, 82.30.Fi, 78.66.-w, 78.20.Ci)

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Bandgap and Optical Properties of Chemical Bath Deposited Magnesium Sulphide (MgS) Thin Films. M.N. Nnabuchi, Ph.D. (Key words: thin film, chemical bath deposition, absorbance, transmittance, reflectance, extinction coefficient, refractive index, absorption coefficient, optical conductivity).

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A Review of Wireless Local Area Network Technologies. S.O. Ajose, Ph.D., I.I. Ezebuoro, Ph.D., D.Sc., and B.O. Oluwo, M.Sc. (Key words: LAN, WLAN, data networks, wireless, data transmission, packet radios).

http://www.akamaiuniversity.us/PJST6_2_111.pdf

A Comparative Review Between Global System for Mobile Communications (GSM) and Code Division Multiple Access (CDMA) Technology. S.O. Ajose, Ph.D., I.I. Ezebuoro, Ph.D., D.Sc., and N.O. Ottun, M.Sc. (Key words: wireless, telecommunications, coverage, clarity, compatibility, security).

http://www.akamaiuniversity.us/PJST6_2_116.pdf

Design and Implementation of a Computerized Frequency Coordination System. S.O. Ajose, Ph.D., I.I. Ezebuio, Ph.D., D.Sc., and E.U. Udo, M.Sc. (Key words: FM broadcasting, mobile communications, wireless, telecommunications testing, RF, frequency coordination).

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A Rule-Based Approach to Voltage Collapse Estimation: A Case Study of the National Electric Power Authority (NEPA) PLC, Egbin Thermal Station. S.O. Ajose, Ph.D., I.I. Ezebuio, Ph.D., D.Sc., and A.S. Adegoke, M.Sc. (Key words: electric grid, electricity crisis analysis, power supply failures).

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Enhancing Offshore Oil Operations with Cost-Effective and Innovative Telecommunications Solutions. S.O. Ajose, Ph.D. and I.I. Ezebuio, Ph.D., D.Sc. (Key words: remote communications systems, Nigerian delta region, wireless, broadband, satellite, radio, telephone).

http://www.akamaiuniversity.us/PJST6_2_132.pdf

An Overview of the Roles of Project Managers in Monitoring and Controlling Engineering Projects. I.I. Ezebuio, Ph.D., D.Sc. (Key words: engineering quality, cost management, project lifecycle, planning).

http://www.akamaiuniversity.us/PJST6_2_138.pdf

Changes in Human Gestation Period due to Variations in External Environmental Forces. S.K. Lentz, Ph.D. (Key words: lunar cycle, barometric pressure, solar orbit, pregnancy, delivery).

http://www.akamaiuniversity.us/PJST6_2_149.pdf

Groundwater Quality in Lekwesi/Umuchieze Area, Southeastern Nigeria. A.E. Ofoma, Ph.D., O.S. Onwuka, and O.C. Egbu. (Key words: springs, potable water, Coliform, agrarian, rural community).

http://www.akamaiuniversity.us/PJST6_2_170.pdf

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Wild Farm Alliance's Farm Biodiversity Conference and The 25th Annual Ecological Farming Conference - "Shining Sustainable Agriculture": A Summary. Neeraja Havaligi, M.S. (Letters and Communications)

http://www.akamaiuniversity.us/PJST6_1_4.pdf

Chemical Bath Deposition of Bismuth Chloride Oxide (BiClO) Thin Film and its Applications . F.I. Ezema, Ph.D. (Key words: chemical bath deposition, bismuth chloride oxide, optical properties, solar cells).

http://www.akamaiuniversity.us/PJST6_1_6.pdf

Structural and Optical Properties and Applications of Zinc Oxide Thin Prepared by Chemical Bath Deposition Technique. D.D.O. Eya, Ph.D., A.J. Ekpunobi, Ph.D., and C.E. Okeke, Ph.D. (Key words: structural properties, optical properties, band gap, grain size, refractive index, annealing temperature, transmittance, extinction coefficient).

http://www.akamaiuniversity.us/PJST6_1_16.pdf

Optical Properties in PbHgS Ternary Thin Films Deposited by Solution Growth Method. B.A. Ezekoye, Ph.D. and C.E. Okeke, Ph.D. (Key words: ternary thin film, electroless, optical constants, optical bandgap).

