CONFERENCE PROCEEDINGS

Scientific and Technical Research Association (STRA)

25th International Conference on Researches in Science and Technology (ICRST), 17-18 Nov 2017, Kuala Lumpur, Malaysia

17-18 Nov 2017

Conference Venue

Bukit Bintang Event Spaces (BBES), The Federal Kuala Lumpur, 35 Jalan Bukit Bintang, 55100 Kuala Lumpur, Malaysia

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KEYNOTE SPEAKER

Ing. Dr. Mohd Faisal Hushim
Senior Lecturer, Automotive & Combustion Synergies Group (ACSG), **Advanced Technology Centre (ATC), Faculty of Engineering Technology**, **Universiti Tun Hussein Onn Malaysia, Malaysia**

KEYNOTE SPEAKER

Dr. Md. Eaqub Ali
Associate Professor of Nanobiotechnology in the University of Malaya, Kuala Lumpur, Malaysia

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KEYNOTE SPEAKER

Nizar Abdul Majeed Kutty,
Department of Physiotherapy at University Tunku Abdul Rahman, Malaysia

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Hak-Ryul Kim GICICRST1715051	**Vegetable Oil : Efficient Substrate for Production of Diverse Value-added Industrial Compounds**
	Hak-Ryul Kim **School Of Food Science And Biotechnology, Kyungpook National University, Daegu 702-701, Korea** **Hyung-Geun Lee** **School Of Food Science And Biotechnology, Kyungpook National University, Daegu 702-701, Korea** **Qi Long** **School Of Food Science And Biotechnology, Kyungpook National University, Daegu 702-701, Korea** **Abstract** **Structural modification of natural lipids via chemical reaction or microbial bioconversion can change their properties or even create novel functionalities. Enzymatic oxidation of lipids leading to formation of oxylipin is one of those modifications. Hydroxy fatty acids, one of those oxylipins have gained important attentions because of their structural and functional properties compared with other non-hydroxy fatty acids. Recently 7,10-dihydroxy-8(E)-octadecenoic acid (DOD) was produced with high yield from lipid containing oleic acid by bacterial strain Pseudomonas aeruginosa PR3, and further study confirmed that DOD contained strong antimicrobial activities against broad range of microorganisms. In this study we tried to modify DOD molecules by enzymatic or physical reaction to create new functionality or to enhance the antimicrobial activity of DOD. After modification of DOD molecules by different ways, we confirmed that the antimicrobial activity of DOD was highly enhanced, suggesting that DOD and its derivatives could be used as an efficient antimicrobial agent for industrial applications.**
Wenjing Wang GICICRST1715054	**Novel amine impregnated graphene/SBA-15 composite with good stability for CO2 capture** **Wenjing Wang** **The University of Queensland, Australia** **Abstract** **Carbon dioxide (CO2) is the major greenhouse gas that makes the largest contribution to global warming. Worldwide research activities have focused on developing different types of physical and chemical adsorbents for CO2 capture. Amine functionalized mesoporous silica combining the merits of physisorption and chemisorption is one of the most promising materials for CO2 capture. However, due to the low thermal conductivity of mesoporous silica coupled with high adsorption heat of chemisorption, the thermal stability and cycle stability are severe issues that should be considered for practical CO2 capture. The introduction of graphene with superior properties, large theoretical specific surface area of 2630 m2 g-1 and excellent thermal conductivities, could be an effective way to solve the problem of stability. SBA-15 is a mesoporous silica, which has well-ordered hexagonal mesopore structure. However, to the best of our knowledge, the feasibility of graphene introduction to SBA-15 for CO2 capture need further explore. In this work, novel nanocomposites of graphene(G) /SBA-15/hyperbranched polymer(HBP) were synthesized and texted as CO2**

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adsorbent. A capacity of up to 1.50 mmol g-1 was obtained by G/SBA-15/HBP (50), indicating the presence of graphene within the system increased the capacity of conventional SBA-15/HBP to adsorb CO2 by 51.51%. SEM images and N2 sorption analyse indicate the introduction of graphene reduced the agglomeration and HBP could disperse more evenly into G/SBA-15. What's more, G/SBA-15/HBP (50) was relatively stable for 10 thermal cycles. The presence of graphene in the nanocomposite efficiently stabilizes HBP, improving cycle stability and adsorbent longevity.

Keywords: CO2 capture, mesoporous silica, graphene, amine functionalization

Andy Obinna GICICRST1715055	**Physical Modelling Of The Scale Effect Of Anaerobic Treatment Plants In The Treatment Of Cassava Wastewater**

E. Onukwugha
Department of Civil Engineering, Federal Polytechnic, Nekede, Owerri, Nigeria

A.O. Ibeje
Department of Civil Engineering, Imo State University, Owerri, Nigeria

B.C.Okoro
Department of Civil Engineering, Federal University of Technology, Owerri, Nigeria.

J.C. Agunwamba
Department of Civil Engineering, University of Nigeria, Nsukka.

Abstract
Three Anaerobic Baffled Reactors (ABRs) are used to evaluate the extent of cyanide inhibition of cassava wastewater treatment. The reactors have aspect ratios of (53:16:30; 4:1:1; 10:3:6). Kinetic analyses of specific growth rate μmax and half saturation constant are evaluated for the respective reactors. For respective reactors, non-inhibited cassava wastewater treatment, Kincannon model yields (μmax = 17.24day-1; 21.74day-1; 21.28 day-1 and) while Monod model yields (μmax = 10.87 day-1; 12.82 day-1; 13.70 day-1 and 0.87; 1.92; 2.32). Coefficient of determination R2 is used to verify the respective models to yield values of () for Kincannon model and () for Monod model.
Key Words: Treatment, Cassava Wastewater, Monod model and Kincannon model

Abubakar Shehu Alhaji GICICRST1715057	**Design, Fabrication And Testing Of Shea Butter Mixer**

Abubakar Shehu Alhaji
Agricultural & Bioenvironmental Engineering, Federal Polytechnic Bida, Niger State, Nigeria

Abstract
A shea butter mixer was designed, fabricated and tested. The machine mixed crushed shea paste with water and extract shea butter oil from the paste. Its major component parts include mixer blade, crank arm, mixing tank, mixing tank, gear system and burner. The machine capacity is 56 kg per hour. The results of testing of the machine revealed that The yield of oil ranged between 26.52 % and 39.43 %. The highest yield of oil of 39.43 % was obtained from interaction between container diameter of 50 cm, blade type 5 numbers and speed of 110 rpm, while the least oil yield of 26.52 % was obtained from interaction between container diameter of 33.2 cm, blade type of 3 numbers and speed of 110 rpm. The blade type, container diameter and speed of mixing were found to have significant effects on yield of the shea