http://www.akamaiuniversity.us/PJST6_1_23.pdf

Accretion Disk as Source of Energy and Power in Astrophysical Objects. R.N.C. Eze, Ph.D. (Key words: accretion disk, cataclysmic variables, angular momentum).

http://www.akamaiuniversity.us/PJST6_1_29.pdf

The Evolution of the Universe: A New Vision. Prof. Kamel Ben Salem (Key words: science and religion, philosophy of science, Islam, astronomy, ancient texts).

http://www.akamaiuniversity.us/PJST6_1_37.pdf

Transient State Analysis of an Active Magnetic Bearing (AMB) System with Six Degree Of Freedoms Using MATLAB. Dr.–Ing. Ogbonnaya I. Okoro. (Key words: control, rotor, active magnetic bearing, transient state, degree of freedoms).

http://www.akamaiuniversity.us/PJST6_1_56.pdf

Induction Motor Control Strategies: Past and Present. Dr.–Ing. Ogbonnaya I. Okoro* and Dr. M.U. Agu. (Key words: induction motor, control strategies, adjustable speed-drives, open loop, closed loop).

http://www.akamaiuniversity.us/PJST6_1_64.pdf

The Health Impacts of Failing to Plan and Design for Children to Walk to School. Jeffery C. Springer, P.E. (Key words: childhood obesity, public health, community transportation planning, pedestrian infrastructure, pedestrian safety).

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Groundwater Exploration in Ikorodu, Lagos-Nigeria: A Surface Geophysical Survey Contribution. D.N. Obiora, Ph.D. and O.S. Onwuka, Ph.D. (Key words: vertical electrical sounding, VES, aquiferous formations, boreholes, groundwater).

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Electroencephalographic (EEG) Pattern in Patients with Generalized Seizures in Adolescents. M.M. Kabiraj, Ph.D., M.A. Jabber, FRCP, A.A. Jamil, M.D. Ph.D., Q.A. Shah, Ph.D., and A. H. Shah, Ph.D., D.Sc. (Key words: generalized seizures, EEG-pattern, clinical neurological pattern, adolescents).
http://www.akamaiuniversity.us/PJST5_2_44.pdf

Electroencephalographic (EEG) Pattern in Patients with Partial Seizures. M.M. Kabiraj, Ph.D., M.A. Jabber, FRCP, A.A. Jamil, M.D. Ph.D., Q.A. Shah, Ph.D., and A. H. Shah, Ph.D., D.Sc. (Key words: EEG, Focal Slowing, Generalized Slowing, Focal Sharp Waves/Spikes, Generalized Sharp Waves/Spikes, Partial Seizures, Neurophysiology)
http://www.akamaiuniversity.us/PJST5_2_50.pdf

Steady State Analysis of Squirrel-Cage Induction Machine with Skin-Effect. O.I. Okoro, Ph.D. (Key words: squirrel-cage, induction machine, steady state, skin effect, conventional model, rectangular rotor bar)
http://www.akamaiuniversity.us/PJST5_2_56.pdf

Transient State Modeling of Asynchronous Generator with Skin-Effect. O.I. Okoro, Ph.D. (Key words: asynchronous machine, wind energy, turbine generators, skin-effect, transient state)
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Characterization of Optimized Grown Calcium Sulphide Thin Films and the Possible Applications in Solar Energy. M.N. Nwabuchi, Ph.D. and C.E. Okeke, Ph.D., FAS. (Key words: photovoltaic material, thin films, chemical deposition, coatings)
http://www.akamaiuniversity.us/PJST5_2_76.pdf