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	butter oil. This development of this mixer wil has a positive economic impact on the local processors. The mixer will improve oil extraction and increase the product throughput for the local investors Keywords: Blade, Mixer, Shea Butter, Yield
Ibrahim Mohammed Gana **GICICRST1715058**	**Dynamics Of Mechanical Parameters Of Grain Drinks Processing Machine On Drink Consistency** **Ibrahim Mohammed Gana** **Agricultural & Bioenvironmental Engineering, Federal Polytechnic Bida, Niger State, Nigeria** **Abstract** A response surface methodology (RSM) has been utilized for investigating the dynamic of mechanical parameters of developed automated grain drinks processing machine and also to the optimal values that yielded the best drink consistency. The automated grain drinks processing machine blend soaked grains, mixed the slurry, extract the aqueous liquid and expel the paste from the machine all in single unit. The machine mechanical parameters, such as blade type, basket orientation and speed have been explored by empirical experiment while drink consistency was considered as performance characteristics. The experiment was based on central composite rotatable design (CCRD). The experimental result showed that the developed regressional model could describe the performance indicators within the experimental range of the factors been investigated. Blade type and speed of rotation were found to have significant ($p \leq 0.05$) effects, while basket orientation has insignificant effects on the drink consistency. Numerical optimization carried out produced optimum values of 3-blade assembly, basket orientation of 46.89o and speed of 1400 rpm and consistency of 7.68 with desirability of 1. But when the goal was to minimized the consistency the optimum values of 5-blades assembly, basket of half angle of 50o and speed of approximately 1000 rpm were obtained, while the milk consistency and desirability were 2.57and 0.894 respectively.
Fnu Jahangeer **GICICRST1715060**	**District Level Analysis and Review on Drought: A Case Study of Udaipur, Rajasthan** **Jahangeer** **Department of Hydrology, IIT Roorkee, Uttarakhand – 247667** **Shaktibala** **Department of Hydrology, IIT Roorkee, Uttarakhand – 247667** **Pankaj Kumar Gupta** **Department of Hydrology, IIT Roorkee, Uttarakhand – 247667** **Vikram Kumar** **Department of Civil Engineering, SBCET Jaipur, Rajasthan – 302013** **Abstract** Drought is natural phenomenon which is integrates hydro-metrological, agriculture, as well as socio-economic component. Semi-arid area is most droughts concern area. Udaipur is district of Rajasthan which is located on south western part of Aravali and area received average annual rainfall is 600.8 mm where which most rain by South West Monsoon during June- Sep is about 549.8 mm and 28.7 mm from North East Monsoon. The atmospheric condition is very dry and Mean daily relative humidity is about 85%. The Aridity Index calculation indicates the area has Aridity Index (AI) value 0.404 so it come under Semi-arid classification where AI value range is 0.20<AI<0.50. International Water Management Institute (IWMI) assist the area by calculation of Normalized Difference Vegetation Index (NDVI) for Drought indexes. Many of Mitigation option is developed in Udaipur district

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	by government and different nongovernmental organisation. Keywords: Udaipur, Aridity Index, Impact Mitigation
Afifa Asif **GICICRST1715062**	**In-vitro assessment of antimicrobial potential of mango Seed kernel against food borne pathogens** **Afifa Asif** **Department of Diet and Nutritional Sciences, University of Lahore, Sargodha Campus (Pakistan)** **Umar Farooq** **Department of Food Science and Technology, MNS-University of Agriculture, Multan (Pakistan)** **Kashif Akram** **Institute of Food Science and Nutrition, Bahauddin Zakariya University, Multan (Pakistan)** **Zafar Hayat** **Department of Animal Sciences, University College of Agriculture, University of Sargodha, Sargodha (Pakistan)** **Abstract** **Continues spread of microbial infectious diseases which affect almost 50, 000 people every day have become a leading global problem and the main reason is the emergence of drug resistance in bacterial strains. So this alarming condition has necessitated search of new and natural antimicrobial substances with higher bioactivity and no side effects. The present study was aimed to explore the natural antimicrobial potential of mango seed kernel against different food borne pathogens. The aqueous and ethanolic extracts of mango seed kernel were obtained with different combinations of solvent concentrations and their antimicrobial activity was examined by disc diffusion assay against Gram-positive (Staphylococcus aureus and Bacillus subtilis) and Gram-negative (Escherichia coli and Salmonella typhi) bacterial strain. The results obtained during study showed that, Gram's positive bacteria were found to be more susceptible to antibacterial potentials of mango seed kernel extract, while Gram's negative bacteria showed relative resistance against extracts. The results further revealed that the mango seed kernel extract possessed significant antimicrobial potential against the tested microorganisms. The zones of inhibition were ranged from 6.60 mm to 24.33 mm and were comparable to the antibacterial potential of standard antibiotics. On the basis of these results it was concluded that the mango seed kernel is not only a waste material instead it has hidden benefits like antimicrobial potential and its extracts in this way can be used as a natural source for control of microorganisms.** **Keywords: Mango seed kernel, food borne diseases, antimicrobial, pathogens**
Mehvish Saif **GICICRST1715063**	**Prevalence of Neuro-Musculoskeletal Complications in Patients with T2DM** **Mehvish Saif** **Riphah International University, Islamabad, Pakistan** **Syed Zain Ali** **Physiotherapy Department, Aga Khan University Hospital Karachi, Pakistan** **Syeda Zufiesha Zehra** **House officer, DIKIOHS, DUHS Karachi** **Benish Zehra**

	House officer, DIKIOHS, DUHS Karachi

Abstract

Diabetes mellitus affects normal metabolizing body function and causes long term organs dysfunctions like blindness, kidney failure, neuropathy and autonomic dysfunction. The musculoskeletal is also affected by T2DM and causes pain, dysfunctions, and disabilities. Thus, this study is to find the prevalence of neuro-musculoskeletal complications in patients with T2DM. This cross sectional survey was conducted in various public and private sector hospitals of four major cities of Pakistan (Islamabad, Karachi, Lahore, and Sargodha) from 1st May to 31st December 2015. The patients of type II diabetes mellitus with both gender and age above 40 were included, and patients with active systemic disease of bones and soft tissues were excluded. A self-structured questionnaire was developed, reviewed by experts, and finalized after calculating their recommendations. The questionnaire was distributed among 600 patients, out of whom 500 patients responded. The non-probability convenient sampling technique was used for data collection. The data was analyzed by SPSS and percentages were calculated to estimate the neuro-musculoskeletal complications in patients with T2DM.The prevalence of neuro-musculoskeletal complication in type II Diabetes mellitus was 100 %, while the frozen shoulder, tingling sensations and ants crawling sensations (61%) were equally the most common neuro-musculoskeletal complications followed by knee pain (53%), low back pain (43%).The most involved age group was 61 to 65 years and 58% patients were with positive family history. The most commonly used way of treatment was medications (90%) and physical therapy (10%). It was proved in study that frozen shoulder, altered sensations, knee pain and back pain have high association with long duration of T2DM.There is association between long duration of diabetes mellitus and neuro-musculoskeletal complications. It is concluded that the prevalence of neuro-musculoskeletal complications is high among patients of T2DM and commonly affects shoulder, back, knee, and altered sensation in legs. These are most commonly managed with medications followed by physical therapy.
Keywords: T2DM, neuro-musculoskeletal, complications, frozen shoulder, Range of motion

Yusuf M. Abdullahi **GICICRST1715064**	**Impact Of Distributed Generation On Zamfara 11kv** **Radial Network**

Yusuf M. Abdullahi
Umaru Ali Polytechnic Sokoto

Aliyu S. Mindaudu
Umaru Ali Polytechnic Sokoto,

Abstract

This paper presents the potential impact of distributed generation (DG) on Zamfara 11kV radial network. Two DGs based on wind and fuel cell systems were used for the simulation to test the response and stability of the network. A bus with DGs and Static Var Compensator (SVC) was studied in comparison with a bus having no DG. For the system without DG, simulation results obtained revealed that the voltage decreases with increasing load. The minimum and maximum loads at which the system became unstable were 0.025MW and 2.5MW respectively. For the system with DGs but no SVC incorporated, the corresponding minimum and maximum loads at which system was unstable were 0.01MW and 1.2MW. With SVC connected the system attained stability at 0.98pu within 20s. Incorporation of DGs and SVC on the network resulted in an improved voltage response and the network stabilized faster.

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Keywords: Static Var Compensator, Distributed Generation, Voltage Response, Radial network, Stability

Spectral Depth Analysis of Aeromagnetic Field Around Gitata Area Sheet No. 187

Imrana, U.
Physics Unit Department of Science laboratory Technology, Umaru Ali Shinkafi Polytechnic, Sokoto, Nigeria   .