The Use of Geographic Remote Sensing, Mapping, and Aerial Photography to Aid the Recovery of Blue Ice Surficial Meteorites in the Antarctic. A.A. Mardon, Ph.D. (Key words: field study, expedition, meteorite recovery, GIS, Trans-Antarctic mountain range)
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MATLAB Simulation of Induction Machine with Saturable Leakage and Magnetizing Inductances. O. I. Okoro, Ph.D. (Key Words: rotor leakage, inductance, MATLAB, induction machine)
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Analytical Method of Computation of Rectangular-Rotor Bar Impedance for Skin –Effect Using MATLAB. O. I. Okoro, Ph.D. (Key Words: skin-depth, skin-effect, rectangular-rotor bar, complex impedance, squirrel-cage induction machine)

http://www.akamaiuniversity.us/PJST5_1_16.pdf

Preparation and Optical Properties of Chemical Bath Deposited Beryllium Chloride (BeCl₂) Thin Films. F. I. Ezema, Ph.D. and P.U. Azogwa, Ph.D. (Key words: chemical bath deposition, BeCl₂, thermal coatings, antireflection)

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Investigation of Optical Properties of Barium Oxide (BaO) Thin Films Deposited by Chemical Bath Technique. F. I. Ezema, Ph.D. 1, 2 and P.E. Ugwuoke, M.Sc. (Key words: chemical bath deposition, BeO, thermal coatings, thin films, antireflection)

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Volume 4, Number 1 (July 2003)

A Critical Analysis of the Dunvegan Hydroelectric Project Environmental Impact Assessment. J.L. Shandro, M.S. (Key Words: EIA, environmental protection, Canadian Environmental Assessment Act, CEAA, NEPA, Navigable Waters Protection Act, Canada, Alberta, fisheries, Peace River)

Effect of Impulse Pressure on the Crop Productivity and Germinating Power of Cucumber (*Cucumis sativus*) Plants. E.E. Nefedieva, Ph.D. (Key Words: impact wave, stress, hothouse, mid-season hybrids, normal distribution)

Photovoltaic Potentials of Some Chemical Bath Deposited PdS and Bi₂S₃ Thin Films. F.I. Ezema, Ph.D. (Key Words: solar cells, band gaps, solar adsorption, optical properties)

Estimation of Optical and Electrical Properties of Zirconium Sulphide Thin Films Prepared by the Chemical Bath Deposition Technique and Using a Spectrophotometer. F.I. Ezema, Ph.D. (Energy dispersive x-ray fluorescence, thermal coatings, antireflection coatings, photothermal applications, photovoltaic applications, energy efficient glazing, ZrS₂)

Optical Properties in CuCl Binary Thin Films Deposited by Solution Growth Method. B.A. Ezekoye, Ph.D. (Key Words: film, electroless, optical constants, optical band gap, coatings)

Growth and Optical Properties of Cu_{1-x}Pb_xS Ternary Alloy Thin Films. B.A. Ezekoye, Ph.D. and C.E. Okeke, Ph.D. (Key Words: solution growth method, optical constants, optical band gap; E_g)

Computer Simulation of a Squirrel-Cage Induction Machine with Non-Linear Effects. O.I. Okoro, Ph.D. (Key Words: dynamic modeling, current, numerical integration technique, no-load, blocked rotor, retardation test, shaft torque)

Thermal Analysis of an Induction Motor Using MATLAB. O.I. Okoro, Ph.D. (Key Words: thermal behavior, squirrel cage induction machine, no load, rated load, blocked rotor)

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Effect of Time on Electrodeposition of Tin Selenide Thin Films from Aqueous Solution. Z. Zainal, Ph.D., N. Saravanan, A. Kassim, Ph.D., M.Z. Hussein, Ph.D., and W.M.M. Yunus, Ph.D. (Key Words: photoactivity, solar cells, photoresponse, thin films, semiconductor, x-ray diffraction)

Photoactivity of Cu₂S Thin Films Prepared through Electrodeposition. A. Kassim, Ph.D., Z. Sainal, Ph.D., R. Vikneshwari, and N. Saravanan. (Key Words: electrodeposition, metal chalcogenides, thin film electrochemistry)

Chemical Bath Deposition of Bismuth Oxide (Bi₂O₃) Thin Film and its Applications. F.I. Ezema, Ph.D. and C.E. Okeke, Ph.D. (Key Words: chemical bath deposition, bismuth oxide)

Investigation of Optical Properties of Chemical Bath Deposited Beryllium Oxide (BeO) Thin Film and its Applications. F.I. Ezema, Ph.D. (Key Words: chemical bath deposition, thermal coatings, bismuth oxide)