Nasiru B.
Physics Unit Department of Science laboratory Technology, Umaru Ali Shinkafi Polytechnic, Sokoto, Nigeria   .

Abstract
Spectral depth analysis of aeromagnetic field around Gitata with Latitude 7.00N to 7.30N and 8.00E to 8.00E was carried out. from the analysis the first depth gives a thickness of 0.20km and a thickness of 2.68km of second depth using (Visual Interpolation) the study have shown that the study area is the uplifted blocks containing about 6.600ft (2.046km) of sedimentary cover area noted; the deep basing flanking the blocks contain thick sedimentary pilled with natural source rocks and reservoir rocks. It is observed from the thickness of the region.

Sadiya Abdu Bichi GICICRST1715066	**Assessment Of Pollutants From Dyeing Industries In Kano State, Nigeria**

Sadiya Abdu Bichi
Department of Science Laboratory Technology, Kano State Polytechnic

Garba Alhaji Adamu
Department of Science Laboratory Technology, Kano State Polytechnic

Abstract
There is a growing concern on the increasing number of cottage dyeing industries in Kano municipality due to the indiscriminate discharge of large volume of toxic effluents in the environment. Waste water and sediment from dyeing centers around Kano metropolis were analyzed for physico-chemical parameters and heavy metals to assess their impact on the environment. The results obtained indicate high concentration of most of the physical and chemical parameters. High concentration of some toxic heavy metals like Cu, Zn, Fe, Cd and Pb with a range of 0.08 to 0.14, 0.38-0.74, 0.02-0.26, 0.20-0.29, 0.06-0.33 mg/L for the water samples and 40.20- 49.1, 28.9-34.5, 26.7-30.40, 1.70-2.30 and 1.90-2.50 mg/kg for the sediment samples respectively. The values were found to be above the acute toxicity level set by WHO and FEPA for both water and sediment samples with sediment values being significantly higher than that of water samples $p<0.05$. This means that effluents from these dyeing centers are heavily contaminated and can serve as a potential environmental pollutant. The indiscriminate disposal of dye bath waste can serve as a threat to human and aquatic life that depends on the adjourning rivers for domestic water supply of.
Keywords: Environment, pollution, heavy metals, dye waste, toxic

Sahar F. Deraz GICICRST1715069	**Production Of Natural Cured Fresh Oriental Sausage By Meat-Associated Lactic Acid Bacteria With Different Nitrite And Nitrate Reductase Activities: A Potential Solutionfor Nitrite Free And Low Nitrite Meat Products**

Sahar F. Deraz
Department of Protein Research, Genetic Engineering and Biotechnology Research Institute, City of Scientific Research and Technological

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Applications, Alexandria, Egypt

Abstract

Use of nitrate and nitrite in processed meat has great benefits but safety of these additives was questioned. Nitrites, however, are used reliably in cured meat products to produce the characteristic red color and to control the growth of spoilage and pathogenic bacteria. A main objective of the present work was to study the possibility of developing natural additives that enhance sausage meat color, safety and to implement these additives as reliable alternatives to nitrite. Lactic acid bacteria (LAB) were isolated from natural fermented sausages and screened for their ability to produce nitrate/nitrite reductase and their antimicrobial activity. Selected LAB isolates and their ability to either deplete nitrate/nitrite from natural sources mainly parsley and celery juice in standard de Man, Rogosa and Sharpe (MRS) broth and their listeria control or elimination effect was determined and were further tested in sausage products. Sausages were subjected to visual and instrumental color assessment, pH and inhibition effect on L. monocytogenes. Compared to controls with added nitrite, some of produced sausages did score higher colorimetric a* (redness) value and sensory color scores and overall acceptability. Furthermore, 1-2 log cfu/g of L. monocytogenes were lower than in the control sausage depending on the type of used protective cultures. The pH values of sausages with LAB isolates and no added nitrite were the lowest throughout processing which protected them against the development of the majority of pathogenic bacteria. This study showed that treatment combinations containing natural indirect source of nitrate/nitrite and LAB isolates with ability to produce either nitrate or nitrite reductase has the potential to substitute for nitrite in the sausage production.

Elekalachi Chukwuemeka Innocent GICICRST1715071	**Empirical Models for the Estimation of Global Solar Radiation on a Horizontal Surface in Three Cities in North Eastern Geopolitical Zone of Nigeria.** **Elekalachi, C. I.,1 Department of Industrial Physics, Chukwuemeka Odumegwu Ojukwu University, Uli, Anambra State, Nigeria Nwokoye A. O. C.,2 Department of Physics and Industrial Physics, Nnamdi Azikiwe University, Awka, Anambra State, Nigeria** **Abstract** **The non-availability of global solar radiation data in some locations in Nigeria is due to the lack of solar radiation measuring instruments such pyranometers and pyrheliometers. This challenge experienced read to the use of different empirical models that based on climatological parameters of a location for the estimation of global solar radiation. In this study, monthly mean global solar radiation Hm, monthly mean extraterrestrial global solar radiation Ho, monthly mean daylight hours (N) and monthly mean hours of bright sunshine (n), latitudes (∅), maximum temperature (Tmax) and relative humidity (RH) as geographical and meteorological parameters for estimating monthly mean global solar radiation in Gombe (10.25 ° N, 11.167° E), Yola (9.230 ° N, 12.460 ° E) and Maiduguri (11.833 ° N, 13.150 ° E) cities in North Eastern geopolitical zone of Nigeria for the period of 11 years (2000 – 2010) were investigated. The meteorological data for this investigation were gotten from the archives of National Aeronautic and Space Administration (NASA). Using empirical Angstrom model as a base model, sunshine based regression equations, maximum temperature and relative humidity based equations were developed for the cities. The correlation coefficient (R) and**

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Root Mean Square Error (RMSE), Mean Bias Error (MBE), Mean Percentage Error (MPE) and t - stat values were determined for each proposed models and were used to evaluate the performance of each of the developed models.

Keyword: Renewable energy, global solar radiation, sunshine hours, empirical models, maximum temperature, relative humidity

Ling Ling Tan **GICICRST1715053**	**Optical Dengue Virus DNA Biosensor based on Schiff Base** **Metal Complex label**

Ling Ling Tan
Southeast Asia Disaster Prevention Research Initiative (SEADPRI-UKM), Institute for Environment and Development (LESTARI), Universiti Kebangsaan Malaysia, 43600 UKM Bangi, Selangor Darul Ehsan, Malaysia.

Nur-Fadhilah Mazlan
Southeast Asia Disaster Prevention Research Initiative (SEADPRI-UKM), Institute for Environment and Development (LESTARI), Universiti Kebangsaan Malaysia, 43600 UKM Bangi, Selangor Darul Ehsan, Malaysia.

Nurul Huda Abd. Karim
School of Chemical Sciences and Food Technology, Faculty of Science and Technology, Universiti Kebangsaan Malaysia, 43600 UKM Bangi, Selangor Darul Ehsan, Malaysia.

Lee Yok Heng
School of Chemical Sciences and Food Technology, Faculty of Science and Technology, Universiti Kebangsaan Malaysia, 43600 UKM Bangi, Selangor Darul Ehsan, Malaysia.

Mohammad Imam Hasan Reza
Southeast Asia Disaster Prevention Research Initiative (SEADPRI-UKM), Institute for Environment and Development (LESTARI), Universiti Kebangsaan Malaysia, 43600 UKM Bangi, Selangor Darul Ehsan, Malaysia.