The Influence of Impulse Pressure on the Phytohormone Content, Growth and Crop Productivity of Buckwheat Plants (*Fagopyrum esculentum Moench., cv. Aromat*). E.E. Nefedieva, Ph.D. (Key Words: buckwheat, pressure, phytohormones, meristem, mitosis, germination, seedling, yield)

A Reverse Phase High Performance Liquid Chromatographic Procedure for the Determination of Acetaminophen and its Degradation Product 4-aminophenol in Aged Pharmaceutical Formulations. R.M. Rao, Ph.D., R.M. Al-Ashban, M.Sc., Z.A. Khan, Ph.D., and A.H. Shah, Ph.D., D.Sc. (Key Words: acetaminophen, 4-aminophenol, determination, HPLC, stability-indication, ageing, post-marketing surveillance)

Pattern of EEG in Patients Suffering from Complex Partial Seizures. M.M. Kabiraj, Ph.D., M.A. Jabber, M.B.B.S, and Q.A. Shah, Ph.D. (Key Words: EEG, focal slowing, generalized slowing, focal sharp waves/spikes, generalized sharp waves/spikes, generalized slowing + focal spikes, complex partial seizures neurophysiology)

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Modern Cardiac Markers and Ischemic Heart Diseases: A Prospective Study. W.A.R.A. Libda, Ph.D., V.P. Gupta, D.F.M., Ph.D., M.M. Kabiraj, Ph.D., and S.M.H. Zaidi, M.R.C.P. (Key Words: angina, myocardial infarction, myoglobin, CKMB mass, troponin, blood assays)

Valproic Acid and Essential Metals. W.A.R.A. Libda, Ph.D., V.P. Gupta, D.F.M., Ph.D., and M.M. Kabiraj, Ph.D. (Key Words: copper, zinc, calcium, magnesium, epilepsy)

Anti-Epileptic Drugs (AEDs) and Anemia: A Prospective Study in Epileptic Children. Q.A. Shah, Ph.D., A.A. Jamil, M.D., V.P. Gupta, D.F.M., Ph.D., M.M. Kabiraj, Ph.D., and A.H. Shah, Ph.D., D.Sc. (Key Words: seizures, hematological parameters, white blood cells, hemoglobin, red blood cells, platelets, hematocrit ration, poly neutrophils, lymphocytes, monocytes, eosinophils)

Effects of Anti-Epileptic Drugs (AEDs) on Biochemical Levels in Epileptic Children: A Prospective Study. Q.A. Shah, Ph.D., A.A. Jamil, M.D., V.P. Gupta, D.F.M., Ph.D., M.M. Kabiraj, Ph.D., and A.H. Shah, Ph.D., D.Sc. (Key Words: epilepsy, seizures, glucose, aspartate amino transferase, alanin amino transferase, alkaline phosphatase, bilirubin)

Anti-Epileptic Drugs (AEDs) and Body Electrolytes in Childhood Epilepsy: A Prospective Study. Q.A. Shah, Ph.D., A.A. Jamil, M.D., V.P. Gupta, D.F.M., Ph.D., M.M. Kabiraj, Ph.D., and A.H. Shah, Ph.D., D.Sc. (Key Words: blood serum, body electrolytes, electrolyte ratios)

The Effect of Impulse Pressure on the Crop Productivity and Physiological Characteristics of Some Tomato (*Lycopersicon esculentum*) Hybrids. E.E. Nefedieva, Ph.D. (Key Words: pressure, stress, hothouse, phytohormone, yield)

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Electro-Encephalogram (EEG) Study Following Prolonged Occlusion of Common Carotid Artery in New Zealand White Rabbits. Mohammad Muslim Uddin Kabiraj, M.D. and Alaa El Din Amin Afifi, Ph.D. (Key Words: electro-encephalogram, EEG, brain studies, ischemic stroke, vascular lesion)

Common Drugs Used by Saudi Addicts Detected by Drug Screening. Waleed A. Rahman Abu Lebdeh, Vijay Prakash Gupta, Ph.D., and Mohammad

Muslim Uddin Kabiraj, M.D. (Key Words: drug screening, addiction, overdose, inebriants, narcotic analgesics, psycho-stimulants, emergency medicine)

The Evolution of the Protective Mask for Military Purposes: 1918 to Present. Major Humberto E. Galarraga, M.S. (Key Words: gas mask, chemical biological warfare, NBC, CBW, technology evolution, science history, military science)

Case Studies in Drug Toxicity and Symptomology from Riyadh Medical Complex, Central Laboratories: Waleed A.Rahman Abu Lebdeh, Vijay Prakash Gupta, Ph.D., and Mohammad Muslim Uddin Kabiraj, M.D.