Abstract

N,N'-bis-5-(hydroxysalicylidene)phenylene-diamine-zinc(II), the novel yellowish Zn salphen complex as synthetic intercalator has been synthesized and incorporated in the optical DNA biosensor design to construct a new system of solid state genosensor for dengue virus detection. Three zinc(II) salphen complex with Zn^{2+} metal ion centre was synthesized in a 5 h reaction and comprehensive analyses using FTIR, NMR and ESI-MS was carried out for further structure confirmation. These Schiff base complexes can form a π-π stacking interaction upon its intercalation between DNA bases due to their square planar geometry and aromatic ring structure, and gave a yellowish pink colouration on the genosensor surface. In addition, silica nanoparticles modified with the reactive amine functional at the nanospheres surface were employed as the DNA supporting substrate that provided high specific immobilization surface for covalent immobilization of DNA molecules. Optimization results obtained from reflectance studies showed high selectivity of the nanosilica-based DNA biosensor in detecting dengue serotype 2 DNA and capable of discriminating even a single nucleotide mismatch. A linear reflectance response between 1.0×10^{-15} M and 1.0×10^{-11} M target cDNA ($R^2 = 0.9975$), fast hybridization time (30 min) and a limit of detectable (LOD) target cDNA concentration as low as 1 zM were attainable by the optical DNA biosensor. This biosensor gave high shelf life stability up to 20-day operational duration and was reusable for five consecutive DNA testings. The biosensing performance of our proposed optical genosensor were more superior compared to previously reported

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	electrochemical DNA biosensor in terms of dynamic linear range, LOD and response time for early diagnosis of dengue infection in human. Keywords: Metal salphen; Schiff base; DNA intercalator; Optical DNA biosensor; Aminated silica nanoparticles
Govinda Pramudya Tama **GICICRST1715065**	**Integrated Weigh in Motion Fiber Sensor Capables of Weighing Individual Running Vehicles** **Ahmad Marzuki** **Faculty of Mathematics and Natural Science, Sebelas Maret University, Surakarta** **Govinda Pramudya Tama** **Faculty of Mathematics and Natural Science, Sebelas Maret University, Surakarta** **Nanang Maulana** **Faculty of Mathematics and Natural Science, Sebelas Maret University, Surakarta** **Ferifta Maulyna Anggraeni** **Faculty of Mathematics and Natural Science, Sebelas Maret University, Surakarta** **Abstract** **This paper presents a method to weigh individual running vehicles using integrated to weigh in motion fiber sensor. Individual vehicle was weighed separately to the following vehicle by utilizing a spacing sensor. This sensor was made by pointing 3 laser beams to different detectors. If a vehicle passing over fiber sensor, the attenuated light will be recorded by photodetector and scale as a dynamic weight. Computer program adds all axles dynamic weight belongs to a vehicle. Additional optical sensor as proposed in this paper was designed in order that dynamic weight summation was applied for a single vehicle not a series vehicle running one after the other. For each vehicle passing over the fiber sensor we have found a statical weight of a single vehicle derivated from its corresponding dynamical weight.** **Keywords : Weigh in Motion, fiber sensor, dynamic weight**
Muhammad Fachrul Rozi Kurniawan **GICICRST1715073**	**Identification Of Salt Water Resource Using Electrical Resistivity Tomography In Banjarsari, Grobogan** **Muhammad Fachrul Rozi Kurniawan** **Department of Physics, Faculty of Mathematics and Natural Science, Sebelas Maret University, Surakarta, Indonesia** **Budi Legowo** **Department of Physics, Faculty of Mathematics and Natural Science, Sebelas Maret University, Surakarta, Indonesia** **Daru Wahyuningsih** **Department of Physics, Faculty of Mathematics and Natural Science, Sebelas Maret University, Surakarta, Indonesia** **Abstract** **Banjarsari village is located to the north of Bledug Kuwu, famous for its mud volcano in Central Java. In this location, there are surface manifestations such as mud flow and the salt water explosion. In this village there are traditional salt mines, therefore a study of the potential resource of salt mines is necessary. The aims of this research are detecting and mapping**

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	subsurface areas of the salt water resource. The direct measurement was conducted using OYO model 2119C resistivitymeter by using Wenner-Schlumberger array configuration and electrode spacing is 30 meters. The direction of line one (A-A') and three (C-C') are from south to northwest and line two (B-B') is from east to west. Based on the distribution of resistivity, the salt water resource is indicated have the lowest resistivity (0,020 - 0,190 ohm.m). The presence of salt water resources is expected to be at 30 until 93.8 meters depth. The final result shows that resource salt water every line has a correlation; it means that the salt water resource is very large. Keywords: Mud flow, manifestation, resource, Wenner-Schlumberger, resistivitymeter
Djay Louis Obediencia **GICICRST1715074**	**Market Acceptability of an Application-Based Basic Education Tutorial Booking System in Tacloban City** **Djay Louis Obediencia** **Division of Management, University of the Philippines Visayas Tacloban College, Tacloban City, Philippines** **Abstract** **This study determined the acceptability of an Application-Based Basic Education Tutorial Booking System in Tacloban City. By utilizing mobile technology, the researcher's end goal is to create an application which acts as a medium that allows the tutees to communicate with a tutor and "book" a tutorial session. The tutors will consist of college students from the University of the Philippines Visayas Tacloban College (UPVTC). On the other hand, the tutees will be composed of elementary and senior high school students in Tacloban City. Lessons taught in the tutorial are subjects from the K to 12 Basic Education Program; mainly, English, Science, Mathematics, and Reading Comprehension. Since this application is not yet existing in the market, the researcher conducted a market study on the acceptability of this application in Tacloban City. The participants of this study are elementary, senior high school and UPVTC students. By using a structured interview schedule, the researcher interviewed its participants to determine the acceptability of the application. This paper discusses the implications of the methods used and the results of the study.** **Keywords: Mobile application, Tutorial Booking System, tutor, tutee**
Utkarsh Raj **GICICRST1715076**	**CEMDB: a manually curated Cancer Epigenetic Marker Database** **Utkarsh Raj** **Dept. of Bioinformatics & Applied Sciences, Indian Institute of Information Technology-Allahabad, Allahabad, India, Email ID:** **Pritish Kumar Varadwaj** **Dept. of Bioinformatics & Applied Sciences, Indian Institute of Information Technology-Allahabad, Allahabad, India** **Abstract** **CEMDB is a freely available e-database for facilitating exploration of cancer epigenetic proteins & their modulators. The contents of this database ranges from protein families of cancer epigenetic, to their structural data and inhibitors, pharmacokinetic properties, information related to their toxicology and cheminformatics. Protein family names can be used for accessing relevant ligand names, ligand structures and substructures. Overall, this database will be useful for designing new drugs and therapies for disease like cancer. The principal purpose of developing the database is to provide an information platform for researchers interested in the field of cancer epigenetics. We believe that the information & tools presented in CEMDB will welcome aspiring researchers to start drug designing outline**

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and bring about an improvement in the field of cancer epigenetics. This knowledgebase would be helpful to cancer biology researchers, especially those interested in epigenetic regulation.

Keywords: CEMDB, cancer, epigenetics, database, proteins.

LISTENER

Ezeamagu Christopher Ezechi
Department of Chemistry, School of Science Education, Federal College of Education, (Tech.) Gusau
GICICRST1715052

Abdul Sesay
Roke Sesay Aid Foundation, Waterloo- Sierra Leone
GICICRST1715067

Mohamed Sesay
Roke Sesay Aid Foundation, Waterloo- Sierra Leone
GICICRST1715068

Ismaila Seckan
The Republic Of The Gambia Ministry Of Basic And Secondary Education, The Gambia College, The Gambia, Banjul
GICICRST1715070