- **Suicidal Failure Following A Massive Digoxin Overdose: A Case Report.** (Key Words: therapeutic effect, toxic dose, therapeutic index, lethal dose, poisoning)
- **Rare Case of Tegretol Overdose: A Case Report.** (Key Words: therapeutic effect, toxic dose, therapeutic index, lethal dose, poisoning)
- **Can A Massive Phenytoin Toxicity Be Asymptomatic?: A Case Report** (Key Words: overdose, toxicity, therapeutic range, lethal dose)

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Developing a First Generation Space Power Technology: An Available Technology, A Needed Power System. Jonathan A. Greenspon and Austin A. Mardon, Ph.D. (Key Words: space power satellite, electricity generation, space systems, microwave distribution, photovoltaic, energy resources)

Changes in Serum Electrolytes in Childhood Epilepsy: A Hospital Based Prospective. Q.A. Shah, Ph.D., A.A. Jamil, M.D., V.P. Gupta, Ph.D., M.M. Kabiraj, Ph.D. and A.H. Shah, Ph.D., D.Sc. (Key Words: childhood epilepsy, seizures, blood serum electrolytes, sodium, potassium, magnesium, calcium, iron, copper, zinc, electrolyte ratios)

Technology Management in Forensic Science. B.M. Mohan, Ph.D., V.P. Gupta, Ph.D., and A.H. Shah, Ph.D., D.Sc. (Key Words: genetic identification, DNA fingerprinting, crime studies, medicolegal studies, toxicology, forensics)

The Evolution of the Protective Mask for Military Purposes: Inception to World War I. Major Humberto E. Galarraga, M.S. (Key Words: gas mask, chemical biological warfare, NBC, CBW, technology evolution, science history, military science)

The Ecology of Medieval English Monasteries. Austin A. Mardon, Ph.D. (Key Words: conservation, traditional environmental management, technology evolution, historic agriculture techniques, agrarian societies, science history, sustainability studies)

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Common Drugs Used for Suicidal Attempts: A Prospective Hospital Based Study in Saudi Arabia. W.A.R.A. Lebdeh, V.P. Gupta, Ph.D., M.M.U. Kabiraj, M.D. (Key Words: drug screening; suicide; overdose; drug investigation; emergency medicine; health studies)

Effects of Long Standing Carpal Tunnel Syndrome on Median Nerve Conduction. M.M.U. Kabiraj, M.D., V.P. Gupta, Ph.D., A.A. Jamil, M.D., and A.H. Shah, Ph.D., D.Sc. (Key Words: carpal tunnel syndrome; CTS; nerve conduction velocity; terminal latency; retrograde changes; abductor policis brevis; health studies)

Biotechnology: Exploring the Science of GMO's. Judith L. Shandro (Key Words: genetically modified organisms, bioengineering, agriculture, genetic manipulation, environment, food safety issues)

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Comparison of Terminal Latency Index in Patients with Entrapment and Generalized Neuropathy. M.M.U. Kabiraj, M.D., V.P. Gupta, Ph.D., A.A. Jamil, M.D., and A.H. Shah, Ph.D., D.Sc. (Key Words: carpal tunnel syndrome; CTS; terminal latency index; TLI; neuropathy; nerve conduction studies; clinical studies)

Deregulation Demystified: An Examination of Issues Associated with the Restructuring of the U.S. Electric Generation Industry. Stephen K. Lentz. (Key Words: deregulation, electricity, electrical industry, energy policy, environmental law)

Nature Connected Psychology: Creating Moments that Let Earth Teach. Michael J. Cohen, Ed.D. (Keywords: ecopsychology, psychology, systems thinking, natural thinking, webstings, ecology, natural senses, qualitative studies)